

A Study of Nursing Practices Used in the
Management of Infection in Hospitals, 1929-
1948

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Abstract

Before the availability of antibiotics minor infections could become life threatening. Nurses working in voluntary and public hospitals in Britain were exposed to such risks. This thesis uses both oral testimonies and published sources in order to examine their practices concerning the management of infection risks. The detail of nursing work in this period has been generally hidden in nursing histories of the 1930s and 1940s which have addressed mainly political, recruitment, educational, registration and status issues. Whilst these histories may comment about menial duties, and the culture and discipline in clinical areas, they lack detailed exploration of the day-to-day work of the nurse. This novel study contributes to redressing the balance by examining nursing practice between the discovery of penicillin in 1929 and its widespread availability in Britain in 1948.

Data analysis, including the oral testimonies of nineteen former nurses who worked between 1929 and 1948, suggests that nursing practice during this period placed enormous emphasis on cleanliness and hygiene. It is argued that this was linked to sanitarianism which influenced nursing practice before its replacement by germ theory. Probationer nurses learnt their skills in managing infection risks to themselves and their patients in a disciplined and safe way. This was achieved through the exercise of strict routines and a hierarchy of tasks that provided a graduated exposure to the patient and infection risks. This thesis draws on debates in the literature about purity, vocation and status to explore, and add weight to this argument.

The analysis also identifies that the introduction of sulphonamide drugs and antibiotics altered nursing practices in the management of both infection risks and patients with infection. Whilst the full effects of these changes are not examined in this thesis, it is argued that the significant impact of these drugs was such that the emphasis on cleaning and hygiene became diminished in importance and nursing had to redefine its role. It suggests that more prominence needs to be given to changes in clinical practice in the history of nursing.

This study breaks new ground by suggesting the rigorous training of nurses in cleaning and hygiene tasks was needed in order to manage the infection risks faced by nurses before the availability of antibiotics.

DECLARATION

I declare that no portion of the work referred to in the thesis has been submitted in support of an application for another degree or qualification of this or any other university or other institute of learning.

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List of Abbreviations

°C	Unit of temperature on the Centigrade scale
cc	Cubic Centimetre (equivalent to a millilitre)
CNR	Civil Nursing Reserve
EUSOL	Edinburgh University Solution of Lime
°F	Unit of temperature on the Fahrenheit scale
FRS	Fellow of the Royal Society
GNC	General Nursing Council for England and Wales
GP	General Practitioner
HAI	Hospital Acquired Infection
M&B 693	Trade name for May and Baker product 693, a sulphapyridine
MRC	Medical Research Council
NHI	National Health Insurance
NHS	National Health Service
POW	Prisoner of War
PTS	Preliminary Training School
RCN	Royal College of Nursing
SRN	State Registered Nurse
TB	Tuberculosis
UK	United Kingdom
USA	United States of America
VAD	Voluntary Aid Detachment
WWI	World War I
WWII	World War II

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I am indebted to the University of Nottingham's School of Nursing, Midwifery and Physiotherapy for sponsorship during the first five years of this study. The RCN Foundation awarded a Monica Baly Bursary which helped with fees in year six. The Wellcome Trust provided a Research Expenses grant towards costs associated with visits to archives and travel for data collection. Without the financial support of these organisations, this study would not have been possible.

To Estelle M. Phillips and D. S. Pugh, thank you. Your book *How to get a PhD* (2nd edition, Buckingham, Open University Press, 1994) was an invaluable read as I thought about beginning the journey of doctoral studies by research. Your advice on having a topic of interest to study and the choice of supervisor are to be commended to all who seek this journey. The journey has been far from lonely. The journey started many years ago with my father who taught me to ask questions about the unknown and who suggested I follow a career in nursing before his untimely death on the day I learnt that I had passed my State Final examinations. Since then many others, who must remain nameless, have contributed to my understanding of nursing. Thank you to colleagues at the University of Nottingham for your interest and excitement as I discussed my topic. You lifted my spirits during those times of doubt and uncertainty.

To my supervisors, Professor Christine Hallett, Jane Brooks and Michele Abendstern, thank you for accepting me as your student. Your guidance, and listening with patience when I would not heed the guidance, has enriched this study as it evolved to become the thesis presented here.

The journey was made possible by the former Registered Nurses who volunteered to tell me their memories of hospital nursing before the creation of the National Health Service. These memories, far from being 'not worth listening to', told an interesting story of nursing before the introduction of antibiotics. Though the interpretation of their memories is mine, this thesis may contribute to explanations about the reasons for their work and some of the changes that have occurred in nursing since that time.

The journey would not have been possible without the love and support of my wife, Paula.

Preface

Several factors in my life history have prompted the study reported here. Chronologically, I remember my father in the 1950s, as a sales representative for one of the original five United States based drug companies which were licensed to develop the mass production of penicillin. In the 1950s, this company had a United Kingdom production plant which manufactured penicillin. My father derived immense satisfaction from his work with General Practitioners and Hospital Pharmacists in promoting the benefits of the antibiotics his employer was marketing. I recall the general wonder he experienced at the changes antibiotics were making to the health of the population. In the late 1960s I undertook a first degree in Chemistry which included a module on microbiology, and through this I began to appreciate some of the risks in handling and coming into contact with micro-organisms. Subsequently I trained to become a nurse through an apprenticeship style of training, becoming a State Registered Nurse with the General Nursing Council for England and Wales in 1975. The development of my nursing career led me through clinical work in trauma and orthopaedics and occupational health into the teaching of occupational health nursing. The privatisation of public sector industries that included steel, coal mining, and the utilities in the early 1980s resulted in a reduced demand for occupational health training, and consequently I returned to the National Health Service. This work, through a succession of senior nurse posts with District Health Authorities concerned with health services research, manpower and service planning, and the development of quality assurance systems, introduced me to the politics of health service management, and the difficulties inherent in trying to bring about change through a 'top down' approach.

In 1994 I returned to teaching, leading on a range of post registration modules including infection control in clinical practice to registered healthcare practitioners. It was during this time that I developed interests in the emergence of drug resistant strains of known organisms and new, previously unknown, organisms and the implications these might have for managing the infection risk to humans. Laurie Garrett's, *The Coming Plague: Newly Emerging Diseases in a World out of Balance*, (London, Atlantic Books, 1994) and Richard Preston's, *The Hot Zone*, (London, Corgi Books, 1995) caused me to think about a scenario of untreatable infections affecting the western world. Would nurses in westernised countries have the knowledge and experience to care for patients for whom no effective antibiotic was available? In thinking about this possibility, I realised a window of opportunity existed to collect oral testimonies from former nurses who had trained and worked in hospitals before the widespread availability of antibiotics. Might their memories provide insights into nursing the patient with a life threatening infection? And so this study was born.

Chapter 1

INTRODUCTION AND METHOD

1.1 The Context of the Study

This study examines nursing care in general hospitals in Britain during the 1930s and 1940s using oral testimonies as a means of uncovering and understanding methods and practices used in the management of life threatening infection before antibiotics became available.¹ It has explored practices that were conceived to minimise the presence of, and exposure to, potential sources of infection in the environment of the patient. Understanding how nurses managed the infected patient may offer insights of value to the management of current day or future infections for which no medication is available. During the 1930s sulphonamide drugs, which had bacteriostatic properties, were introduced into Britain.² In the 1940s a range of antibiotics, the first being penicillin, became available. These antibiotics were bactericidal.³ Before the introduction of sulphonamides and antibiotics, nurses working in general hospital cared for patients with a range of infections that are rarely seen in hospitals in the early 21st century.⁴ In the 1930s and 1940s, nurses working in general hospitals used techniques and skills that may have been lost to nurses with no experience of nursing before sulphonamides and antibiotics became available. The findings of this study suggest that nursing was grounded in sanitarianism, a movement that arose in the early nineteenth century as an approach to the control and elimination of miasma

¹ In this thesis 'general hospital' refers to either a voluntary hospital or local authority hospital which admitted patients under the care of a physician or surgeon.

² Sulphonamide is a generic term for a family of sulphur containing drugs of which the sulphanilamide group was the first to be identified, exemplified by Prontosil, and the sulphapyridine group of which M&B 693 is the most well known. Development of these drugs continued throughout the late 1930s and 1940s. Other groups include sulphathiazole, sulphadiazine, and sulphaguanidine. In the twenty first century the American spelling has been adopted whereby 'sulpha' is replaced by 'sulfa'. However the original spelling is used throughout this thesis to reflect the spelling of the time. Bacteriostatic refers to the arresting or hindrance of the growth of bacteria, see Harold W. Jones, Norman L. Hoerr, and Arthur Osol (eds), *Blakiston's New Gould Medical Dictionary*, (London, H. K. Lewis and Co. Ltd., 1951), p117.

³ Bactericidal refers to the destruction of bacteria, see Jones, Hoerr, and Osol (eds), *Blakiston's New Gould Medical Dictionary*, p116.

⁴ Two common infections were primary lobar pneumonia and carbuncle.

thought to be means of disease causation.⁵ It is suggested in this thesis that routinisation of care practices existed in order to manage infection risks. Routinisation enabled skills to be developed, and a hierarchy of routines enabled more technical skills to be acquired once fundamental skills had been learnt. The sulphonamide drugs and antibiotics introduced major change in the management of infections which had a considerable impact on the sanitarian approach to nursing care of the patient.

Nursing in the 1930s and 1940s was highly routinised and based on an apprenticeship style of training.⁶ Participants, generally, did not complain about this approach to training. They experienced it as providing a means to develop skills in a structured and safe way.⁷ Some did express a degree of dissatisfaction with the environmental cleaning duties they were expected to undertake questioning the relevance of these. The apprenticeship style of training has been the subject of criticism in the literature on a number of fronts on the grounds that: it provided poor quality education; affected recruitment and retention; too much of the work was considered inappropriate and 'menial'; and placed an expectation that nurses held an increasingly

⁵ Sanitarianism refers to the belief that protection from ill health and improvements to health can be achieved through the removal of dirt and filth from the environment together with the provision of pure air, pure water, good nutrition and good light. It was the underpinning strategy of the nineteenth and early twentieth century public health movement, see for example, Edwin Chadwick, *Report on the Sanitary Condition of the Labouring Population of Great Britain*, (London, W. Clowes and Sons, 1842) reproduced in full in M. W. Flinn, *Edwin Chadwick, Report on the Sanitary Condition of the Labouring Population of Great Britain*, (Edinburgh, Edinburgh University Press, 1963); C. Fraser Brockington, *Public Health in the Nineteenth Century*, (Edinburgh, E & S Livingstone, 1965); Harry Wain, *A History of Preventive Medicine*, (Springfield, Charles C. Thomas, 1970); Claire Hooker, 'Sanitary failure and risk: pasteurisation, immunisation and the logics of prevention', Chapter 6 in Alison Bashford and Claire Hooker, (eds), *Contagion; Historical and cultural studies*, (London, Routledge, 2001), p129-149; Michael Worboys, *Spreading Germs: Disease Theories and Medical Practice in Britain 1865-1965*, (Cambridge, Cambridge University Press, 2006), p38-42;; and David Wootton, *Bad Medicine: Doctors Doing Harm Since Hippocrates*, (Oxford, Oxford University Press, 2007), p180.

⁶ See, for example, Ann Bradshaw, *The Nurse Apprentice, 1860-1977*, (Aldershot, Ashgate, 2001); Gerard M. Fealy, *A History of Apprenticeship Nurse Training in Ireland*, (London, Routledge, 2006);

⁷ See, for example, Margaret S. Riddell, *A First Year Nursing Manual*, 5th edition, (London, Faber and Faber, 1939); Chapter 8 provides a fuller discussion of this interpretation.

untenable vocational commitment.⁸ However such criticisms in the literature are linked only weakly to any detailed analysis of the clinical work of nurses.

1.2 Rationale for the Study

The focus of much of the written history of nursing deals with political, management and education issues.⁹ There is a lack of evidence about the actual task of nursing. Initial searches for evidence of how the patient with an infection was cared for before antibacterial treatments were available in Britain found little evidence about the clinical work of nurses in general hospitals in the United Kingdom in the 1930s and 1940s.¹⁰ The infection risk to the patient from a wound infection, for example, was a major concern, one that could result in a fatal septicaemia.¹¹ Patients could be admitted to a general hospital because of pneumonia, with 50-70 percent of all cases over the age of 60 dying from lobar pneumonia.¹² Whilst the medical text by John Ryle and S. Elliott takes 24 pages to discuss the management of septicaemia and bacteraemia, and that by Robert Young takes 30 pages to examine lobar pneumonia there is a surprising lack of detail on the nursing care reported by these authors, beyond a request that skilled nursing care is given.¹³ Such absence of detail is commonplace within the medical texts of the time. Thus Ellen Musson, Chairman of the General Nursing Council for England and Wales, was given less than a full page to

⁸ Ministry of Health and Board of Education, *Interim Report of the Inter-departmental Committee on Nursing Services*, the Right Hon. The Earl of Athlone, Chairman, (London, HMSO, 1939). Hereafter referred to as the Athlone Committee, *Interim Report*.

⁹ Brian Abel-Smith, *A History of the Nursing Profession*, (London, Heinemann Educational, 1960); Susan McGann, *The Battle of the Nurses*, (London, Scutari Press, 1992); Anne Marie Rafferty, *The Politics of Nursing Knowledge*, (London, Routledge, 1996). See also chapter 3 below.

¹⁰ Margaret R. Currie, *Fever Hospitals and Fever Nurses: A British Social History of Fever Nursing: A National Service*, (London, Routledge, 2005). This book addresses fever nursing and fever hospitals between 1921 and 1971. It does not explore the work of nurses in general hospitals.

¹¹ John A. Ryle, J. A. and S. D. Elliott, 'Septicaemia and Bacteraemia', in Humphry Rolleston, (ed.), *The British Encyclopaedia of Medical Practice*, (London, Butterworth and Co., 1939), Volume 11, p76-89.

¹² Robert A. Young, 'Pneumonia, Lobar' in Humphry Rolleston, (ed.), *The British Encyclopaedia of Medical Practice*, (London, Butterworth and Co., 1939), Volume 9, p727.

¹³ Ryle and Elliott, 'Septicaemia and Bacteraemia', p85 call for careful nursing in relation to staphylococcal infection and p87 in respect of streptococcal infection; Young, 'Pneumonia, Lobar', p733 asks for skilled nursing.

discuss nursing staff duties at the end of a text designed for surgical staff.¹⁴ Horder and Gow mention only that the nursing of septicaemia patients is of 'great importance' but then offer no details.¹⁵ Other textbooks from the 1930s and 1940s offer little insight into nursing practices. James Livingstone suggested 'careful nursing, copious fluids, alkalis, saline aperients, adequate sleep' as the general treatment for septicaemia.¹⁶ Gordon Sears, a physician, provided a little more detail about what the nurse should do for the patient with septicaemia, but nothing about how the nurse should deliver care.¹⁷

The *British Journal of Nursing* published an account of a lecture by Donald MacIntyre MD DPH on infectious disease reporting his view that the general requirements for nursing an infectious case were 'cleanliness, fresh air, pleasant surroundings and careful observation and attention' adding that a 'good nurse is more important than the doctor, and she it is who, through her conscientious and skilled attention, will pull many a patient, suffering from infectious disease, back from the gate of death and will protect him from the complications liable to arise'.¹⁸ In terms of the secondary literature, Margaret Currie's study of the history of fever nursing in the UK, explored the provision, organisation and work of nurses who cared for the infectious patient, often in isolation hospitals, though sometimes in the home environment.¹⁹ Currie's

¹⁴ Ellen M. Musson, 'The House Surgeon and the Nursing Staff' in Hamilton Bailey, (ed.) *Pye's Surgical Handicraft: A manual of surgical manipulations, minor surgery, and other matters connected with the work of house surgeons and of surgical dressers*, 11th edition, (Bristol, John Wright and Sons Ltd, 1939), p 475. Dame Ellen Musson (1867–1960) one time Chair of the General Nursing Council for England and Wales, began nursing in 1895 at St Bartholomew's Hospital, London.

¹⁵ Horder, and Gow, A. E., 'Bacterial Diseases', in Frederick W. Price, (ed.), *A Textbook of the Practice of Medicine*, 5th edition, (London, Oxford University Press, 1937), p30.

¹⁶ James L. Livingstone, *Aids to Medicine*, (London, Baillière, Tindall and Cox, 1935), p2.

¹⁷ Gordon W. Sears, *Medicine for Nurses*, (London, Edward Arnold & Co.,1945), p16-17.

¹⁸ *British Journal of Nursing*, 'Lecture – Infectious Disease', *British Journal of Nursing*, (1939) 87, (March), p69. In this thesis the female gender is used to refer to the nurse; the vast majority of general hospital nurses were female. The male gender is used to refer to the patient except when specific female patients are cited.

¹⁹ Margaret R. Currie, *Fever Hospitals and Fever Nurses: A British Social History of Fever Nursing: A National Service*, (London, Routledge, 2005). Isolation Hospitals (alternatively known as fever hospitals) existed to provide care for patients with infectious diseases under the Notification of Infectious Diseases Act 1889. See, for example, William Robertson, *An Introduction to Hygiene*, 2nd edition, (Edinburgh, E. and S. Livingstone, 1939) p6-18.

study spanned a fifty year period from 1921 to 1971, and drew on the reported experiences (mainly in writing in response to a questionnaire) by a self selected group of former fever nurses.²⁰ Though interesting in many ways, it does not address the work of nursing in acute general hospital settings, and offers little detail about the nursing care of the patient with an infection. Overall, the primary and secondary sources fail to elaborate the skills required of the nurse caring for the infected patient.

Textbooks about nursing practice written in the 1930s and 1940s were often written in the style of training manuals with descriptions on how to undertake named procedures.²¹ The prescriptive style of such texts described the execution of the requisite procedure, but generally did not locate the procedure within the complexities of a hospital ward in which a range of activities were required to be undertaken. Other texts written for nurses give insights into clinical conditions.²² Texts written for nurses by medical practitioners sometimes combined both practical guidance and descriptions of clinical conditions, though again they tend to lack detail about the clinical work of nurses.²³ Jocalyn Lawler reported, in her phenomenological study of Australian nurses' clinical work, that she found a lack of research publications about the work of nurses to inform her understanding of what happened when the nurse was 'behind the screens' with a patient.²⁴ A study to investigate the nature of skilled nursing care in the 1930s and 1940s was needed to fill this evidence gap.

In addition, the example of hand hygiene from the more recent past suggests the potential for a difference between the expected and delivered practice. It is known

²⁰ Currie, *Fever Hospitals and Fever Nurses*, p7.

²¹ See, for example, A. Millicent Ashdown, *A Complete System of Nursing*, (London, J. M. Dent and Sons Ltd., 1928); Riddell, *A First Year Nursing Manual*; Kenneth D. Keele, *Modern Home Nursing*, (London, Odhams Press Ltd., undated); and Marjorie Houghton, *Aids to Tray and Trolley Setting*, 2nd edition, (London: Baillière, Tindall and Cox, 1943).

²² See, for example, Evelyn C. Pearce, *A Short Encyclopaedia for Nurses*, (London, Faber and Faber, 1933); Margaret Hitch, *Aids to Medicine for Nurses*, 2nd edition, (London: Baillière, Tindall and Cox, 1943).

²³ A good example is W. T. Gordon Pugh, *Practical Nursing including Hygiene and Dietetics*, 13th edition, (Edinburgh, William Blackwood and Sons, 1940).

²⁴ Jocalyn Lawler, *Behind the Screens: Nursing, Somology, and the Problem of the Body*, (Melbourne, Churchill Livingstone, 1991).

that cross-infection may result from poor hygiene practices.²⁵ A frequently cited study by Taylor, reported in 1978, demonstrated that hand hygiene was not performed effectively, with several areas of the hand surface frequently poorly cleansed or indeed missed altogether.²⁶ Later studies, principally by Didier Pittet with colleagues, demonstrated that compliance with hand hygiene expectations was poor.²⁷ Nurses achieved the best overall performance of between 55 percent and 65 percent compliance compared to other health care professionals in a series of studies based on non-participant observation by infection control nurses. These two aspects of hand hygiene, areas cleansed and compliance, raise questions about nurses' performance of other clinical practices. Pittet's studies were undertaken when antibiotics had been available for more than 50 years. Practices could have been different in the era before antibiotics were available. Nevertheless, these studies demonstrate there was a difference between theory and practice at the time the studies were undertaken. Is there evidence to be found that nurses in the 1930s and 1940s did not always comply with the procedures that were expected of them? Would an oral history study provide insights into compliance? Was the practice of nursing in the 1930s and 1940s delivered in accordance with published texts of the period? Former nurses from the 1930s and 1940s might have memories that would inform the understanding of what it was like to deliver care at that time. The value of oral history as a method to explore workplace practices is well established.²⁸ The purpose of this study was therefore to use the oral testimonies of former nurses to uncover insights into nursing practice in the 1930s and 1940s and to capture their experiences of the introduction of sulphonamides and antibiotics.

²⁵ Zsolt Filetoth, *Hospital Acquired Infection*, (London, Whurr Publishers, 2003), p117-20.

²⁶ L. Taylor, 'An evaluation of hand washing techniques', *Nursing Times* (1978) 74, (3), p108-110.

²⁷ Didier Pittet, Philippe Mourouga, and Thomas V. Perneger, 'Compliance with Hand washing in a Teaching Hospital', *Annals of Internal Medicine* (1999) 130, (2), p126-130; and, Didier Pittet, Stéphane Hugonnet, Stephan Harbarth, Philippe Mourouga, Valérie Sauvan, Sylvie Touveneau, Thomas V. Perneger, 'Effectiveness of a hospital-wide programme to improve compliance with hand hygiene', *The Lancet*, (2000) 356, (9238), p1307-1312.

²⁸ Paul Thompson, *The Voice of the Past*, 3rd edition, (Oxford, Oxford University Press, 2000), p88-93.

In the history of medicine, it is generally recognised that the development of antibiotics led to major changes in health care practices.²⁹ For example, the development of surgical techniques made open surgical repair of fractures possible since the availability of both prophylactic systemic and topical antibiotics reduced the risk of post-operation wound infections. Transplantation surgery was assisted with drugs that counteracted foreign tissue rejection and antibiotics that provided the patient protection when the immune system was suppressed. Many patients with infections who needed hospitalisation before the availability of sulphonamides and antibiotics were treated effectively at home after their introduction. Though antibiotics are claimed to have enabled major advances in medicine, no histories of medicine or nursing have systematically explored the impact of the introduction of sulphonamides and antibiotics on nursing practice. The oral evidence reported in this thesis suggests that the impact of these drugs was extensive, fundamentally changing nursing practice. It is suggested that these changes provided the catalyst that enabled subsequent educational and organisational changes in nursing to occur.³⁰

The inherent risks of resistant infection arising in the future from novel and difficult to treat infections will require skilled nurses, experienced in the management of patients with infections. Alarmist, journalistic books like *The Coming Plague*, and *The Hot Zone* reflect the anxieties of westernised societies about the spread of new, emerging and resistant pathological microbes.³¹ Though it may be all too easy to paint doomsday scenarios, these books highlight concerns in society that an epidemic of infectious disease could arise for which no preventative vaccination or effective treatments exist.

²⁹ See, for example, Walter C. Alvarez, 'The Antibiotics and the Clinical Practice of Medicine', in Iago Galdston, *The Impact of Antibiotics on Medicine and Society*, (New York, International Universities Press Inc., 1958), p179-186; James Le Fanu, *The Rise and Fall of Modern Medicine*, (London, Abacus, 2000), p5 & p191-195; Robert Bud, *Penicillin: Triumph and Tragedy*, (Oxford: Oxford University Press, 2007); and John T. McFarlane and Michael Worboys, 'The Changing Management of Acute Bronchitis in Britain, 1940-1970: The Impact of Antibiotics', *Medical History*, (2008) 52, (1), p47-72.

³⁰ See chapter 8 for a discussion of the evidence presented in this thesis.

³¹ Laurie Garrett, *The Coming Plague: Newly Emerging Diseases in a World out of Balance*, (London, Atlantic Books, 1994); Richard Preston, *The Hot Zone*, (London, Corgi Books, 1995).

Such concerns have attracted scholarly interest.³² Would the health care systems of the westernised nations, and nurses in particular, have the capacity and the experience to care for infected patients in this eventuality? The concerns raised by the potential threat of untreatable infection make it important to understand how nurses managed the patient with a life threatening infection prior to the availability of antibiotics. The most recent period in the UK when nurses did not have antibiotics available was just prior to the late 1940s.³³

Not only is the emergence of new infections of concern, but also the increase of resistance to antibiotics arising in bacteria, and to anti-viral medication in viruses. Resistance to antibiotics has existed from the earliest use of antibiotics, though the extent of resistance has been on the increase in recent years.³⁴ Examples of difficult to treat infections include extensively drug resistant *Mycobacterium Tuberculosis*,³⁵ and vancomycin resistant and methicillin resistant *Staphylococcus Aureus*.³⁶ An additional concern is that of Hospital Acquired Infections (also known as Healthcare Associated Infections) (HAIs). HAIs are commonplace in twenty first century western health care systems with point prevalence rates between 5 percent and 10 percent.³⁷ The evidence suggests that such prevalence levels appear to have persisted throughout

³² See for example the collections of papers in Richard M. Kraus, (ed.), *Emerging Infections: Biomedical Research Reports*, (London, Academic Press, 1998) and D. Ann Herring and Alan C. Swedlund, (eds), *Plagues and Epidemics: Infected Spaces Past and Present*, (Oxford, Berg, 2010).

³³ Penicillin was first available to the general populations of North America and Europe after World War II, but it took some years before widespread availability was commonplace. The availability of penicillin to the British public began in 1946, see David Greenwood, *Antimicrobial Drugs: A Chronicle of a Twentieth Century Medical Triumph*, (Oxford, Oxford University Press, 2008), p110.

³⁴ Mary E. Florey, (ed), *Antibiotic and Sulphonamide Treatment*, (Oxford, Oxford University Press, 1959), p1-2.

³⁵ World Health Organisation, Multi-drug Resistant Tuberculosis: 2013 Update, (http://www.who.int/tb/challenges/mdr/MDR_TB_FactSheet.pdf, accessed 3rd June 2013).

³⁶ Peter C. Appelbaum, 'The emergence of vancomycin-intermediate and vancomycin-resistant *Staphylococcus aureus*', *Clinical Microbiology and Infection*, (2006) 12, (s1), p16-23.

³⁷ Graham A. J Ayliffe, J. R. Babb, and Lynda J. Taylor, *Hospital Acquired Infection: Principles and Practice*, 3rd edition (Oxford, Butterworth-Heinemann, 1999), p1-2. A point prevalence rate is the number of existing cases in the total population at risk at a point in time, see David Bowers, *Medical Statistics from Scratch*, (Chichester, John Wiley and Sons Ltd., 2002), p42.

the second half of the twentieth century.³⁸ In recent years extensive monitoring of HAIs has been used in the United Kingdom in response to increases in rates of 'difficult to treat' infections. Principal amongst the causative 'difficult to treat' organisms have been Methicillin Resistant Staphylococcus Aureus and Clostridium Difficile. In England and Wales, Methicillin Resistant Staphylococcus Aureus infection reached a peak for females in 2005 causing 758 deaths and for males in 2007 causing 953 deaths, and Clostridium Difficile infection accounted for 8204 deaths in 2007.³⁹ Monitoring has shown decreasing numbers of patients infected by difficult to treat infections in UK hospitals from high points in the middle of the 2000s. The key element in reducing the death rate has been the implementation of a major programme to improve hand hygiene compliance.⁴⁰ Such evidence suggests that attention to hand hygiene practices was poor amongst health care professionals at the end of the twentieth and beginning of the twenty first centuries. Hand hygiene was reported to be rigorous and thorough in the 1930s and 1940s at a time when the participants in this study were in practice.⁴¹ This and other hygiene-related practices are examined in detail in this thesis.

1.3 Research Question

The factors discussed above in relation to possible future scenarios of untreatable infection and the present day experience of HAIs raise questions about how nurses managed the patient who developed an infection while in hospital prior to the widespread availability of the sulphonamide family of drugs and antibiotics. What practices did nurses follow when caring for patients? Were they wholly compliant with procedures? Exploring these questions may offer insights into the work of nurses at

³⁸ Graham A. J. Ayliffe, and Mary P. English, *Hospital Infection: From Miasmas to MRSA*, (Cambridge, Cambridge University Press, 2003), p189.

³⁹ See for example, Office for National Statistics, *Deaths involving Staphylococcus and MRSA, England and Wales, 1993–2011*, (available at <http://www.ons.gov.uk/ons/rel/subnational-health2/deaths-involving-mrsa/2007-to-2011/stb----mrsa.html>, released 22 August 2012, accessed 3rd June 2013), and Office for National Statistics, *Deaths involving Clostridium difficile: England and Wales, 2006 to 2010*, (Newport, Office for National Statistics, 2012).

⁴⁰ Department of Health, *Saving Lives: Reducing Infection, Delivering Clean and Safe Care*, (London, Department of Health, 2007).

⁴¹ See chapters 4 and 7 of this thesis.

that time. The aim of the present study was to explore the work of nurses in the period 1929 to 1948 with a particular emphasis on managing the patient with an infection. The starting point for the study, 1929, is the year that Alexander Fleming reported his discovery of penicillin in the autumn of 1928.⁴² The endpoint, 1948, represents the time when penicillin became widely available to the British civilian population having become commercially available in the United States of America during 1945 and the UK from 1946.⁴³ The endpoint of the study predates the creation of the National Health Service. The focus is entirely on British nursing practices.

1.4 Methods Used and Methodological Considerations

The research was undertaken using both oral and written testimonies of nurses, contemporary published material and secondary literature. In particular, the principal primary sources are a group of nineteen interviews, collected by the author during 2008-10. The participants were former nurses trained in hospitals in England during the 1930s and 1940s. Pseudonyms are used for this group of participants to preserve their anonymity. The pseudonyms appear in italics in the text to differentiate these participants from other sources. Additional evidence was collected from oral testimonies of former nurses held in archives and published memoirs of those who nursed during the 1930s and 1940s. Journals and textbooks written for nurses about nursing practice, medicine and surgery published during the 1930s and 1940s were also analysed. In addition, primary source material was drawn from published reports into the state of nursing, principally the Lancet Commission and the Athlone Committee reports.⁴⁴ A range of secondary source material was consulted.⁴⁵

⁴² Bud, *Penicillin: Triumph and Tragedy*, p1.

⁴³ Bud, *Penicillin: Triumph and Tragedy*, p61 and p75.

⁴⁴ *The Lancet Commission on Nursing: Final Report*, (London, The Lancet, 1932); Athlone Committee, *Interim Report of the Inter-departmental Committee on Nursing Services*.

⁴⁵ The secondary sources are referred to, as necessary, in subsequent chapters of the thesis.

1.4.1 Oral History Method

The production of history draws on materials from a variety of sources including the written word, art, building designs and a whole range of artifacts created by former societies.⁴⁶ History also draws on oral accounts of the past.⁴⁷ Both oral and documentary evidence may be contemporaneous with past events or produced sometime later. The historian needs to be aware of the context by which each source is prepared. Contemporary accounts may be produced to meet particular agendas. They are more likely to be accurate regarding factual detail. Later reports rely on memory but informants may use hindsight to contextualise events, or reshape their role in events.⁴⁸

Varieties of approach to capturing oral history have been used. Thus, prior to sound recording options, historians would write down accounts based on what they heard. The modern quest, in academia, for the reliability and validity of data, brings into question the reliability of such reports. Do historians capture what was said in full, or only those parts of accounts which were of interest to them? Paulo Jedlowski explained it is the past that 'structures the present through its legacy, but it is the present that selects this legacy'.⁴⁹ Once the availability of sound recording became an option, it was possible to capture oral histories more reliably. Oral history is considered by some to be the oldest method associated with recording the past.⁵⁰ Professor of Social History, Paul Thompson argues that it was commonplace prior to the development of writing as a means of recording the past.⁵¹ Oral history captures the living past, that

⁴⁶ Michael J. Galgano, J. Chris Arndt, and Raymond M. Hyser, *Doing History: Research and Writing in the Digital Age*, (Boston, Thomson Wadsworth, 2008), p6.

⁴⁷ Geertje Boschma, Margaret Scaia, Nerrisa Bonifacio, and Erica Roberts, 'Oral History Research', Chapter 6 in Sandra B. Lewenson, and Eleanor Krohn Herrmann, (eds), *Capturing Nursing History: A guide to historical methods in research*, (New York, Springer Publishing Co., 2008), p79-98.

⁴⁸ Alessandro Portelli, 'What makes oral history different', Chapter 3 in Robert Perks, and Alastair Thomson, (eds), *The Oral History Reader*, 2nd edition, (London, Routledge, 2006), p32-42.

⁴⁹ Paulo Jedlowski, 'Memory and Sociology: Themes and Issues', *Time and Society*, (2001) 10, (1), p29-44.

⁵⁰ Paul Thompson, *The Voice of the Past*, 3rd edition, (Oxford, Oxford University Press, 2000), p25.

⁵¹ Thompson, *The Voice of the Past*, p30.

which people alive can recall.⁵² Documenting history also requires a high level of literacy.⁵³ Where this is not available history can be lost to future generations unless passed on by oral means.⁵⁴

It is argued that history typically records major events, and draws on the memories of those involved in creating, influencing or managing these events. History has traditionally been accounts of the elite, those who shape events through their actions.⁵⁵ History has concentrated on events which have affected societies at large. Thus wars, famines, industrialisation, politics and major changes in society are typical areas of focus of the historian.⁵⁶ In these histories, it is the powerful whose history tends to be reported, those without power remaining invisible. Thompson offers useful advice about the undertaking of oral history projects.⁵⁷ In addition to its use as a means to add value to the biographies of the elite, oral history also offers a number of other opportunities. It can be the means by which the voices of the disenfranchised from the living past can be collected and as such it may enable new perspectives on history to be examined.⁵⁸ Thompson advises that oral history has particular advantages for labour history, being the history of the working class.⁵⁹ Oral history is said to have special value when exploring work processes.⁶⁰ Histories of working life can help in the investigation of technology and its use, and of the social and cultural relationships within the workplace.⁶¹ In the past women's experiences and contributions have tended to be under-reported by historians, and whilst considerable

⁵² Lynn Abrams, *Oral History Theory*, (London, Routledge, 2010), p18-19.

⁵³ This is not to imply that nurses in the 1930s and 1940s were illiterate.

⁵⁴ see for example, Portelli, 'What makes oral history different', p34; Abrams, *Oral History Theory*, p154-161.

⁵⁵ See for example, Elizabeth Fox-Genovese, 'History in a Post Modern World', Chapter 6 in Elizabeth Fox-Genovese and Elisabeth Lasch-Quinn, *Reconstructing History: The Emergence of a New Historical Society*, (London, Routledge, 1999), p40-45.

⁵⁶ Galgano, Arndt, and Hyser, *Doing History: Research and Writing in the Digital Age*, p13.

⁵⁷ Thompson, *The Voice of the Past*.

⁵⁸ Alistair Thomson, 'Making the most of memories: The empirical and subjective value of oral history', *Transactions of the Royal Historical Society*, 6th series, (1999) 9, p291-201.

⁵⁹ Thompson, *The Voice of the Past*, p88

⁶⁰ Thompson, *The Voice of the Past*, p91.

⁶¹ Daniel James, D., 'Listening in the cold' (2000), Chapter 7 in Robert Perks, and Alistair Thomson, (eds), *The Oral History Reader* 2nd edition, (London, Routledge, 2006), p83-101.

progress has been made since the 1960s women remain underreported in history.⁶²

In more recent times there has been an exploration of alternative histories. A range of accounts, that had not been given much exposure in the past, are now of interest.

Oral history is seen as one way to capture the accounts of the ordinary lives of the working classes, of the experience of work and home life, of the role of women and children. Oral history is an ideal tool for collecting the histories of the disenfranchised, that is those who do not feature prominently in the elite history.⁶³ Their stories have not been seen as important to the overall course of events.⁶⁴

Nursing, traditionally women's work, is an area for which oral history is particularly suited.⁶⁵ Firstly, as women's work it has been largely hidden from history.⁶⁶ Nurses who have featured have been those with some power, women who have been leaders, and instrumental in bringing about change.⁶⁷ Secondly, nursing as a form of work which addresses bodily functions is seen as low status work and as such has been hidden from society.⁶⁸ Historians of nursing have made use of oral history to capture, for example, the occupational histories of the elite in nursing, the memories of particular institutions, aspects of mental health nursing, recollections of war time, and aspects of clinical practice.⁶⁹ The primary data for this study centres on the clinical

⁶² See for example, Sheila Rowbotham, *Hidden From History*, 3rd edition, (London, Pluto Press, 1977) p. ix; Mary Sponberg, 'Introduction: 'Hardly any women at all?': Women writers and the gender of history' in Mary Sponberg (Ed.) *Writing Women's History since the Renaissance*, (Houndmills, Palgrave Macmillan, 2002), p.1.

⁶³ Alistair Thomson, 'Fifty Years On: An International Perspective on Oral History', *The Journal of American History*, (1998), 85, (2), p.581-595.

⁶⁴ Popular Memory Group, 'Popular Memory: Theory, Politics, Method', Chapter 6 in Richard Johnson, Gregor McLennan, Bill Schwarz, and David Sutton, (eds), *Making Histories: Studies in history-writing and politics* (London, Hutchinson, 1982), p.205-252.

⁶⁵ Susan H. Armitage, and Sherna Berger Gluck, 'Reflections on Women's Oral History: An Exchange', Chapter 6 in Robert Perks, and Alastair Thomson, (eds), *The Oral History Reader*, 2nd edition, (London, Routledge, 2006), p.73-82.

⁶⁶ Joan Kelly, *Women, History and Theory: The essays of Joan Kelly*, (Chicago, The University of Chicago Press, 1984).

⁶⁷ McGann, *The Battle of the Nurses*.

⁶⁸ Lawler, *Behind the Screens*. p.47.

⁶⁹ See, for example, John Hopton, 'Daily life in a 20th century psychiatric hospital: an oral history of Prestwich Hospital', *International History of Nursing Journal*, (1997) 2, (3), 27-39; Colette Clifford, (ed.) *QE Nurse 1938-1957: A history of nursing at the Queen Elizabeth Hospital, Birmingham*, (Studley, Brewin Books, 1997); Gerard M. Fealy, *The Adelaide Hospital School of Nursing 1859-2009: A Commemorative History*, (Dublin, The Columba Press, 2009); Jane Brooks, 'Managing the Burden: Nursing Older people in England, 1955-1980', *Nursing Inquiry*, (2011) 18, (3), p.226-234;

practices of former nurses, which, as noted above, are underreported in text documents. Oral history is therefore vital as a means of exploring their working lives.

1.4.2 Oral History and Memory

Joanna Bornat writes that oral history 'values memory as a source of information about the past'.⁷⁰ Yet oral history is more than a collection of memories taken at face value. The context of the memory must be identified since, for example, managers and workers may recall a workplace event differently though none are wrong in their recollection of the event. In a discussion of memory, Lynn Abrams identifies five different types of individual memory – semantic, procedural, working, episodic and flash-bulb. Episodic memory (sometimes referred to as autobiographical memory) is the most 'called upon in oral history interviews', and flash-bulb memory refers to the vividness with which some memories are recalled.⁷¹ Thus Yow reported that single incidents that affected an individual 'have a high rate of recall'.⁷²

The oral historian needs to be aware of both the strengths and the limitations of memory. The conception that memories of events fade with time is addressed by Valerie Yow.⁷³ She refers to work by Ebbinghaus (1885) that 'people forget more about a specific event in the first hour after it happens than during any other time'.⁷⁴ This does not mean that forgetting only occurs in this period. Forgetting continues over days, weeks and years, though its rate declines.⁷⁵ Abrams recognises that the accuracy of memory based on personal experiences has been criticised, but argues

Barbara Mortimer, *Sisters: Memories from the Courageous Nurses of World War Two*, (London, Hutchinson, 2012); Tommy Dickinson, *Mental Nursing and "Sexual Deviation": Exploring the Role of Nurses and the Experience of Patients, 1935-1974*, Unpublished PhD Thesis, (Manchester, University of Manchester, 2012).

⁷⁰ Joanna Bornat, 'Introduction', in Joanna Bornat, (Ed), *Reminiscence Reviewed: perspectives, Evaluations, Achievements*, (Buckingham, Open University Press, 1994), p3.

⁷¹ Abrams, *Oral History Theory*, p83.

⁷² Yow, *Recording Oral History*, p20.

⁷³ Valerie R Yow, *Recording Oral History: A practical guide for social scientists*, (Thousand Oaks, Sage Publications Inc., 1994).

⁷⁴ Yow, *Recording Oral History*, p19.

⁷⁵ Richard L. Gregory, (ed.) *The Oxford Companion to the Mind*, (Oxford, Oxford University Press, 1987), p264-5.

that such concerns are misplaced when the evidence is examined.⁷⁶ In her opinion recollection depends on the initial encoding of the memory and the circumstances under which the memory is retrieved. She reports that older people can recall events from their youth 'as long as the subject remains healthy'.⁷⁷ In this study of the work of nurses in the 1930s and early 1940s, participants were elderly. For example, one of the youngest participants, *Violet Vickers*, was 81 years of age in 2010 at the time of her interview, having started her nursing career at age 18 in 1947.⁷⁸ According to Bornat, retrieving memories of the distant past from older people has some similarities with reminiscence therapy and there is fine line between reminiscence work and oral history.⁷⁹ Elsewhere, Bornat clarifies that oral history has a focus on the content of memory whereas reminiscence therapy is concerned with the abilities needed to recall the past.⁸⁰

The issue of the reliability of memory in the histories captured is a concern of exponents, and critics alike. Ken Howarth notes that reliability is tested by relating the remembered data to evidence from other sources, be they other oral accounts or documentary sources.⁸¹ Memories that appear different to the collective should not necessarily be treated as false. The memories of the 'outsider', the person who is 'different' in some way to the majority, may be valid yet atypical when tested against other sources. The context from which they are told is vital. If the topic is of interest to the participant their recollection of events is considered to be more reliable.⁸² However, participants may be unwilling to recall particular memories to the oral

⁷⁶ Abrams, *Oral History Theory*, p86.

⁷⁷ Abrams, *Oral History Theory*, p90.

⁷⁸ The principal primary sources are a group of 19 interviews, collected by the author during 2008-10. These former nurses trained in UK hospitals during the 1930s and 1940s. Pseudonyms are used to preserve their confidentiality. Names are shown in italics in the text to differentiate participants from other sources. Violet Vickers, interviewed by David Justham on 24 May 2010 at Nottingham. Began SRN training in Nottingham in 1947.

⁷⁹ Bornat 'Introduction', p3.

⁸⁰ Joanna Bornat, 'Reminiscence and Oral History: Parallel universes or shared endeavour', Chapter 35 in Robert Perks, and Alastair Thomson, (eds), *The Oral History Reader*, 2nd edition, (London, Routledge, 2006), p456-473.

⁸¹ Ken Howarth, *Oral History: A Handbook*, (Thrupp, Sutton 1998), p81.

⁸² see for example, Thompson, *The Voice of the Past*, p132; and Bernstein, Nourkova and Loftus 'From Individual Memories to Oral History', p157-181.

historian.⁸³ The reasons for this will vary, and could relate to the rapport between the participant and the historian, the nature of the events being withheld, or the medium in use to record the interview. On this latter point, participants may request an audio recorder is turned off whilst a sensitive memory is recalled. Thompson suggests that 'remembering in an interview is a mutual process' and thus warns the interviewer to attempt to see the answers given from the participant's perspective.⁸⁴

The potential for memory to be limited by individual factors, the influence of collective memory, or social factors needs to be addressed by the interviewer in preparation for, during the interview, and throughout analysis and interpretation. In terms of individual factors, Elaine Batty discusses the relationship between interviewer and participant, noting that the presence of the interviewer will influence the interaction, and hence the recall of memories.⁸⁵ The availability of memorabilia can aid recall. Thompson considers mutual interests of participant and interviewer to be helpful though warns that interviewers must not lead participants towards answers that are outside their experience.⁸⁶ Michael Argyle, a social psychologist, offers practical advice to the interviewer that is designed to enhance participant responsiveness, for example relative seating positions and proximity, non-verbal communications such as body posture, facial expressions and style of dress.⁸⁷ In this study, the gender difference between interviewer and participant could influence the interview dynamics.

Memories may be influenced by social norms, events in peoples' lives and the values and customs of groups to which they belong. What people remember as well as what they forget is also influenced by the way they want to be depicted and to see themselves. The appreciation that memories of past events may be altered by intervening events is addressed by Alessandro Portelli when he writes that 'Changes which have subsequently taken place in the narrators' personal subjective

⁸³ Thompson, *The Voice of the Past*, p133.

⁸⁴ Thompson, *The Voice of the Past*, p157.

⁸⁵ Elaine Batty, 'Reflections on the use of oral history techniques in social research', *People, Place and Policy Online*, (2009) 3, (2), p109-121.

⁸⁶ Thompson, *The Voice of the Past*, p157.

⁸⁷ Michael Argyle, *The Psychology of Interpersonal Behaviour*, (Harmondsworth: Penguin, 1972), p37.

consciousness ... may affect ... the valuation and "colouring" of the story'.⁸⁸ Thus, conflation of memories from two or more events can occur and so appear associated with one event. For this reason, capturing recent memories is argued to be more reliable and valid than memories of events from further back in time. Nevertheless, Yow notes that historians 'cannot reconstruct a past or present event in its entirety because the [oral and other] evidence is always fragmentary'.⁸⁹

Recalling memories is a more complex process than reporting facts about the past. Portelli and others have highlighted the importance of being aware of the circumstances of the person doing the recollecting, including their position in society both at the time the events occurred and at the time of the interview.⁹⁰ The interviewer's own background and how this may relate to the participant may also influence the interview and a reflexive approach which recognises this dynamic process is required by the interviewer.⁹¹ In this study, the interviewer was a registered nurse and could speak a 'common' language with the participants. Closely aligned to this is 'collective memory', identified by nursing historian Sandra Lewenson as providing a professional identity for the nurse, and one which could unwittingly be introduced into the interview.⁹² Analysis of interview data needs to take into account the potential presence of both collective and individual memory.

Individual memories can also be influenced by collective or popular memory, the accuracy of which has been challenged by historians.⁹³ It is argued that this form of memory is often created from folklore, myth or rumour and becomes part of society's

⁸⁸ Portelli, 'What makes oral history different', p38.

⁸⁹ Yow, *Recording Oral History*, p22.

⁹⁰ See for example, Portelli, 'What makes oral history different', p32-42; Thompson, *The Voice of the Past*, p138-9; Valerie Yow, 'Do I Like Them Too Much?: Effects of the Oral History Interview and Vice-versa', Chapter 5 in Robert Perks, and Alastair Thomson, (eds), *The Oral History Reader*, 2nd edition, (London, Routledge, 2006), p54-72.

⁹¹ See for example, Popular Memory Group, 'Popular Memory: Theory, Politics, Method', p240; Abrams, *Oral History Theory*, p63-69.

⁹² Sandra B. Lewenson, 'Historical Research in Nursing: A Current Outlook', Chapter 19 in Cheryl Tatano Beck, (ed.), *Routledge International Handbook of Qualitative Nursing Research*, (Abingdon, Routledge, 2013), p257.

⁹³ Abrams, *Oral History Theory*, p95.

conception of the past.⁹⁴ Collective memory is formed not only by participants and witnesses to events but by the interpretation of contemporaries of and successors to the event.⁹⁵ Its interest and importance to oral historians relates to the reasons such myths and legends develop, including the need to promote a particular view of the past which does not threaten the social order, the need to forget defeat or to place blame elsewhere.⁹⁶ Hence, memories may be deliberately shaped by public institutions and leaders to encourage the creation of the 'right' memories of past events, through such actions as the control of information, or an emphasis or underplay of particular actions and roles that contributed to an event.⁹⁷ Elizabeth Tonkin recognises the implication of this when noting that there is an inextricable link between myth and history such that collective memory applies 'equally to written histories'.⁹⁸

Another feature of collective memory is its power to help people to recall aspects of their past lives, although, as noted above, it may also lead to a distortion of their place and role in the events recalled.⁹⁹ Thompson argues that collective memory can be a strength rather than a weakness, particularly where occupational groups that have similar roles are concerned.¹⁰⁰ In addition Samuel and Thompson argue that collective memories enable minorities to reinforce their own sense of self in their quest for survival.¹⁰¹ The Popular Memory Group considered that individuals compose or construct collective, or popular, memories using the language and meaning of their

⁹⁴ See for example, Popular Memory Group, 'Popular Memory: Theory, Politics, Method'; Raphael Samuel and Paul Thompson, *The Myths We Live By*, (London, Routledge, 1990); Daniel M. Bernstein, Veronika Nourkova and Elizabeth F. Loftus 'From Individual Memories to Oral History', Chapter 5 in Alexandra M. Columbus, (ed.), *Advances in Psychology Research*, volume 54, (Hauppauge, Nova Science Publishers, 2008), p157-181.

⁹⁵ Bernstein, Nourkova and Loftus 'From Individual Memories to Oral History', p168.

⁹⁶ For examples of differences between collective memory and facts about events see Alessandro Portelli, 'The Massacre at the Fosse Ardentine: History, Myth, Ritual and Symbol', Chapter 1 in Katharine Hodgkin and Susannah Radstone, (eds), *Memory, History, Nation: Contested Pasts*, (New Brunswick, Transaction Press, 2006), p29-41; Alistair Thomson, 'Anzac Memories: Putting Popular Memory Theory into Practice in Australia', Chapter 19 in Robert Perks, and Alastair Thomson, (eds), *The Oral History Reader*, 2nd edition, (London, Routledge, 2006), p244-254.

⁹⁷ Bernstein, Nourkova and Loftus 'From Individual Memories to Oral History', p175.

⁹⁸ Elizabeth Tonkin, 'History and the Myth of Realism', Chapter 1 in Raphael Samuel and Paul Thompson, *The Myths We Live By*, (London, Routledge, 1990), p25-35

⁹⁹ Thompson, *The Voice of the Past*, p136.

¹⁰⁰ Thompson, *The Voice of the Past*, p151.

¹⁰¹ Raphael Samuel and Paul Thompson, 'Introduction', in Raphael Samuel and Paul Thompson, *The Myths We Live By*, (London, Routledge, 1990), p19.

culture.¹⁰² The result is memories which reflect similar themes and sequencing of events in a story albeit they arise from different individuals from different places and time. One theme that arose in this study which was reported by all participants was the nurse's involvement in environmental cleaning and so raises the possibility that individual memories were influenced by a collective memory that nurses undertook such work. This example illustrates that collective memory is a relevant issue in nursing in general and for this study in particular.

1.4.3 Sampling Strategy

One of the challenges of collecting oral history is to find participants. It was not known how many former nurses from the period under study might still be alive to form the population from which a sample could be invited to participate in the study. Appendix 1 contains an analysis of data compiled from both Brian Abel-Smith's book *A History of the Nursing Profession* and the National Statistical Office. The different data were used to produce an estimate of the population of potential informants in 2007 when data collection was about to commence.¹⁰³ The estimation suggested that between 3,600 and 4,080 former registered nurses or nurses in training from the period were still alive in 2007. Of these, it was estimated that fifty percent were assumed to be unavailable due to ill health and infirmity or subsequent death.¹⁰⁴ Of the remaining fifty percent, a two percent sample would yield between 36 and 41 persons. The inclusion criteria were former nurses who were either trained or were in training and who worked in either a voluntary or local authority hospital, in or before 1949. Further inclusion criteria required them to have cared for persons in medical, surgical or orthopaedic wards. Exclusion criteria related to the ability to participate in the study –

¹⁰² Popular Memory Group, 'Popular Memory', p207.

¹⁰³ Abel-Smith, *A History of the Nursing Profession*; National Statistical Office, *Population Estimate*, (London, National Statistical Office, 2007), (available at http://www.statistics.gov.uk/census2001/pop2001/england_wales.asp accessed 18th October 2007).

¹⁰⁴ David Sweet, 'Health' in Jen Beaumont, (ed.) *Social Trends 41*, (London, Office for National Statistics, 2010) identifies approximately 45% of women aged 65 in 2005-2007 described their health as less than good. Data for older women is not available but this proportion is more likely to increase than decrease.

thus those with incapacity due to dementia, or with illnesses affecting the ability to communicate effectively, for example stroke, were excluded.

Recruitment involved advertising and use of the media wherever possible, through letters and/or press releases to local newspapers and national magazines aimed at the older population. Margaret Currie successfully recruited 130 former Registered Fever Nurses by use of "Choice" magazine, then subsequent use of networks with recruits.¹⁰⁵ Christine Hallett, Michele Abendstern and Lesley Wade used local newspapers to attract recruits in their study of cotton mill workers.¹⁰⁶

Recruitment was targeted in the Northwest and the East Midlands regions of England in the first instance to minimise travelling costs. A number of hospitals had Nurses' Leagues which offered opportunities for their current and former nurses to meet socially or otherwise provide ways to keep in contact. Two of these proved to be fruitful sources for recruits. Fifty sets of recruitment information (see Appendices 2, 3, 4, 5) were prepared under the University of Manchester's letterhead, forwarded to the membership secretary of one Nurses' League who undertook to mail her members who met the inclusion criteria.¹⁰⁷ This approach produced nine participants, with a further 23 who declined (six on the grounds of health problems, seven who considered they did not meet the inclusion criteria, four who considered their memory not good enough, four returned undelivered by the Royal Mail, and two declined because they considered they lived too far away). In addition, a relative of one former member submitted her sister's written memoirs of her nursing experiences. Six further recruits came forward following a meeting with the second Nurses' League. The four other recruits to the study were the result of personal contacts (3) and an advertisement in

¹⁰⁵ Margaret R. Currie, 'Fever Nurses' Perceptions of Their Fever Nurse Training', *International History of Nursing Journal*, (1997) 3, (2), p5-19,

¹⁰⁶ Christine Hallett, Michele Abendstern, and Lesley Wade, 'The Struggle for Sanitary Reform in the Lancashire Cotton Mills, 1920-1970', *Journal of Advanced Nursing*. (2004) 48, (3), p257-265.

¹⁰⁷ The study evolved from an initial plan to focus on the period from 1919 (the Nurses' Registration Act 1919) and the commencement of World War II. The title of the study as shown in the appendices reflects this earlier timescale. As the study developed it became more relevant to focus on the timescale encapsulated by the discovery of penicillin in 1929 to its widespread availability in Britain in 1948.

the local press (1) (see Appendix 6). A second response to the press advertisement was received, but unfortunately, this person died before she could be interviewed. See appendix 7 for brief biographical details of each participant. Participants trained in hospitals in Lancashire, Nottinghamshire, Leicestershire, London, south Yorkshire and north Wales. Following qualification they may have worked in other hospitals, including field hospitals during World War II.

Following receipt of written agreement to participate, arrangements were made to undertake the interview at a location acceptable to the interviewee. Opportunities to opt out of the interview were offered at the time it was arranged, at confirmation between twenty four and forty eight hours prior to the interview, and at the commencement of the interview. At these points it was restated that a family member or friend could be present if desired (see section 1.4.3). Suggested topic areas for discussion were included in the letter of invitation. These topics were also included in subsequent correspondence and served as a prompt to help participants prepare for the interview. Participants were advised that having memorabilia, for example group photographs from the period of the study, as well as being interesting in their own right were known to aid recall and stimulate reminiscence.¹⁰⁸

1.4.4 Ethical Considerations

A number of ethical issues were considered relating to the interviewing of potentially vulnerable, elderly and frail individuals in their own homes. For this reason, informed written consent was sought prior to interview. This is a fundamental principle of research with human subjects, as in, for example the Declaration of Helsinki.¹⁰⁹ Writers on oral history recognise the need for informed consent.¹¹⁰ Boschma and colleagues also make the point that the process of obtaining consent extends to

¹⁰⁸ See, for example, Faith Gibson, *Reminiscence and Recall: A guide to Good Practice*, (London, Age Concern England, 1994); and Abrams, *Oral History Theory*, p84.

¹⁰⁹ World Medical Association, *Declaration Of Helsinki: Ethical Principles for Medical Research Involving Human Subjects*, 8th revision, (2008), Available at: <http://www.wma.net/e/policy/b3.htm>. Date of access 21st July 2009.

¹¹⁰ See, for example, Boschma, Scaia, Bonifacio, and Roberts, 'Oral History Research', p85; Yow, *Recording Oral History*, p90-91.

explanation about the future storage and access to any recording of the history.¹¹¹

Obtaining written consent also provided some indication of the participant's capacity to participate. Following discussion with the University of Manchester's Ethics Committee on Research with Human Subjects it was agreed that an invitation to have a friend or family member present would be offered.

Another issue for consideration is the safety of the researcher. As a lone worker, meeting participants required a safe system of work.¹¹² This involved leaving details of the visit address, appointment time and expected departure time with a named individual who was contacted to confirm the researcher's safety following the interview.

All personal information of participants, consent forms, deposit agreements, transcripts and copies of recordings were held securely in a locked filing cabinet. Access to data held on computer was password controlled.

1.4.5 Recording Oral History

Ken Howarth's *Oral History: A Handbook* provided a useful guide for the conduct of oral history interviews.¹¹³ His approach, supported by ideas from Michael Argyle on interpersonal behaviours and their application to interviews, helped in formulating the approach to the interviews.¹¹⁴ The oral history interview used a guided interview schedule (Appendix 8).¹¹⁵ The topics listed served as a prompt, and open ended questions were used to encourage the participant to report their memories. Interviews were recorded using a digital audio recorder (model: Marantz PMD660) capable of

¹¹¹ Boschma, Scaia, Bonifacio, and Roberts, 'Oral History Research', p86.

¹¹² Kader Parahoo, *Nursing Research: Principles, Process and Issues*, 2nd edition, (Houndmills, Palgrave Macmillan, 2006), p350.

¹¹³ Ken Howarth, *Oral History: A Handbook*, (Thrupp, Sutton 1998).

¹¹⁴ Argyle, *The Psychology of Interpersonal Behaviour*.

¹¹⁵ The guided interview schedule is variously described. Parahoo, *Nursing Research: Principles, Process and Issues*, p323 refers to the interview being 'focused' by having a list of topics to be covered. Duane R. Monette, Thomas J. Sullivan, and Cornell R. Dejong, *Applied Social Research: A Tool for the Social Sciences*, 7th edition, (Belmont, Thomson Brooks Cole, 2008), p172 describes the unstandardized interview in which the interview has a guide outlining topic areas to be explored.

meeting the demands of the interview. A pilot test of the recording equipment enabled optimum working conditions to be identified. When battery operated, spare batteries were available, an important consideration, ensuring participants' time was not wasted. If mains operated, permission to use a mains supply was sought at the time of the interview. The length of the interview was determined by the participant. Data collection would have ceased at any point if it was perceived that the participant was getting tired, though this did not occur. Once collected, data were transferred onto a password controlled laptop, 'back up' discs made and held in locked filing cabinets. In addition, the researcher made field notes during and following the interviews which helped contextualise data analysis.¹¹⁶

1.4.6 Transcribing Data

Abrams considers the interview to be a performance, and that an audio recording or a combined image and sound recording are only a record of the performance.¹¹⁷ Thus the participant's use of accents and facial expressions, choice of dress and location, gesticulations, the selection of anecdotes and the style of telling can all influence the interviewer's interpretation of the oral history account. Samuel made the observation that 'People do not usually speak in paragraphs, and what they have to say does not usually follow an ordered sequence of comma, semi-colon, and full stop; yet very often this is the way in which their speech is reproduced'.¹¹⁸ The interviews for this study were transcribed verbatim to produce a file for analysis. A verbatim transcript helps to preserve an essence of the account should there be deterioration of the actual recorded sound quality over time.¹¹⁹ Thompson, writing in the early days of digital technology for the recording of interviews and their preservation, suggests that there

¹¹⁶ Field notes provide useful aide memoirs about interviews, for example, the environment, whether the participant spoke softly or was hard of hearing, information given following completion of the interview.

¹¹⁷ Abrams, *Oral History Theory*, p145.

¹¹⁸ Raphael Samuel, 'Perils of the Transcript', (1971), Chapter 32 in Robert Perks, and Alastair Thomson, (eds), *The Oral History Reader*, (London, Routledge, 1998), p389-392; David Justham, *Transcribing the voice – punctuation and nuance in transcriptions to reveal the voice*. Paper presented at the Hearing Voice in Oral History conference, Oral History Society. (Glasgow, University of Glasgow, 3rd-4th July, 2009).

¹¹⁹ Yow, *Recording Oral History*, p227.

would be rapid transcription of sound recordings via the use of voice recognition software.¹²⁰ In 2013 the software lacks the sophistication to transcribe, accurately, multiple voices within a conversation being of more value in systems which rely on one voice.¹²¹

There are a number of issues to be addressed when transcribing audio recordings.¹²² Of particular importance is the accurate reflection of a conversation which can demonstrate the meaning and character of the original conversation. In an otherwise useful discussion about transcribing data Thompson offers little detail on the practicalities of transcription.¹²³ The principle expounded is that a full transcription should be made. However, Thompson recognises that 'The spoken word can very easily be mutilated in being taken down on paper'.¹²⁴ There are problems in accounting for loss of gestures, timing – pauses and speed of speech – and variations in tone and emphasis. Furthermore, he adds that distortion is both serious and probable through 'imposing standard grammatical forms and a logical sequence of punctuation'.¹²⁵ The extraction and editing of data from a transcript can compound the representation of the original to such an extent that 'the original speech becomes unrecognizable'.¹²⁶ The difficulties of transcription are enhanced when transcribing dialect or unfamiliar technical terms leading to the need for phonetic spelling – though too much of this can render a text absurd.¹²⁷ In discussing a practice of some oral historians, citing in particular those from the United States, Thompson examines the process of verifying a transcript by asking the informant to confirm the accuracy of the transcription.¹²⁸ This is not without its risks. Many participants are tempted to rewrite parts of the original, changing it to more grammatically correct prose. Elite

¹²⁰ Thompson, *The Voice of the Past*, p258.

¹²¹ See, for example, <http://www.makeuseof.com/answers/what-software-can-transcribe-a-recording-with-multiple-voices> (date accessed 19th February 2014).

¹²² See for example, Yow, *Recording Oral History*, p227-236; Thompson, *The Voice of the Past*, p257-264; Francis Good, 'Voice, Ear and Text: Words, Meaning and Transcription', Chapter 27 in Robert Perks, and Alastair Thomson, (eds), *The Oral History Reader*, 2nd edition, (London, Routledge, 2006), p362–373.

¹²³ Thompson, *The Voice of the Past*, p257–264.

¹²⁴ Thompson, *The Voice of the Past*, p260.

¹²⁵ Thompson, *The Voice of the Past*, p260.

¹²⁶ Thompson, *The Voice of the Past*, p260.

¹²⁷ Thompson, *The Voice of the Past*, p262.

¹²⁸ Thompson, *The Voice of the Past*, p263.

participants may have the time, confidence and skills to do this, and potentially rewrite history at the same time.¹²⁹ Here, Thompson also alludes to those in public office who might use such opportunities to edit the transcript to change the impressions of their role in certain events.¹³⁰ For less able informants on the other hand it may be an unreasonable burden to expect verification of a transcript.

It would appear that there is no standard for transcription amongst oral historians.¹³¹ While the transcription of recorded histories is recognised as necessary by many authors, the process of transcription is not addressed as fully as might be expected.¹³² There appear to be several approaches adopted. Yow suggests that this is because of the time consuming nature of accurate transcription, requiring high levels of skill and judgement to produce an accurate transcription.¹³³ Several issues need to be addressed: should the transcription be complete, partial or just a summary; writing text to reflect emotion, emphasis, intonation, pauses, interruptions, and incidental noises. Complete transcription is a lengthy process, with various estimates suggesting that transcription time is anywhere between five hours and ten hours for every one hour of recording time.¹³⁴ Transcription time varies for a number of reasons including the clarity of the recording, diction speed, and presence of dialect words, local accents, jargon words, and technical terms all of which may be unfamiliar to the transcriber. The preference is for the person who undertakes the analysis of the data to undertake the transcription also. The process of transcribing enables the analyst to become familiar with the content and construction of the oral history.¹³⁵ Transcription may be only partial.¹³⁶ In this event, the transcription takes account of only those sections of the recordings which offer particular evidence for the historian. In this case

¹²⁹ Thompson, *The Voice of the Past*, p263.

¹³⁰ Thompson, *The Voice of the Past*, p263.

¹³¹ Good, 'Voice, Ear and Text', p362–373.

¹³² Jane A. Edwards, 'Principles and Contrasting Systems of Discourse Transcription', Chapter 1 in Jane A. Edwards, and Martin D. Lampert, (eds), *Talking Data: Transcription and Coding in Discourse Research*, (Hillsdale, Lawrence Erlbaum Associates, 1993), p3-32; Yow, *Recording Oral History*, p227-236; Thompson, *The Voice of the Past*; and Good, 'Voice, Ear and Text'.

¹³³ Yow, *Recording Oral History*. p228.

¹³⁴ Thompson, *The Voice of the Past*, p257-258.

¹³⁵ Yow, *Recording Oral History*, p228.

¹³⁶ Yow, *Recording Oral History*, p227; and Good, 'Voice, Ear and Text', p362–373.

the analyst prepares transcripts based on a detailed understanding of the content of the sound recording. Elsewhere, summaries of sound recordings are produced.¹³⁷ Such summaries are more appropriate as abstracts for use by archives. In these instances the summaries enable users of the archive to appreciate the range and nature of the content of a particular sound recording.

It was considered that summarisation of sound recordings was inappropriate for the current study. The aim for this project was to achieve a complete transcription for all recordings. Verbatim transcripts of these histories were therefore prepared. It is acknowledged however that they remain incomplete as a transcript of the words spoken and cannot take account of all the non-verbal gestures and intonations in the conversation.¹³⁸ See Appendix 9 for a sample transcript. Capturing the essence of a recording is of particular interest. An oral history interview is influenced by both the interviewer and participant. The interviewer may introduce bias through particular lines of questioning, by interruption, by use of non-verbal cues. The participant as informant determines the historical account, and may consciously decide what to report and what memories need to be suppressed.¹³⁹ These issues apart, the actual sounds within the recording need to be reflected in the transcript. There may be occasions when it is difficult to differentiate a sound, for example the classic *Two Ronnies* sketch "*Fork Handles*" from 1976 in which the shop assistant misinterprets sound as 'four candles' not 'fork handles'.¹⁴⁰ In this study discussion by participants of the 'back round' had the potential to be misheard as the 'background'. How is tone to be conveyed in an English transcript? This was not specifically addressed in detail in any texts, though phonologists have complex tools for this.¹⁴¹ Both Good and Yow address the problems of punctuation, and reproduction of hesitations within the transcript, illustrating how meaning can change as a result of punctuation.¹⁴²

¹³⁷ Good, 'Voice, Ear and Text', p362-373.

¹³⁸ Samuel, 'Perils of the Transcript', p389-392.

¹³⁹ Abrams, *Oral History Theory*, p130-152.

¹⁴⁰ Gerald Wiley, *Fork Handles*, Performed by Ronnie Barker and Ronnie Corbett on the *Two Ronnies Show*, (London, BBC 4th September, 1976).

¹⁴¹ Peter Ladefoged, *A Course in Phonetics*, 2nd edition, (San Diego, Harcourt Brace Johanovich, 1982).

¹⁴² Good, 'Voice, Ear and Text', p364; and Yow, *Recording Oral History*, p229-230.

In the light of the problems raised by transcription, the author repeatedly listened to the recordings as part of the analytical process. An interviewer reading transcripts of interviews s/he has conducted has a memory of the voice and intonations used by the participant, but this is rarely conveyed to others who read the transcripts.¹⁴³

1.4.7 Analysis of Oral History Data

Thematic content analysis was used to identify recurring themes within the oral testimonies.¹⁴⁴ Thus environmental cleaning was the predominant theme amongst my participants when seeking memories of being a first-year probationer. Within this theme sub-themes were identified, for example on the time of day when cleaning took place, the range and method of cleaning activities. Documentary evidence from the 1930s and 1940s, other oral histories, published memoirs and secondary sources were used to validate, challenge or support the emerging themes from the oral history narratives.¹⁴⁵ The interpretation of the data was guided by hermeneutic principles, which in this thesis recognised that the interpretation was made by the researcher whose own experience of hospital work initially began in 1970 and within nursing from 1973.¹⁴⁶ Iterative processes inherent within hermeneutics enhanced the data analysis, testing understanding against other primary and secondary sources concerning nursing work in the 1930s and 1940s. Presentations through seminars and conference papers, and discussions with colleagues helped with refinements of the interpretation.¹⁴⁷ The analyses of Victorian nursing by Alison Bashford, Sioban Nelson

¹⁴³ Abrams, *Oral History Theory*, p145.

¹⁴⁴ Judith Lathlean, 'Qualitative Analysis', Chapter 27 in Kate Gerrish and Anne Lacey, *The Research Process in Nursing*, 5th edition, (Oxford, Blackwell Publishing Ltd., 2006), p417-433.

¹⁴⁵ Thompson, *The Voice of the Past*, discusses two tests for reliability being the evidence of similar accounts in other testimonies and correlation with documentary sources.

¹⁴⁶ Zygmunt Bauman, *Hermeneutics and Social Science: Approaches to Understanding*, (Abingdon, Routledge, 2010), p7-22 describes exploring the meaning of actions, seeking clarification, use of reflection which draws on personal experiences to understand and explain the data collected.

¹⁴⁷ David Justham, *Nurses' work with patients suffering from life-threatening hospital acquired infection prior to 1945*, Seminar paper presented to the Centre for the History of Science, Technology and Medicine, (Manchester, University of Manchester,

and Martha Vicinus, and the nature of dirt as examined by Mary Douglas provided some insights about nursing work before the availability of antibiotics.¹⁴⁸

1.4.8 Archival Research

Issues concerning constructing the past begin with establishing what evidence is available. Primary sources of evidence can be found in archives. These can hold documents and books, other recorded forms (for example audio recordings) and artefacts from previous generations.¹⁴⁹ Examination of these sources may help to establish facts about the topic under study.¹⁵⁰ Homer Hockett describes two examinations.¹⁵¹ The first test is to establish the extant reality of sources such as identifying authorship, locating the date of creation, determining the original form and detection of spurious documents. Secondly, Hockett advocates criticism of the content to explore the literal and intended meaning of statements within documents; dealing with unsubstantiated material which may be considered gossip, rumour, slander, myths, legends and traditions; testing the truthfulness of the content by cross reference, and removing discredited material. Hockett's view is that the recovery of

25th November 2008); David Justham, *The clinical work of hospital nurses between 1930 and 1945*, Paper presented to paper to the International Perspectives in the History of Nursing Conference, (Egham, Royal Holloway College, 14–16th September 2010); David Justham, *The domestic duties of nurses in the 1930s*, Paper presented to the United Kingdom Centre for the History of Nursing and Midwifery annual colloquium, (Glasgow, Glasgow Caledonian University, 1st April 2011); David Justham, *Those maggots did a marvellous job: The changing work of civilian nurses with the emergence of penicillin during the 2nd World War*. Paper presented to an 'invitation only' colloquium, (Manchester, University of Manchester, 30th June 2011).

¹⁴⁸ Martha Vicinus, *Independent Women: Work and Community for Single Women 1850–1920*, (London, Virago Press Ltd., 1985); Sioban Nelson, *Say Little, Do Much: Nurses, Nuns and Hospitals in the Nineteenth Century*, (Philadelphia, University of Pennsylvania Press, 2001); Alison Bashford, *Purity and Pollution: Gender, Embodiment and Victorian Medicine*, (Houndmills, Macmillan Press Ltd., 1998); Mary Douglas, *Purity and Danger: An Analysis of Concepts of Pollution and Danger*, (London, Routledge Classics, 2002).

¹⁴⁹ Keith C. Mages, and Julie A. Fairman, 'Working with Primary Sources: An Overview', Chapter 9 in Sandra B. Lewenson, and Eleanor Krohn Herrmann, (eds), *Capturing Nursing History: A Guide to Historical Methods in Research*, (New York, Springer Publishing Co., 2008), p129-148.

¹⁵⁰ Christine Hallett, ' "Truth about the Past?" The Art of Working with Archival Materials', Chapter 10 in Sandra B. Lewenson, and Eleanor Krohn Herrmann, (eds), *Capturing Nursing History: A Guide to Historical Methods in Research*, (New York, Springer Publishing Co., 2008), p149-158.

¹⁵¹ Homer C. Hockett, *The Critical Method in Historical Research and Writing*, (New York, Macmillan, 1955), p13-72.

the past is achieved through determinable facts.¹⁵² These tests are reiterated by Galgano and colleagues who require the historian to consider tests of authorship, point of view of the author, the intended and unintended audiences, purpose, tone and language used, and the significance of the various sources of evidence used.¹⁵³ Marwick is credited with the notion of 'unwitting testimony', by which is meant differences may occur between the intended information of the original author and his/her unintentional attitudes and values and cultural perspectives which are conveyed within the source.¹⁵⁴ Application of the tests suggested by Hockett and Galgano and colleagues was used to establish the reliability and validity of archival sources.

There are a number of archives of relevance to this study. These are The Royal College of Nursing (RCN) Archive held in Edinburgh, the Wellcome Trust's Archive in London and the University of Huddersfield Archive. The RCN Archive was originally established to maintain an archive of the work of the RCN, and holds the most important collections dedicated to the history of the nursing profession in the UK.¹⁵⁵ The Archive holds a collection of around 300 oral testimonies of former nurses recalling their careers and experiences of nursing ranging from World War I to more recent times. A number of these recordings refer to nursing in the 1930s and 1940s, and were accessed for data relating to clinical practice in the 1930s and 1940s. The Wellcome Library in London is a leading library of medical literature and archives, and its archives hold a wealth of material on the history of medicine. Within its range of material it is possible to find personal papers of former nurses, and books about nursing. The archive has been used to help contextualise the environment of hospital nursing in the 1930s and 1940s with reference to the medical understanding of disease. Of particular interest is the state of understanding of disease causation, and the extent that nursing practices in the 1930s and 1940s were comparable to nursing practices arising at a time when miasma was

¹⁵² Hockett, *The Critical Method in Historical Research and Writing*, p13.

¹⁵³ Galgano, Arndt, and Hyser, *Doing History: Research and Writing in the Digital Age*, p57-62.

¹⁵⁴ Marwick, *The New Nature of History*, p172-179.

¹⁵⁵ RCN Archive details available at http://www.rcn.org.uk/development/library_and_heritage_services/library_collections/rcn_archive (latest access 19th February 2014).

considered to be a source of disease. The archive holds a range of nursing textbooks utilised in this study. The University of Huddersfield Archives holds transcripts of the interviews collected by Graham Thurgood for a study of nursing in general hospitals.¹⁵⁶

1.4.9 Use of Memoirs

In addition to the oral testimonies collected for this study, evidence is also drawn from a number of published memoirs of former nurses of the 1930s and 1940s. These needed to be subjected to the techniques of source criticism referred to above. Published memoirs have the potential to be embellished in order to entertain their readership. In addition, authors have reasons for recounting their experiences which may concern particular agendas. Some of the texts used are edited collections of memoirs from several former nurses. In these instances, it is possible that the collections could reflect the particular interests of the editors as they select the anecdotes and experiences of their informants. Nevertheless, these memoirs served as a useful adjunct to the oral testimonies and helped to validate or challenge the evidence emerging from participants in this study.

1.5 Historiographical Considerations

This section comments on both the fields of history and the task of the historian in the interpretation of data.

1.5.1 Nursing History as a Separate Field of History

A number of fields of study within the discipline of history have emerged over time including political, economic and military genres. Fragmenting history into 'thematic and period subspecialisms' is useful in order to help organise and interpret data about

¹⁵⁶ University of Huddersfield Archives details available at <http://www.hud.ac.uk/archives/archivalcollections> (latest access 25th February 2014)

the past.¹⁵⁷ These fields are considered arbitrary by some historians, thus Sheila Rowbotham noted that 'the demarcations we impose are equally artificial' and caution is needed in assigning historical studies to particular fields.¹⁵⁸ In the past the history of nursing rather than being seen as a field in its own right has found expression through other subdivisions of history. Those fields of relevance to this thesis are social history, women's history, history of occupations, institutional history and the history of medicine. Social history is concerned with the changes in society and historians of nursing like Monica Baly, Robert Dingwall, Anne-Marie Rafferty and Charles Webster located their studies within this field.¹⁵⁹ Britain experienced major social change during the inter-war period of the 1920s and 1930s. One example of this was the changing opportunities for female employment, as, for example, in London County Council's removal in 1935 of the bar to married women working as teachers, and in more light engineering work as domestic service opportunities declined.¹⁶⁰ The thesis explores the work of nurses and therefore makes a contribution to occupational history. All the participants in this study were women and in exploring their experiences of practice the thesis makes a contribution to women's history. Institutional history is of relevance in so far as the organisation of nursing work reported in this thesis is located within the confines of hospitals. The sulphonamide family of drugs became available in the 1930s and antibiotics in the 1940s. The impact of these drugs on nursing practices also informs the history of medicine. Whilst these fields of history are informed by this study, in recent years the history of nursing has emerged as a field in its own right.¹⁶¹ The content and purpose of nursing history has been discussed

¹⁵⁷ Popular Memory Group, 'Popular Memory: Theory, Politics, Method' p221.

¹⁵⁸ Sheila Rowbotham, *A Century of Women: The History of Women in Britain and the United States*, (Harmondsworth, Penguin, 1999), p3.

¹⁵⁹ Robert Dingwall, Anne Marie Rafferty, and Charles Webster, *An Introduction to the Social History of Nursing*, (London, Routledge, 1988); Monica Baly, (ed.), *Nursing and Social Change*, 3rd edition, (London, Routledge, 1995).

¹⁶⁰ Gail Braybon and Penny Summerfield, *Out of the Cage: Women's Experience in Two World Wars*, (Abingdon, Routledge, 2013), p146; Deidre McLoskey, 'Paid Work', Chapter 11 in Ina Zweiniger-Bargielowska, *Women in Twentieth-Century Britain*, (Harlow, Pearson Education Limited, 2001), p168; Penny Summerfield, *Reconstructing Women's Wartime Lives: Discourse and Subjectivity in Oral Histories of the Second World War*, (Manchester, Manchester University Press, 1998), p197-250.

¹⁶¹ See for example Sandra B. Lewenson, and Eleanor Krohn Herrmann, (eds), *Capturing Nursing History: A Guide to Historical Methods in Research*, (New York, Springer Publishing Co., 2008). The appointment of Christine Hallett as the first

in the literature with several authors calling for focus which makes the history of nursing a unique field of study, the consensus being to explore the clinical work of nurses.¹⁶² This uniqueness should not isolate the history of nursing from other fields of history, but rather the insights that are uncovered should be contextualised by reference to and integrated with the narratives emerging through the other fields of history.¹⁶³ Lewenson reports that since last decade of the twentieth century historians of nursing have begun to explore the history of 'work nurses did at the bedside' in order to explore nursing practices.¹⁶⁴ It is primarily within this emerging subspecialism of the history of nursing practice that this study is located.

1.5.2 The Interpretation of Data to Inform History

Jenkins and Munslow describe three types of historical analysis, namely, reconstructionism, constructionism, and deconstructionism.¹⁶⁵ The study of history also draws on a range of techniques and strategies to help interpret source material. Three of these are empiricism, hermeneutics, and discourse analysis. The empirical approach is fundamental to reconstructionism whereby attempts are made to reconstruct the past and to describe the events that happened as an 'objective historical narrative'.¹⁶⁶ The empirical approach calls for historians to establish facts and the reconstructed historical account becomes a series of interconnected facts. Some analysts of history consider empiricism and reconstructionism to be similar if not the same.¹⁶⁷ However, there is not complete agreement. The empirical approach advocated by Marwick, for example, denies that historians can reconstruct the past

Professor of Nursing History within Europe in 2012 recognises the growth of this discipline amongst European nations.

¹⁶² See for example, Christopher Maggs, 'A History of Nursing: A History of Caring?', *Journal of Advanced Nursing*, (1996) 23, (3), 630-635; Patricia D'Antonio, 'Revisiting and Rethinking the Rewriting of Nursing History', *Bulletin of the History of Medicine*, (1999) 73, p268-90; Sioban Nelson, 'The Fork in the Road: Nursing History vs. the History of Nursing', *Nursing History Review*, (2002) 10, p175-88.

¹⁶³ Nelson, 'The Fork in the Road', p182.

¹⁶⁴ Lewenson, 'Historical Research in Nursing', p263.

¹⁶⁵ Keith Jenkins, and Alun Munslow, 'Introduction', in Keith Jenkins, and Alun Munslow, (eds), *The Nature of History Reader*, (London, Routledge, 2004), p1-18.

¹⁶⁶ Jenkins and Munslow, 'Introduction', p7.

¹⁶⁷ see, for example, Bonnie G. Smith, *The Gender of History: Men, Women and Historical Practice*, (Cambridge, Harvard University Press, 1998).

but rather suggests that they contribute 'knowledge ... about the past'.¹⁶⁸ The historian's task is to identify the authenticity of sources and of the facts within these sources. The strengths of the empirical approach lie in the establishment of facts, such as authorship of sources, the dating of original sources, relationships between sources, and the recognition of material which may not be associated with the original. It enables material of a later date to be identified. Its principle weakness is that there is no interpretation of the facts.¹⁶⁹ Whilst facts may be established and presented in a chronological or other coherent manner, it fails to offer meaning and/ or relevance of the facts in the context of the society to which they relate. Lynn McDonald's work on chronology in her reproduction of Florence Nightingale's 'Notes on Nursing for the Labouring Classes' is a useful illustration of how to reconstruct the history of a text by cataloguing how the text of the original changes with subsequent editions.¹⁷⁰ To be able to reconstruct the past accurately assumes that adequate and sufficient evidence is available.

Concerns have been expressed about the ability of historians to reconstruct the past by a dispassionate, empirical exploration of historical evidence. Jenkins and Munslow address these under the terms constructionism and deconstructionism.¹⁷¹

Constructionists, create history by the application of interpretation of the uncovered evidence.¹⁷² Jenkins and Munslow argue that the interpretative approaches of constructionists do not override the empirical and objective methodology of reconstructionists. Constructionists build on the established facts to present an interpretation of the uncovered evidence. The history created by constructionists has its own potential problems. Not only does it suffer from potential inadequacy of the evidence available, it is open to potential different interpretations of the evidence. Interpretations need to be tested against the evidence, and against new evidence which emerges subsequently. One approach to interpretation is hermeneutics.

¹⁶⁸ Arthur Marwick, *The New Nature of History: Knowledge, Evidence, Language*, (Basingstoke, Palgrave, 2001), p29.

¹⁶⁹ Jenkins and Munslow, 'Introduction'.

¹⁷⁰ Lynn McDonald, (ed.), *Florence Nightingale on Public Health Care*, (Waterloo, Wilfrid Laurier University Press, 2004), p17-162.

¹⁷¹ Jenkins and Munslow, 'Introduction'.

¹⁷² Jenkins and Munslow, 'Introduction' p11.

Hermeneutics helps to explore the meaning of a primary source.¹⁷³ This approach is normally associated with written primary sources but can apply to oral evidence as well.¹⁷⁴ John Thompson's introduction to the translation of Paul Ricouer's French essays offers insights into the problems of interpretation of historical text.¹⁷⁵ Thompson discusses four issues which arise.¹⁷⁶ Firstly, the meaning of what is recorded may change over time. The reader may interpret the written words in different ways to the original intended meaning of the word. Secondly, the written word cannot reflect accurately what the originator of the text was intending to say, or had said. In this sense, the power of expression and use of punctuation and other textual notation cannot accurately reflect the emphases, nuances and urgency or otherwise of the delivery. Thirdly, the text is decontextualised from the time and place, the social conditions and historical settings from which it emerges. Thus the reader meets the text in isolation of its original context. The fourth issue is closely aligned to the third, and this addresses the background and experiences of the historian who brings these frames of reference to the interpretation of the text. Thus the construction of history inevitably relies on the interaction of the historian with his/her sources in a variety of ways. However, Stanford cautions the historian to be aware that a source is a construction of several types, or levels, of evidence each needing its own interpretation.¹⁷⁷ Draper reports that hermeneutic interpretation draws on the historian's own experiences and knowledge.¹⁷⁸ He indicates that understanding of history arises from the interaction of the historian's prejudices (or presuppositions) with those of the evidence under study. This thesis primarily seeks to develop a

¹⁷³ Michael J. G. Stanford, *The Nature of Historical Knowledge*, (Oxford, Blackwell, 1986).

¹⁷⁴ Dona R. Carpenter, 'Phenomenology as Method', Chapter 4 in Helen J. Streubert, and Dona R. Carpenter, (Editors), *Qualitative Research in Nursing: Advancing the Humanistic Imperative*, 2nd edition, (Philadelphia, Lippincott, 1999), p43-64

¹⁷⁵ John B. Thompson, *Paul Ricouer - Hermeneutics and the Human Sciences: Essays on language, action and interpretation*, (Cambridge, Cambridge University Press, 1981), presents a translation of some of Ricouer's views on hermeneutics. The theory of hermeneutics as defined by Ricouer concerns the processes involved in understanding when applied to the interpretation of texts.

¹⁷⁶ Thompson, *Paul Ricouer*, p13-14.

¹⁷⁷ Stanford, *The Nature of Historical Knowledge*.

¹⁷⁸ Peter Draper, *Nursing Perspectives on the Quality of Life*, (London, Routledge, 1997).

constructionist approach to the development of a history of nursing in the hospital setting in the pre-antibiotic period. My interpretation of this period in history will be influenced by reflection on my general nursing experience which began in 1973 at a time when the apprenticeship approach to training was still practised. In addition my experience as a specialist Community Public Health Nurse - Occupational Health, and interest in infection control also helped in the interpretation of uncovered themes.

The construction of history using the technique of hermeneutics, challenges the historian to understand the primary sources under study. The deconstructionist approach to history questions interpretations of sources, recognising that interpretations 'exist only in relation to other interpretations'.¹⁷⁹ Deconstructionists share many of the methods of critique associated with the post-modern movement.¹⁸⁰ Postmodernism identifies concerns about the certainty of historical fact such that the past can never be fully recreated or understood.¹⁸¹

The historiographical considerations lead the author to acknowledge that the history he has created in this thesis would be categorised as 'constructed' history. The thesis does not present a narrative of interrelated facts in isolation of any interpretation. The uncovered evidence is interpreted to suggest a system of nursing that evolved to enable its probationers to develop skills in a structured and safe way that ultimately enabled practitioners to achieve expertise in technical tasks when exposed to infective material. Such skills were necessary to manage the infection risk to the patient and the practitioner.

¹⁷⁹ Jenkins and Munslow, 'Introduction', p12.

¹⁸⁰ Callum G. Brown, *Postmodernism for Historians*, (Harlow, Pearson Education Ltd., 2005), p40.

¹⁸¹ Brown, *Postmodernism for Historians*, p29.

1.6 Summary of Method

Consideration of historical method suggests that the study of nursing the hospitalised patient with a life threatening infection in the 1930s and 1940s was possible through the analysis of oral testimonies collected from participants who were nursing in this period. This presented particular challenges since elderly participants were recalling events from several decades earlier. Such recall might be influenced by the experiences of intervening years, and the accuracy of memories. The evidence was corroborated by other primary source material. A number of interrelated themes emerged within the oral testimonies, which form the basis of the interpretation offered in Chapter 8 below.

1.7 Structure of the Thesis

One of the strong themes to emerge from the oral testimonies collected for this study was associated with cleanliness, and Chapter 2 includes a discussion of this in the context of the transition to germ theory. The discovery of penicillin was reported in 1929, and throughout the subsequent two decades progress was made by pharmacologists and microbiologists in the battle to control infections and infectious disease. Before the widespread availability of both the sulphonamide group of drugs and antibiotics there was a fear of pathogenic infection. Chapter 2 also considers society's reaction to this fear and the level of immunological understanding in explaining an individual's response to infection.

Chapter 3 explores issues arising from historical studies of the nursing profession. The hiddenness of accounts of nursing practice is examined before an exploration of the status of aspects of nursing work. Between 1929 and 1948, a period described by Ann Bradshaw as an 'age of reports', and by Susan McGann, Anne Crowther and Rona Dougall as nursing's 'struggle for influence' a number of studies investigated

recruitment, retention and the context of nursing work.¹⁸² The chapter continues with comments on the issues in the 1930s and 1940s that have attracted the attention of historians of nursing.

Chapter 4 considers the management of the infection risk faced by nurses in relation to their own protection and the expectation of many in the nursing profession for individuals whose attitude was to be one of self-sacrifice in the care of patients irrespective of the risks to the nurse's own health. Chapters 5, 6, and 7 examine in turn environmental cleaning, personal care of the patient and wound care. The sequence is deliberate, and approximates to the probationer's journey through three years of training. In Year One, contrary to their expectations of nurse training, probationers were faced with duties which tended to keep them away from the bed side. It is a contention of this thesis that such duties enabled the junior probationer to develop skills in controlling the infection risk, and to observe more senior and skilled probationers and nurses at work in what was a dangerous environment, where the potential to acquire an infection was high. As the junior probationer gained experience in managing the environment they were allowed to get more closely involved with patients, as reported in Chapter 6. By this time they might have absorbed practices to help them avoid acquiring infections. Chapter 6 explores aspects of the direct care given to patients. The more senior probationers and qualified staff were most often associated with the technical care delivery. Chapter 7 explores wound care as an example of a technical task. An infected wound could be a potent source of pathogens, and as such would require very careful management. Chapter 8 attempts to draw together the common threads emerging from the previous chapters and relate these to the currently extant history of nursing. Highly developed skills in minimising transmission of the infection risk were required. However, the advent of the sulphonamide group of drugs in the late 1930s and of antibiotics in the 1940s resulted in enormous advances in the management of patients with infections. The impact on

¹⁸² Ann Bradshaw, *The Nurse Apprentice 1860–1977*, (Aldershot, Ashgate, 2001), p82-112; Susan McGann, Anne Crowther, and Rona Dougall, *A History of the Royal College of Nursing 1916–1990: A voice for Nurses*, (Manchester, Manchester University Press, 2009). p86-125.

nursing was profound such that major changes in the content of nursing work were made possible. Chapter 9 considers the implications of the study and recommendations for necessary further work.

Chapter 2

UNDERPINNING CONCEPTS OF RELEVANCE TO INFECTION IN THE 1930S AND 1940S

2.1 Introduction

In a study examining the clinical work of nurses at a time before the availability of antibiotics it is relevant to explore some concepts about the nature of infection and the management of the risks of acquiring an infection. This chapter consequently outlines aspects of the understanding of the causes of infection at the end of the 1920s and developments in infection management which occurred during the period under study.

2.2 Miasma and Germ Theories

A major change took place in the understanding of the causes of disease from the middle of the nineteenth century through to the 1930s. This change was the transition from seeing disease as caused by 'miasma' to an understanding of diseases arising from specific causes.¹ The advent of germ theory led to specific infectious diseases being understood as caused by invasion of specific micro-organisms rather than emerging spontaneously from 'foul air' or 'filth' in the environment.² By the 1930s understanding of the nature and biology of micro-organisms was still in its infancy, and not all infectious diseases had a clearly identified and associated micro-organism.³ There is evidence, as noted by the medical historian Michael Worboys, that the transition from miasma to germ theory was not straightforward, with differing

¹ See, for example, Michael Worboys, *Spreading Germs: Disease Theories and Medical Practice in Britain 1865–1965*, (Cambridge, Cambridge University Press, 2006); and Graham A. J. Ayliffe, and Mary P. English, *Hospital Infection: From Miasmas to MRSA*, (Cambridge, Cambridge University Press, 2003).

² A. Millicent Ashdown, *A Complete System of Nursing*, (London, J. M. Dent and Sons Ltd., 1928) refers to specific infective diseases as those for which a known pathogenic organism is present. See page 256. The clear implication is that others are not known.

³ See, for example, Charles R. Box, 'Typhus Fever', in Frederick W. Price, (ed.), *A Textbook of the Practice of Medicine*, 5th edition, (London, Oxford University Press, 1937) p256-231 in which the carrier of the infection is known but the causative organism is speculation, with *Rickettsia prowazeki* being postulated.

concepts about the nature of 'germs' and differing interpretations of the management of the environment to minimise infection risk.⁴ Germ theory was problematic in its early period due to the 'powerful and persistent argument' that the presence of germs did not always result in an infection or infectious disease.⁵ There had been little formulation of germ theory's relationship with conceptions of the body's resistance to infection via the immune system.⁶ In his analysis of medical progress, David Wootton concludes that the rate of development in medicine, following the introduction of antiseptic surgery by Lister in 1865, was slow with only a gradual decline in old therapies.⁷ He asserts that support for germ theory could have led to an early search for injectable chemicals to kill germs. Wootton writes that 'Penicillin could have been developed at almost any point after 1872. But there was no conceptual model for an antibiotic. The risks seemed high and the rewards uncertain'.⁸ According to Wootton, improvements in medical technology could lead to a reduction in medical staff attending patients and in consequence a reduction in medical staff incomes. This fear of the loss of earnings might have influenced slowness to change practice. As a consequence retaining practices based on old ideas, such as miasma, tended to persist well beyond the date new technologies or theories were introduced.⁹ Suellen Hoy noted that Americans accepted germ theory only gradually as it was 'difficult to understand and even more difficult to prove', and that it was not until the first two decades of the twentieth century that miasma gave way to germ theory.¹⁰ Flinn noted that the elimination of miasma as a cause for disease had not been 'entirely achieved by the mid-twentieth century' since practices used to eradicate it 'could do nothing but

⁴ Worboys, *Spreading Germs*.

⁵ Worboys, *Spreading Germs*, p6.

⁶ Worboys, *Spreading Germs*, p120-121; Arthur M. Silverstein, *A History of Immunology*, (London, Academic Press, 1989) p38-58.

⁷ David Wootton, *Bad Medicine: Doctors Doing Harm Since Hippocrates*, (Oxford, Oxford University Press, 2007), p 251.

⁸ Wootton, *Bad Medicine*, p251.

⁹ Wootton, *Bad Medicine*, p252-6.

¹⁰ Suellen Hoy, *Chasing Dirt: The American Pursuit of Cleanliness*, (Oxford: Oxford University Press, 1995), p70 and p86.

good'.¹¹ Evidence suggests that it took considerable time for the concept of miasma to be overtaken entirely by germ theory.

Persistence of ideas associated with miasma as an explanation of disease causation may have been due to variations in the understanding of germ theory. Worboys demonstrates that several different interpretations of germ theory existed.¹² Fundamentally, all theories were based on a disease 'germ' which grew in the host human. There was debate about the nature of the germ. The idea of a germ gave rise to the seed and soil metaphor, the seed being the 'germ', the soil the human host.¹³ There were differences in understanding of the seed – whether this was a micro-organism itself or a product from a micro-organism (for example, chemical toxin or spore) – and thus differences arose in the approach to dealing with the seed. Such differences are seen in the antiseptic movement associated with the work of Joseph Lister (1827–1912), and the aseptic approach of Charles Barrett Lockwood (1856–1914).¹⁴ The aseptic movement believed in the need to create and maintain germ free environments, whereas the antiseptic movement focussed on the need to kill contaminating germs. Regarding the theory of the host as the soil, Worboys argues that sanitarians were more concerned with strengthening the soil to resist the seed, rather than with actions to remove or destroy the seed which had become embedded in the soil.¹⁵ Worboys offers some insight in the transition of understanding for both infection and contagion. Infection came to be understood as the acquisition of micro-organisms and contagion as the transmission by whatever means of micro-organisms from one host to another.¹⁶

¹¹ M. W. Flinn, 'Introduction', in M. W. Flinn, (ed.), *Edwin Chadwick, Report on the Sanitary Condition of the Labouring Population of Great Britain*, (Edinburgh, Edinburgh University Press, 1963), p63.

¹² Worboys, *Spreading Germs*. The whole of the text is devoted to demonstrating the varieties of interpretation.

¹³ Worboys, *Spreading Germs*, p6-7.

¹⁴ Asepsis is defined as being free of micro-organisms and includes the processes for preventing contamination by micro-organisms, and antiseptic is the removal of contaminating micro-organisms through destruction by chemical agents. For example see Jennie Wilson, *Clinical Microbiology: An Introduction for Healthcare Professionals*, (London, Baillière Tindall, 2000), p380.

¹⁵ Worboys, *Spreading Germs*, in various places.

¹⁶ Worboys, *Spreading Germs*, p38.

Ideas of miasma underwent re-interpretation as germ theory developed. Worboys argues that the twenty first century perception of miasma as being associated with 'disease-poisons wafting around in mists' should be viewed with caution since miasmatic explanations of disease were 'quite precise and amongst the most well grounded ideas of the Victorian period'.¹⁷ He notes that miasmatic views of disease persisted between 1865 and 1900, and probably into the twentieth century, in the ways that clinicians, and particularly public health officials, approached the prevention of exposure to infectious diseases.¹⁸ By the start of the twentieth century there were differences between germ theorists (who used scientific, laboratory based techniques) and sanitarians (considered unscientific and bureaucratic).¹⁹ The origin of sanitarianism was that the provision of pure air, pure water and attention to cleanliness and hygiene could exclude miasma.²⁰ A number of authors recognise the persistence of the concept of miasma influencing explanations of disease well into the twentieth century.²¹ Alison Bashford found such ideas in twentieth century texts of nursing.²² Elsewhere there is evidence of the persistence of miasmatic theory. Thus John Duffy in his history of public health in America noted that 'the miasmatic thesis still remained basic to the sanitary movement ... and until World War 1 sewer gas was considered by most Americans to be a source of disease'.²³ Hoy, in her exploration of household cleaning, notes the persistence that ideas of miasma and the emergence of germ theory would leave many Americans confused well into the 1920s about the best ways to prevent infectious disease.²⁴ Whilst no evidence was found to suggest that miasma was considered to be a cause of disease in the 1930s and 1940s, the literature points to the distinct possibility that practices which had their origins in miasmatic theory may be found in this period.

¹⁷ Worboys, *Spreading Germs*, p38.

¹⁸ Worboys, *Spreading Germs*, p234-276.

¹⁹ Margaret Pelling, 'The meaning of contagion: reproduction, medicine and metaphor', Chapter 1 in Alison Bashford and Claire Hooker, (eds), *Contagion; Historical and cultural studies*, (London, Routledge, 2001), p15-38.

²⁰ Pelling, 'The meaning of contagion', p15-38.

²¹ See for example, John Duffy, *The Sanitarians: A History of American Public Health*, (Chicago, University of Illinois Press, 1990), p129; and Hoy, *Chasing Dirt*, p106; Alison Bashford, *Purity and Pollution: Gender, Embodiment and Victorian Medicine*, (Houndmills, Macmillan Press Ltd., 1998) p133.

²² Bashford, *Purity and Pollution*, p133.

²³ Duffy, *The Sanitarians*, p129.

²⁴ Hoy, *Chasing Dirt*, p106.

Florence Nightingale, a sanitarian, was known for her support of miasma and her resistance to germ theory. Lynn McDonald gives an interpretation of a change in Nightingale's views on germ theory.²⁵ The evidence for this change is discussed in more detail in appendix 10 of this thesis. Her requirements for managing the environment in the home and in hospital, particularly her quest for replacing 'foul air' and the removal of 'filth', were associated with miasma as the cause of disease. Whilst Nightingale, in later life, might have acknowledged the existence of bacteria, her advice for controlling contagious disease was grounded in sanitarian measures, which had their origins in miasma theory.²⁶

The secondary literature reports both changing understandings of germ theory as it evolved during the nineteenth century and a persistence of ideas associated with the miasma causation of disease well into the twentieth century. Wootton suggests that medical practitioners resisted change, and so continued with practices with which they were familiar.²⁷ Hence it might be possible that persistence in the use of 'sanitarian' nursing can be observed in the work of nurses into the 1930s and 1940s. Sanitarian nursing is exemplified in the approach to nursing described by Nightingale in *Notes on Nursing: What it is and What it is not*, which addresses nursing actions designed to eliminate miasma.²⁸

2.3 Ideas of Sanitation

Florence Nightingale (1820–1910) was a great supporter of the sanitary movement, and had envisioned that nurses would be effective sanitarians.²⁹ McDonald records Nightingale's 'vision of a public health care system based on positive measures to

²⁵ Lynn McDonald, (ed.), *The Nightingale School*, (Waterloo, Wilfrid Laurier University Press, 2009), p13-21.

²⁶ Lynn McDonald, (ed.), *Florence Nightingale on Public Health Care*, (Waterloo, Wilfrid Laurier University Press, 2004), p573.

²⁷ Wootton, *Bad Medicine*, p251.

²⁸ Florence Nightingale, 'Notes on Nursing: What it is and What it is not' in Lynn McDonald, (ed.), *The Nightingale School*, (Waterloo, Wilfrid Laurier University Press, 2009), p579-705.

²⁹ Florence Nightingale, Letter to Dr G H De'Ath 20th May 1982, Wellcome Ms 5473/5, in Lynn McDonald, (ed.), *Florence Nightingale on Public Health Care*, (Waterloo, Wilfrid Laurier University Press, 2004), p591-2.

promote good health and prevent disease'.³⁰ The argument used by sanitarians was driven by the notion that removing dirt and 'filth' also eradicated miasma as a cause of disease.³¹ Sanitation is seen as those actions implemented to improve environmental conditions and was co-incidental with, and probably a driving force for, the emergence of the public health movement.³² A number of writers have examined ideas which link into this theme, principally Mary Douglas and Alison Bashford, and these are examined separately below.³³

Anthropologist Mary Douglas's classic study explored issues of purity and danger in so-called 'primitive religions'.³⁴ She attempted to define the concepts of purity and pollution as symbolic constructs.³⁵ Such constructs serve as ways to help societies maintain order and control within them, and have been applied to other settings, notably Bashford's study of Victorian nursing.³⁶ Bradshaw's study of the apprenticeship system in nurse education placed great emphasis on Nightingale's insistence that applicants for training needed a Christian vocational commitment.³⁷ Though nursing in the twentieth century cannot be called a 'primitive religion', Douglas's ideas may have some relevance to an examination of the work of nurses.

Douglas asserted that '[t]here is no such thing as absolute dirt: it exists in the eye of the beholder'.³⁸ The development of this notion leads her to identify that removing dirt is a positive strategy for organising and ordering an environment because dirt is 'matter out of place'.³⁹ Pollution (the presence of dirt) becomes a source of danger, requiring the rituals and religious practices of primitive societies to deal with the

³⁰ McDonald, (ed.), *Florence Nightingale on Public Health Care*, p6.

³¹ Ayliffe, and English, *Hospital Infection*, p2.

³² Monica Baly, (ed.), *Nursing and Social Change*, 3rd edition, (London, Routledge, 1995), 94–110.

³³ Bashford, *Purity and Pollution*; Mary Douglas, *Purity and Danger: An analysis of concepts of pollution and danger*, (London, Routledge Classics, 2002).

³⁴ Douglas, *Purity and Danger*, p5-7.

³⁵ Douglas, *Purity and Danger*, p3.

³⁶ Bashford, *Purity and Pollution*.

³⁷ Ann Bradshaw, *The Nurse Apprentice, 1860–1977*, (Aldershot, Ashgate, 2001), p1–28.

³⁸ Douglas, *Purity and Danger*, p2.

³⁹ Douglas, *Purity and Danger*, p44.

presence of pollution.⁴⁰ Douglas explored the concept of hygiene to explain the rules by which dirt is managed. Yet, the view that dirt is a relative concept calls for society to change its hygiene rules as knowledge and understanding of dirt changes.⁴¹ Societies have their rules or conventions which hold them together, derived, in Douglas's terms, from their primitive religious experiences. Societies evolve when there are changes in their religious beliefs. As societies evolve so too do their ideas of the meaning and constitution of dirt. Thus Douglas argued that present day Western/European ideas of dirt 'express symbolic systems ... that the difference between pollution behaviour in one part of the world and another is only a matter of detail'.⁴² Writing in 1966, Douglas reminded her readers that 'The bacterial transmission of disease was a great nineteenth-century discovery. ... We must be able to make the effort to think back beyond the last 100 years and to analyse the bases of dirt avoidance, before it was transformed by bacteriology'.⁴³

In exploring dirt as a relative concept there are indications that an object or person can be both pure and impure.⁴⁴ Douglas addressed the idea that it is the pure which removes the impure.⁴⁵ For example, a priest is able to remove the impurity within a soul through hearing the confession of the penitent. Bashford develops this idea by constructing the nurse as pure.⁴⁶ She argues that the nurse becomes legitimised by professional training and enabled to deal with the detritus of society, in particular the bodily excretions of the ill and with the pollution of ill health within society.⁴⁷ The image of the new nurse, promoted and encouraged by Nightingale, was intended to be sober and religiously dedicated to serving her patients and employers.⁴⁸ The nurse uses hygienic practices designed to clean and sanitise both domestic and hospital environments.⁴⁹ Bashford argues that illness was a response to putrefying and

⁴⁰ Douglas, *Purity and Danger*, p3.

⁴¹ Douglas, *Purity and Danger*, p8.

⁴² Douglas, *Purity and Danger*, p43.

⁴³ Douglas, *Purity and Danger*, p44.

⁴⁴ Douglas, *Purity and Danger*, p44-45.

⁴⁵ Douglas, *Purity and Danger*, p169.

⁴⁶ Bashford, *Purity and Pollution*, p35-36.

⁴⁷ Bashford, *Purity and Pollution*, p21-39.

⁴⁸ Bashford, *Purity and Pollution*, p28.

⁴⁹ Bashford, *Purity and Pollution*, p31.

decomposing matter in the environment – be it the build up of ‘human waste, accumulation of dirt, stagnant water, foul air’.⁵⁰ The hygienic practices designed to sanitise the spaces affected by miasma involved excluding miasma from the environment by opening windows and lighting fires to draw clean air into and through a room. In a clean environment, practices which sought to prevent entry of miasma, such as keeping windows shut, might be used. Some potential for contradiction and hence confusion could arise.

Whilst the developing medical sciences were seeking to explain disease in objective terms with explanations grounded in scientific understanding of nature they failed to accommodate the ideas and beliefs of the old world, strongly held by many in society. Bashford described the ‘new nurse’ as a stabilising influence in a changing world. In Bashford’s words ‘[t]he new nurse functioned as a sort of cultural reservoir of religious-moral values in a modernising politics of health’.⁵¹

Mary Douglas’s work influenced Claire Hooker’s study of public health in Australia, where, as in Britain, public health was grounded in sanitarianism in the early twentieth century, but evolved to adopt germ theory from the 1950s. The emergence of germ theory had led to differences in surgical practice depending on whether asepsis or antisepsis was the driving force. Hooker uses this evidence to argue that two contrasting public health practices developed from germ theory.⁵² These are the technique of pasteurisation and the use of immunisation within the context of the prevention of ill health. Pasteurisation is a process of sterilisation and is symbolic of processes to sanitise, or make aseptic, the environment within which human beings live. By contrast using an antiseptic construct, immunisation protects the individual so that they can co-exist in an unclean environment. Immunisation is associated with ideas of contagion. Hooker links both to strategies to overcome failures of sanitary measures to control the importation of disease carried by immigrants into Australia.

⁵⁰ Bashford, *Purity and Pollution*, p5.

⁵¹ Bashford, *Purity and Pollution*, p61.

⁵² Claire Hooker, ‘Sanitary failure and risk: pasteurisation, immunisation and the logics of prevention’, Chapter 6 in Alison Bashford and Claire Hooker, (eds), *Contagion; Historical and cultural studies*, (London, Routledge, 2001), p129-149.

Importantly, for this thesis, she concludes that these successful practices heralded a change, over several decades, in public health away from a primary focus on sanitation as a means of infectious disease control.⁵³ Hooker uses the word 'sanitary' to describe notions of cleanliness claiming it 'dominated public health literature between 1850 and 1950'.⁵⁴ She notes that the term was sometimes used in a derogatory manner when distinctions between the newer bacteriological approaches to public health were promoted against the 'older, sanitarian cleansing practices and mistaken miasmatic theories'.⁵⁵ Similarly, Margaret Horsfield, in her study of housework in the twentieth century, comments that women were sanitarians and had little understanding of germ theory. She asserted that there had been little change in this situation for 75 years since the early years of the twentieth century.⁵⁶

Conceptualisations by both Douglas and Bashford of sanitation and the management of dirt and pollution suggest a possible framework to help understand the work of hospital nurses in the 1930s and 1940s.⁵⁷ The framework constructs the nurse as a sanitarian, one who deals with contagion in the environment. Nurses are involved in dirty work, but being constructed as pure individuals through probationer training, they are legitimately able to remove dirt (or pollution) from the environment, from the patient, or from a wound the patient may have. The changing conception of dirt between earlier sanitarians and later germ theorists may cast light upon the increasing concerns about routinised (ritualised) practices of nurses in the 1930s and 1940s.

2.4 Removing Dirt

If sanitary measures concern the removal of dirt, then it is necessary to consider the process of removal. Conceptualisation of the nurse as someone pure enabled them to

⁵³ Hooker, 'Sanitary failure and risk', p145.

⁵⁴ Hooker, 'Sanitary failure and risk', p130.

⁵⁵ Hooker, 'Sanitary failure and risk', p130.

⁵⁶ Margaret Horsfield, *Biting the Dust: The Joys of Housework*, (London, Fourth Estate, 1997), p159-62.

⁵⁷ Bashford, *Purity and Pollution*; Douglas, *Purity and Danger*.

remove the impure, or the unclean.⁵⁸ The work of nurses includes maintaining cleanliness. Cleanliness can relate not only to the environment, but also the body – both that of others and of the self.

Both Horsfield and Hoy have considered environmental cleanliness, albeit with a primary focus on domestic cleaning.⁵⁹ Hoy's analysis focuses on the changing approaches to cleanliness in America from before the American Civil War to the 1990s. She comments on public health matters in so far as they affect cleanliness of public places. Hoy suggests that the American, Catherine Beecher, was ahead of Florence Nightingale in espousing aspects of cleanliness.⁶⁰ In the period before the American Civil War the standard of hygiene amongst Americans, especially rural Americans and the urban poor was considered appalling.⁶¹ By the end of the nineteenth century the sanitarian movement in America could claim that improvements to personal cleanliness and public hygiene provision had been made.⁶² Hoy adds that the increasing pressure to achieve cleanliness would fall mainly on women, claiming that women's temperament was ideally suited to order and cleanliness.⁶³ Developing these ideas about public health, Hoy introduces Nightingale's views about the work of health nurses that they should focus on teaching hygiene and address preventive medicine.⁶⁴ Hoy suggests that by the 1950s contagious disease was no longer the threat it used to be, and that old rationales for hygiene had lost prominence.⁶⁵ Though not stated explicitly, this would be co-incidental with the availability of antibiotics to destroy the 'seed', and may hint at a slackening in attitudes towards the hygiene principles that were considered necessary to strengthen the 'soil'. Indeed Hoy suggests that rigour in the practice of hygiene and cleanliness measures may have peaked in the decades

⁵⁸ Bashford, *Purity and Pollution*, p31-37.

⁵⁹ Hoy, *Chasing Dirt* and Horsfield, *Biting the Dust*.

⁶⁰ Hoy, *Chasing Dirt*, p20.

⁶¹ Hoy, *Chasing Dirt*, p7.

⁶² Hoy, *Chasing Dirt*, p59.

⁶³ Hoy, *Chasing Dirt*, p72.

⁶⁴ Hoy, *Chasing Dirt*, p103; Florence Nightingale, 'Sick Nursing and Health Nursing' in Lynn McDonald, (ed.), *Florence Nightingale on Public Health Care*, (Waterloo, Wilfrid Laurier University Press, 2004), p205–219.

⁶⁵ Hoy, *Chasing Dirt*, p178.

prior to the 1950s, and that Americans are not as focused on cleaning as they used to be.⁶⁶

Horsfield's study was motivated by the low esteem given to domestic work. It addresses the history of household cleanliness.⁶⁷ Drawing heavily on a range of fictional as well as academic sources, she constructs the housewife as the primary lead for domestic cleanliness.⁶⁸ She discusses the considerable influences exerted by advertisers of cleaning products and equipment who capitalised on the housewife's ignorance of germ theory, especially microbes.⁶⁹ Commenting on the relentless pressure of domestic work in late Victorian times, Horsfield identifies that the maid would take lunch during the time allowed for the dust to settle after sweeping up before commencing polishing work.⁷⁰ She discusses the built environment, and refers to Florence Nightingale's views on tiled walls and other impervious surfaces as being easier to clean – views which remain in the infection control literature.⁷¹ Horsfield takes the view that many current cleaning practices still reflect the pre-antibiotic era in the quest to rid the environment of pathogenic germs.⁷² Whilst Horsfield's work focuses on the domestic environment it does raise perspectives on how nursing in a hospital environment might have incorporated and adapted these concepts and practices to ensure that patients' had a clean and dirt free environment in the 1930s and 1940s. Historians of nursing have identified that the nurses' role on a hospital ward was seen as being, in part, one of household management.⁷³

⁶⁶ Hoy, *Chasing Dirt*, p179.

⁶⁷ Horsfield, *Biting the Dust*, p7.

⁶⁸ Horsfield, *Biting the Dust*, px.

⁶⁹ See Chapters 10 and 11 in Horsfield, *Biting the Dust*, p140-172.

⁷⁰ Horsfield, *Biting the Dust*, p67.

⁷¹ Julie Bushell, 'Design of New and Refurbished Buildings', Chapter 5 in Janet McCulloch, (Ed), *Infection Control: Science, management and practice*, (London, Whurr, 2000), p61-96.

⁷² Horsfield, *Biting the Dust*, p11.

⁷³ See, for example, Robert Dingwall, Anne Marie Rafferty, and Charles Webster, *An Introduction to the Social History of Nursing*, (London, Routledge, 1988), p15-56.

2.5 Fear of Infection

Prior to the availability of the bacteriostatic sulphonamide drugs and the bactericidal antibiotics there was a degree of fear about the spread of infectious disease in the community. The sanitarians were influential in forming government policy concerning public health.⁷⁴ The Public Health Act of 1848 established the first health department within central government.⁷⁵ The 1872 and 1875 Public Health Acts extended government influence.⁷⁶ The Notification of Infectious Diseases Act of 1889 was the first to require General Practitioners to notify the local Medical Officer of Health regarding the appearance of notifiable disease in the community.⁷⁷ Indicative of the fear of spread of an infection, William Robertson reviewing The Notification of Infectious Diseases Act 1889 (still extant in 1939), wrote of households where parents resisted the removal of an infected child to hospital. In these circumstances any persons in the household 'engaged in handling food for sale, or employed as out-workers ... should be compelled to leave the infected house to live perhaps with friends'.⁷⁸ The concerns regarding spread of infection were such that the Medical Officer of Health needed to be notified. If the attending doctor or head of household did not do so then the responsibility was placed on relatives or other persons who occupied the building, adding 'if no one has notified a case of infectious disease attending school, it is the duty of the schoolmaster to do so'.⁷⁹ Robertson writes about the need for disinfection of potentially contaminated public vehicles such as taxis, tramcars, buses if an infectious person had been carried, noting that 'the owner of the vehicle must apprise the Medical Officer of Health, who will insist on the disinfection of the conveyance'.⁸⁰ Fear of infection in society was such that legislation was still in place in 1948 that forbade anyone with an infectious disease from using any form of

⁷⁴ Margaret Pelling, Mark Harrison, and Paul Weindling, 'The Industrial Revolution, 1750 to 1848', Chapter 3 in Charles Webster (ed.) *Caring for Health: History and Diversity*, (Buckingham, Open University Press, 1993), p46.

⁷⁵ Pelling, Harrison, and Weindling, 'The Industrial Revolution, 1750 to 1848', p46.

⁷⁶ Worboys, *Spreading Germs*, p110.

⁷⁷ William Robertson, *An Introduction to Hygiene*, 2nd edition, (Edinburgh, E. and S. Livingstone, 1939), p7.

⁷⁸ Robertson, *An Introduction to Hygiene*, p8.

⁷⁹ Robertson, *An Introduction to Hygiene*, p8.

⁸⁰ Robertson, *An Introduction to Hygiene*, p16.

public transport, or anyone who knowingly exposed others to a risk of infection by being in any public place was 'guilty of an offence'.⁸¹ Recruitment into nursing was affected by the fear of infection. This was highlighted in a report by the Lancet Commission into nursing which noted that 'The fear of infection is difficult to combat'.⁸² Adding that the evidence did not support the claim, the Commission cited the suggestion that nursing staff contracted tuberculosis in sanatoria, but added that such events were 'so rare as to be negligible'.⁸³ Though this may be an understatement of the potential for infection, there is some evidence that recruitment strategies used by sanatoria targeted former consumptives who would have some resistance to re-infection.⁸⁴

Whilst the texts by Robertson and Gerald Breen serve to illustrate the legal situation regarding notifiable infectious disease, the underlying fear of infection exudes from the writing, reflecting society's concern for the need to keep infection under control. However, there is evidence that the general public lacked understanding of the means by which infection could be spread. The highly memorable public health campaign of World War II that 'coughs and sneezes spread diseases' sought to control disease transmission in public places.⁸⁵ The campaign was planned as a way to reduce workplace absenteeism as part of the war effort, though highlights the increasing prominence of germ theory's explanatory power of one means of transmission of infectious disease. The sanitarians achieved success because, though originating from the miasma theory of disease causation, when the practical measures they promoted were implemented, they proved effective.

⁸¹ Gerald E. Breen, *Essentials of Fevers*, 2nd edition, (Edinburgh, E. and S. Livingstone, 1948), p339.

⁸² *The Lancet Commission on Nursing: Final Report*, (London, The Lancet, 1932), p147.

⁸³ *The Lancet Commission on Nursing: Final Report*, p147.

⁸⁴ Frank Ryan, *Tuberculosis: The greatest story never told*, (Bromsgrove, Swift Publishers, 1992), p30.

⁸⁵ Ministry of Information for the Ministry of Health, *Coughs and Sneezes*, Short film from 1945 available at http://www.nationalarchives.gov.uk/films/1945to1951/filmpage_cas.htm accessed 17th December 2013.

Poverty and lack of education often prevented the implementation of even some of the sanitarians' basic recommendations.⁸⁶ From a miasmatic perspective, removing dirt and foul air, for example, eradicated the means by which disease could originate in the environment. Germ theorists came to realise that dirt in the environment could harbour disease causing organisms and thus its removal was beneficial to preventing the risk of infection. Nevertheless, the general health of the population was largely hidden. In an essay on the changing patterns of health and illness during the nineteenth and twentieth centuries, Paul Weindling refers to uncovering of 'a submerged mass of already existing aches, pains, carbuncles and infections' as more medical facilities were made available.⁸⁷ Though Weindling was not specifically referring to the 1930s, the research undertaken by Margery Spring Rice into working class wives in the 1930s reveals a poverty of knowledge about health matters and a lack of wellness amongst the women themselves, with less than a third considered to meet the criteria for good health.⁸⁸

Robertson's text was written before penicillin was available. It was published in 1939 when sulphonamides had been available for some three years, though they are not mentioned in the book.⁸⁹ Whilst Breen makes reference to sulphonamides and penicillin throughout his text, an eleven page general account of the treatment and management of fever makes no mention of the value of these.⁹⁰ Alongside developments in the field of bacteriology, there was increasing understanding in the field of immunology of how the body could resist infection.

⁸⁶ Leonore Davidoff, 'The Family in Britain', Chapter 2 in F. M. L. Thompson, *The Cambridge Social History of Britain 1750 -1950, Volume 2, People and Their Environment*, (Cambridge, Cambridge University Press, 1990), p71-129, especially p123.

⁸⁷ Paul Weindling, 'From infections to chronic diseases: changing patterns of sickness in the nineteenth and twentieth centuries', in Andrew Wear, *Medicine in Society*, (Cambridge, Cambridge University Press, 1992), p303-316.

⁸⁸ Margery Spring Rice, *Working Class Wives*, 2nd edition, (London, Virago, 1981), p69-93.

⁸⁹ Robertson, *An Introduction to Hygiene*.

⁹⁰ Breen, *Essentials of Fevers*, p77-87.

2.6 Immunology

Nightingale's concern for her patients extended to improving the constitution of the patients by attention to their nutritional needs.⁹¹ Her intent was to give the patient strength so that the body could survive whilst nature provided healing.⁹² The body's ability to withstand infection was also beginning to be understood in the light of discoveries in the field of immunology.⁹³ The level of understanding expected in practice in the 1930s was minimal. *Dora Davies*, when a second-year probationer, recorded in her notes of a lecture on blood in late 1933 that one of the functions of blood was to:

- | | |
|------------------|--|
| Protect the body | (a) white cells eat the germs |
| | (b) Plasma carries antitoxins |
| | (c) has the power of clotting. ⁹⁴ |

These notes were signed off by her tutor with no corrections, suggesting she had reflected the lecture content to an acceptable level of understanding for that time. Professor of Bacteriology, Joseph Bigger, provides a useful insight into the extent of immunological understanding expected of 'students and practitioners of medicine' at the beginning of the 1930s.⁹⁵ Bigger discusses presumed processes concerning phagocytosis and opsonins, toxins and anti-toxins, agglutinins and precipitins, and bactericidal and bacteriolytic antibodies and other lysins.⁹⁶ Understanding was partial, and competing theories of immunity existed. Thus, whilst it had been established that the white blood cells, known as phagocytes, had a role in digesting and destroying bacteria, he makes no mention of the B lymphocytes found in blood plasma, known

⁹¹ See, for example, Chapter 7 in Florence Nightingale, 'Notes on Nursing for the Labouring Classes', in Lynn McDonald, (ed.), *Florence Nightingale on Public Health Care*, (Waterloo, Wilfrid Laurier University Press, 2004), p91-98; Nightingale, 'Notes on Nursing: What it is and What it is not', p633-639.

⁹² Nightingale, 'Notes on Nursing for the Labouring Classes', p156.

⁹³ For a useful review of the developments in immunology see Arthur M. Silverstein, *A History of Immunology*, (London, Academic Press, 1989).

⁹⁴ Dora Davies, Lecture 19 'Blood', in her Anatomy Lectures Notebook donated to David Justham on 17 July 2008 at Glossop.

⁹⁵ Joseph W. Bigger, *Handbook of Bacteriology*, 3rd edition, (London, Baillière, Tindall, and Cox, 1933), p160-180.

⁹⁶ Bigger, *Handbook of Bacteriology*.

today to produce antibodies.⁹⁷ Bigger reported two opposing views about the role of phagocytes. Firstly, that of Metchnikoff who believed that immunity was due to phagocytes found in the tissues and blood. This he contrasted with Metchnikoff's opponents who suggested that phagocytes were scavengers which removed the bodies of bacteria slaughtered by various substances in the plasma of the blood. Bigger added that 'it is now generally conceded that the truth lies midway between the views of the extremists'.⁹⁸ The phagocytes were considered most important in the body's defence, 'but without the help of the plasma they are powerless'.⁹⁹ In this treatise lies uncertainty, arising from an imprecise understanding of the role of the white blood cells. However, there was some understanding of the body's development of immunity as a resistance to future bacterial infections. The views expressed by Bigger remained during the 1930s as can be seen in Matthews, Horder, and Gow's supposition that the 'truth lies between these extreme views' of Metchnikoff and his opponents.¹⁰⁰ The implications for nursing practice of such limited understanding might lie in evidence of differences in medical practice, for example those described by Kevin Brown regarding poultices to treat pneumonia.¹⁰¹

Throughout the 1930s, there had been uncertainty about the origin of antibodies. Bigger wrote that 'We do not know with certainty in what tissues or organs antibodies are fabricated, but the weight of opinion is in favour of the reticulo-endothelial system'.¹⁰² In addition, antibodies were speculative in so far as 'we only know antibodies by the effects they produce. They have never been isolated in the pure state'.¹⁰³ Bigger explored further theory about the production of antibodies, but ultimately admitted that 'We have to confess frankly that we do not know the

⁹⁷ Gerard J. Tortora, Berdell R. Funke and Christine L. Case, *Microbiology: An Introduction*, 6th edition, (Menlo Park, Addison Wesley Longmann Inc., 1998), p467-472.

⁹⁸ Bigger, *Handbook of Bacteriology* p169.

⁹⁹ Bigger, *Handbook of Bacteriology* p169.

¹⁰⁰ John Matthews, Horder and A. E. Gow, 'Immunity', in Frederick W. Price (ed.), *A Textbook of the Practice of Medicine*, (London, Oxford University Press, 5th edn, 1937), p5-15.

¹⁰¹ Kevin Brown, *Penicillin Man: Alexander Fleming and the Antibiotic Revolution*, (Phoenix Mill, Sutton Publishing Ltd., 2004), p32.

¹⁰² Bigger, *Handbook of Bacteriology* 170.

¹⁰³ Bigger, *Handbook of Bacteriology* 171.

mechanism of their production'.¹⁰⁴ A few years later Pugh's text differentiated between phagocytosis and antibody production.¹⁰⁵ Pugh supported a theory that antibodies were produced by tissue cells. It was not until 1948 that the plasma based B lymphocytes were discovered to be responsible for antibody production.¹⁰⁶ Breen, Divisional Medical Officer at the London County Council, outlines the knowledge base at the end of the 1940s.¹⁰⁷ Neither Sears nor Breen discuss the mechanism for the development of immunity in detail, but observe merely that antibodies are produced in response to antigens.¹⁰⁸

This rudimentary understanding of the immune system influenced knowledge of the body's response to infection. Many writers describe different types of immunity being 'natural immunity', 'acquired active immunity' and 'acquired passive immunity'.¹⁰⁹ Pugh's text describes natural immunity as being enhanced by 'healthy hygienic surroundings, such as cleanliness, exposure to fresh air and sunlight, sufficient food, and properly regulated exercise and rest'.¹¹⁰ These ideas reflect a sanitarian perspective well into the 1930s. However, the introduction of drugs based on the chemical sulphonamide in the mid 1930s began to change the management of infections.

¹⁰⁴ Bigger, *Handbook of Bacteriology* 173.

¹⁰⁵ W.T.Gordon Pugh, *Practical Nursing including Hygiene and Dietetics*, 11th edition, (Edinburgh, William Blackwood and Sons, 1937), p422.

¹⁰⁶ Arthur M. Silverstein, *A History of Immunology*, (London, Academic Press, 1989), p178-179.

¹⁰⁷ Breen, *Essentials of Fevers*, p32-38.

¹⁰⁸ W.Gordon Sears, *Medicine for Nurses*, (London, Edward Arnold & Co., 1944), p8-11; Breen, *Essentials of Fevers*, p32-38.

¹⁰⁹ See, for example, Bigger, *Handbook of Bacteriology*, p160-168; Pugh, *Practical Nursing*, 11th edition, p424-426; Matthews, Horder and A. E. Gow, 'Immunity', p6 differentiate between acquired immunity from prior exposure to a micro-organism and artificial immunity (either active or passive) obtained via vaccination; and C. C. Okell, 'Immunity and Immunization' in Humphry Rolleston, (ed.), *The British Encyclopaedia of Medical Practice*, (London, Butterworth and Co. (Publishers) Ltd., 1938), Volume 7 p58-80 only describes active and passive.

¹¹⁰ Pugh, *Practical Nursing*, 11th edition, p424.

2.7 The Impact of Sulphonamides and Antibiotics

The sulphonamide group of drugs were bacteriostatic.¹¹¹ Introduced during the 1930s, they prevented reproduction of the infecting organism, allowing time for the body's active immunity against the invading organism to develop. The first preparation to be introduced was Prontisil, a sulphanilamide preparation.¹¹² Sebastian Amyes gives a lengthy discussion of Prontisil.¹¹³ This was first developed by Gerhard Domagk in 1935. Domagk was medically qualified and worked in Germany. He was awarded the Nobel Prize for 'Physiology or Medicine' in 1939 for his discovery of Prontisil, but was obliged to decline by the Gestapo.¹¹⁴ This was a time of political unrest, and promotion of new drugs emerging from the German state was not well received in Britain. This enabled rival drugs to be introduced, the most notable of which was a sulphapyridine known by its trade name M&B 693.¹¹⁵ Written from a pharmaceutical perspective, Amyes's text explores issues around the chemical structure and manufacture of the sulphonamide drugs yet there is no specific discussion of M&B 693, developed by the pharmaceutical company May and Baker.¹¹⁶ The drug was introduced in the mid-1930s and was primarily used against streptococcal infections. John Ryle and S. Elliott noted that Streptococci cause a range of infections including bacterial endocarditis, scarlet fever, erysipelas, and rheumatic fever, and reported that sulphonamides had revolutionised the treatment of pyogenic streptococcal infections.¹¹⁷ Remembered in

¹¹¹ Bacteriostatic drugs prevent the growth and reproduction of bacteria. This action prevents the development of an overwhelming infection, and provides time to allow the body's immune system fight the infection. This is in contrast to bactericidal antibiotics which kill susceptible bacteria.

¹¹² Sears, *Medicine for Nurses*, p426.

¹¹³ Sebastian G. B. Amyes, *Magic Bullets, Lost Horizons: The Rise and Fall of Antibiotics*, (London, Taylor and Francis, 2001), p8-15.

¹¹⁴ Amyes, *Magic Bullets, Lost Horizons*, p15.

¹¹⁵ Sears, *Medicine for Nurses*, p426; David Greenwood, *Antimicrobial Drugs: A Chronicle of a Twentieth Century Medical Triumph*, (Oxford, Oxford University Press, 2008), p75-76.

¹¹⁶ Amyes, *Magic Bullets, Lost Horizons*.

¹¹⁷ John A. Ryle and S.D. Elliott, 'Septicaemia and Bacteriaemia', in Humphry Rolleston (ed.), *The British Encyclopaedia of Medical Practice*, (London, Butterworth and Co., 1939), Volume 11, p76-89; Today, Streptococcal infections have been classified into more than 20 different types and are recognised to be involved in a wide range of infections in addition to those noted by Ryle and Elliott – some strains are associated with necrotising fasciitis, glomerulo-nephritis. The toxins produced by Streptococci cause haemolysis (destruction of red blood cells). See, for example, Jennie Wilson,

the memoirs of Joan Markham, a nurse practicing during the 1930s, M&B 693 was used in the treatment of pneumonia and 'out went tepid sponging and that awful wait for the crisis on the tenth day'.¹¹⁸ Graham Thurgood provides some recollections by nurses of their use of M&B 693 which was described by one of the participants in his oral history study as having a dramatic effect on the management of cerebro-spinal meningitis.¹¹⁹

More dramatic change was associated with penicillin's introduction. Thurgood's doctoral study, exploring the history of technology in nursing, reported one participant whose nursing career began in 1945 who noted that penicillin 'revolutionised everything'.¹²⁰ Other accounts of the impact of penicillin can be found in the published memoirs of former nurses.¹²¹ The revolution included significant changes to mortality. Spink, who was both a bacteriologist and physician and was closely involved with developing penicillin, noted that a 'mortality rate of 80 percent had been reduced to 35 percent' for staphylococcal bacteraemia.¹²²

Currie, writing about the work of fever nurses, reports several of her respondents recalling the use of penicillin in its early days.¹²³ Though little by way of practical detail is given, one nurse who trained between 1943 and 1946 remembered a two year old boy with meningitis who was very ill and expected to die and was given penicillin

Infection Control in Clinical Practice, 2nd edition, (London, Baillière Tindall, 2006), p103.

¹¹⁸ Joan Markham, *The Lamp was Dimmed: The Story of a Nurse's Training*, (London, Robert Hale, 1975), p132.

¹¹⁹ Graham Thurgood, 'Defining Moments in Medical History – Nurses' Narratives of their Everyday Experiences of a Key 20th Century Historical Event – the First Use of Antibiotics', in Nancy Kelly, Christine Horrocks, Kate Milnes, Brian Roberts, and David Robinson, *Narrative, Memory and Everyday Life*, (Huddersfield, University of Huddersfield, 2005), p231-242.

¹²⁰ Graham Thurgood, *A History of Nursing in Halifax and Huddersfield 1870-1960*, Unpublished PhD Thesis, (Huddersfield, University of Huddersfield, 2008); Graham Thurgood, *Transcript of interview HX5 recorded on 8 August 2001*, (Huddersfield, University of Huddersfield Archives), data extracted 19 July 2010.

¹²¹ See, for example, Evelyn, Prentis, *A Nurse in Time*, (London, Hutchinson & Co., 1977), p179 considered it shifted the balance of power in nursing; and Brenda McBryde, *Quiet Heroines: Nurses of the Second World War*, (Saffron Walden, Cakebread Publications, 1989), p135 describes miracles occurring every day.

¹²² Wesley W. Spink, *Infectious Diseases: Prevention and Treatment in the Nineteenth and Twentieth Centuries*, (Folkstone, Wm Dawson, 1978), p283.

¹²³ Margaret R. Currie, *Fever Hospitals and Fever Nurses: A British Social History of Fever Nursing: A National Service*, (London, Routledge, 2005).

intravenously. The boy 'made a good recovery'.¹²⁴ The early formulation of penicillin needed it to be given by injection up to eight times per day. Impurities contributed to the painfulness of these injections. Robert Bud quotes from an interview with Jessie Carter in which she describes 'the feeling as if "they'd injected boiling water"'.¹²⁵ It is unclear from Bud's writing who constituted 'they' in this account. In a short personal reflection, Doreen Fry recalls some detail of the preparation of the penicillin for injection.¹²⁶ A 10ml glass syringe was used to draw up distilled water which was then injected through a rubber cap into the bottle of penicillin powder. The mixture was shaken for several minutes until the powder had dissolved. The solution of penicillin was then drawn back into the syringe. The three inch needle was changed with ungloved hands, and replaced with a wide bore needle. This was necessary, because the penicillin mixture was quite thick. The preparation procedure was undertaken at the patient's bedside. Fry continues 'Syringes and needles were not disposable, they were sharpened, sterilised in pure Lysol and used until they broke'.¹²⁷ Currie quotes a former nurse, who trained between 1937 and 1941, and who remembered Dr Mary Ethel Florey at the Central Middlesex Hospital before penicillin was commercially available.¹²⁸ In order to maximise the use of penicillin, a drug which was readily excreted by the kidneys, the nurse recalled that she used to take Winchester bottles full of urine to the Pathology Laboratory 'for the excreted penicillin to be extracted and given back to the same patients'.¹²⁹ Such efforts were taken because of the recognised potential of penicillin to radically alter the treatment of infection.

Bud's history of penicillin provides an informative account in lay terms of the scientific and technical development of penicillin and some of its derivatives. There is, however, a lack of commentary about the clinical impact of penicillin. The little he provides raises questions about the transformation in healthcare prior to and following

¹²⁴ Currie, *Fever Hospitals and Fever Nurses*, p84.

¹²⁵ Robert Bud, *Penicillin: Triumph and Tragedy*, (Oxford, Oxford University Press, 2007), p62.

¹²⁶ Doreen Fry, 'Penicillin and Pedantic Patients in 1950' *International History of Nursing Journal*, (1998) 3, (4), p47-48.

¹²⁷ Fry, 'Penicillin and Pedantic Patients in 1950', p48.

¹²⁸ Dr Mary Ethel Florey was the wife of Howard Florey, the scientist responsible for developing penicillin for commercial production.

¹²⁹ Currie, *Fever Hospitals and Fever Nurses*, p96.

penicillin's introduction. Bud reports comments made by a Dr Walter Erlich, a Czechoslovak soldier, who tells of being wounded in northern France, being evacuated to Basingstoke in England, where 'he described a nurse going from patient to patient with her "large syringe" injecting penicillin as she went, without bothering to change needles.¹³⁰ The nurse was told that changing the needle was unnecessary because penicillin prevented infections.¹³¹ If the recollection by Erlich is an accurate reflection it raises a number of questions about the early perceptions of the value of penicillin, and also of the nurses' understanding of infection control. The underlying impression is that penicillin was seen as effective against all infective organisms to such an extent that one loaded syringe and one needle would suffice for injecting a number of patients. The nurse appears not to have given any thought that the needle may lose sharpness, or recognised any concept of the problems arising from the transfer of foreign proteins between patients. On the other hand, the increased workload from mixing penicillin, and then giving injections, may have caused time pressures requiring her to get on with the task in hand.

The use of penicillin in the 1950s and 1960s is associated with reports of a lowering of standards in hygiene practices. Bud cites three examples. Firstly, he suggests that medical staff were becoming more casual in their practices when he cites the case of a nurse who challenged a doctor about his poor aseptic technique, to which the doctor replied that penicillin was available so he did not need to be as precise.¹³² Secondly, drawing on evidence from 1963, Bud claims the growth in antibiotic prescribing was not solely related to clinical need but to work pressures, poor understanding and inadequate diagnosis. Finally, Bud returns to the prophylactic use of penicillin, reporting work from the 1960s which expressed concern about reducing standards for infection control as seen in the use of antibiotics sprayed into the environment of crowded clinical areas to control cross infection risks.¹³³ This issue of falling standards is also hinted at by Macfarlane and Worboys in their paper on changes in the

¹³⁰ Bud, *Penicillin*, p62.

¹³¹ Bud, *Penicillin*, p62.

¹³² Bud, *Penicillin*, p99.

¹³³ Bud, *Penicillin*, p99.

management of acute bronchitis.¹³⁴ They suggest that there was a merging of the differential diagnosis between bronchitis and early bronchopneumonia such that general practitioners 'were quick to diagnose bronchitis and offer an antibiotic prescription'.¹³⁵ However, Bud calls for caution about the lowering of clinical standards being consequential to the introduction of antibiotics. He is keen to point out that infectious disease incidence was falling well before the introduction of antibiotics suggesting that practice would have changed anyway.¹³⁶ This recognition of a fall in the incidence of infectious disease reflects the work of Thomas McKeown who examined the decline of infectious diseases before the availability of effective drug therapies, and linked the decline with improvements in the general health, nutrition and living circumstances of the general population arising from sanitarianism.¹³⁷

The introduction of penicillin as the first commercially available bactericidal antibiotic for American civilians took place in 1945, though it took another year for it to be generally available to the public in the UK.¹³⁸ Notwithstanding the work of McKeown and Bud, lessons from penicillin's introduction in relation to the subsequent changes in professional practices may inform the nature of nursing practice prior to its introduction. The comments in the literature about the lowering of hygiene standards suggest the presence of tougher hygiene standards before the introduction of penicillin. Similarly, changed approaches to patient care following penicillin's introduction might indicate a less rigorous approach to managing exposure to the risk of infection.

¹³⁴ John T. McFarlane and Michael Worboys, 'The Changing Management of Acute Bronchitis in Britain, 1940-1970: The Impact of Antibiotics', *Medical History*, (2008) 52, (1), 47-72.

¹³⁵ McFarlane and Worboys, 'The Changing Management of Acute Bronchitis in Britain, 1940-1970', p59.

¹³⁶ Bud, *Penicillin*, p115.

¹³⁷ Thomas McKeown, *The Role of Medicine: Dream, Mirage, or Nemesis*, (Oxford, Basil Blackwell Ltd., 1979), particularly p45-65, but also p91-113.

¹³⁸ Henry Welch, 'Antibiotics 1943-1955: Their Development and Role in Present-Day Society', Chapter 6 in Iago Galdston, *The Impact of Antibiotics on Medicine and Society*, (New York, International Universities Press Inc., 1958), p70-87.

2.8 Development of Infection Control

The Medical Research Council War Wounds Committee and Committee of London Sector Pathologists recommended that, at large hospitals in particular, an appointment is made of 'a full time special officer to supervise the control of infection'.¹³⁹ Infection Control, as a recognised specialism in the UK, did not appear until the late 1950s.¹⁴⁰ Initially, infection control officers were identified, and it was usual for these officers to be senior medical staff.¹⁴¹ This was followed by the appointment of nurses to infection control teams. The first infection control nurse in the UK was appointed in 1959.¹⁴² She worked at Torbay Hospital. An infection control nurse had been appointed to Jefferson Hospital in the USA in 1956.¹⁴³ There are no references in the literature to the appointments of dedicated infection control officers to co-ordinate the management of infection prior to the 1950s. This absence suggests that during the 1930s and 1940s there would have been quite disparate approaches to infection control within different hospitals. Nevertheless, infection control staff were the inheritors of a sanitarian tradition beginning with the public health legislation of the nineteenth century which laid the foundations for protection against infectious disease.

One of the conceptual tools used by twenty first century infection control staff for managing the risk of acquiring an infection is known as the chain of infection.¹⁴⁴ Breaking the chain is a means to break the transmission of the infective agent from its reservoir to the new host. Elements of the present-day conception of the chain of infection can be found in writings from the 1940s. Thus Breen describes factors to

¹³⁹ Medical Research Council War Wounds Committee and Committee of London Sector Pathologists, *The Prevention of "Hospital Infection" of Wounds*, MRC War Memorandum No. 6, (London, His Majesty's Stationery Office, 1941), p14.

¹⁴⁰ Ayliffe, and English, *Hospital Infection*, p193.

¹⁴¹ Ayliffe, and English, *Hospital Infection*, p193.

¹⁴² Kath Banfield, 'The role of the infection control team', Chapter 3 in Janet McCulloch, (ed.), *Infection Control: Science, Management and Practice*, (London, Whurr Publishers, 2000), p39-47.

¹⁴³ Ayliffe, and English, *Hospital Infection*, p193.

¹⁴⁴ Janet McCulloch, Lesley Finn and Betty Bowell, 'Management of Known Infections', Chapter 20 in Janet McCulloch, (ed.), *Infection Control: Science, Management and Practice*, (London, Whurr Publishers, 2000), p316-351; Zsolt Filetoth, *Hospital Acquired Infection*, (London, Whurr Publishers, 2003), p74 -96.

consider in the control of infection.¹⁴⁵ Such factors include the source of the infection, the nature of the infection, and the susceptibility of the host. Strategies for breaking the chain can be likened to strategies for use in the management of exposure to workplace hazards.¹⁴⁶ Such strategies include: reduce exposure time; reduce exposure concentration; contain; isolate; eliminate; substitute; and protect.¹⁴⁷ Some of these strategies can be seen in the management of the infected patient in the 1930s and 1940s. Cleaning is a means to reducing exposure concentration, since complete elimination of the infection risk is not possible by cleaning alone.¹⁴⁸ Filetoth notes the importance of cleaning in helping to break the chain of infection.¹⁴⁹ In 1907, Gordon considered that probationers and not ward maids should carry out 'menial' work in fever hospitals, especially cleaning, so that they were well grounded in the principles of surgical cleanliness and aseptic technique 'for the safety of the patient'.¹⁵⁰ One of the big challenges that Gordon identified was that patients should not be allowed to infect one another. The rigour of learning asepsis by undertaking menial work was designed to create an 'unconscious and automatic knowledge of asepsis'.¹⁵¹ The paper by Gordon illustrates an interface between sanitarianism and germ theory in that provision of training in hygiene and sanitation was considered a means to achieve asepsis. Cleaning routines are discussed in more detail in Chapter 5 of this thesis.

The infected person who was deemed contagious required isolation. This was achieved by isolating the patient in either a room within the home or by transfer to a fever hospital. The law in England and Wales in the 1930s and 1940s allowed for compulsory removal to hospital, though Robertson claimed that using this option was a 'rare event'.¹⁵² Sometimes known as isolation hospitals, fever hospitals were not the only place for the nursing of the infectious patient since non-contagious patients were

¹⁴⁵ Breen, *Essentials of Fevers*, p47.

¹⁴⁶ Richard S. F. Schilling and S. A. Hall, 'Prevention of Occupational Disease', Chapter 20 in Richard S. F. Schilling, (ed.), *Occupational Health Practice*, (London, Butterworth, 1973), p408-420.

¹⁴⁷ Schilling and Hall, 'Prevention of Occupational Disease', p408-420.

¹⁴⁸ Filetoth, *Hospital Acquired Infection*, p122.

¹⁴⁹ Filetoth, *Hospital Acquired Infection*, p120-122

¹⁵⁰ A. Knyvett Gordon, 'The position of the Isolation Hospital in the Training of the Nurse', *The British Journal of Nursing*, (26th January 1907), Volume 38, p63-65.

¹⁵¹ Gordon, 'The position of the Isolation Hospital in the Training of the Nurse', p63.

¹⁵² Robertson, *An Introduction to Hygiene*, p13-14.

also nursed in 'most other institutions'.¹⁵³ Placing an infected person in hospital (of whatever designation) removed the infection risk from the home and wider society. In the view of Alison Bashford and Maria Nugent society was sanitising itself by this process.¹⁵⁴

Allowing an infection to run its course was commonplace as there were few means of treatment. This is exemplified in Nightingale's view that nature alone heals.¹⁵⁵ Evidence from the 1930s and 1940s for this is found in various sources. Thus Hitch presented a detailed account of the nursing care needed to support the patient with pneumonia through the course of the infection.¹⁵⁶ Nurses supporting patients through an infection is exemplified by Janet Crawley who remembered nursing the patient with pneumonia through the course of the disease.¹⁵⁷ Elimination of the infection through treatment appeared with the introduction of drug therapies. Currie summarises the change in fever nursing with the introduction of sulphonamides and antibiotics which meant that recovery was more likely, and ultimately led to the demise of fever hospitals.¹⁵⁸ Advances in the preparation of preventative vaccinations ultimately led to the worldwide elimination of the highly contagious smallpox virus in 1977.¹⁵⁹

Substitution in the sense advocated by Schilling and Hall is a deliberate strategy to replace the toxic substance by one with less toxicity.¹⁶⁰ In relation to the micro-biological environment such a direct strategy is not practical.¹⁶¹ For example, prophylactic substitution through immunisation of attenuated strains could be

¹⁵³ Currie, *Fever Hospitals and Fever Nurses*, p36.

¹⁵⁴ See, for example, Alison Bashford and Maria Nugent, 'Leprosy and the management of race, sexuality and nation in tropical Australia', Chapter 5 in Alison Bashford and Claire Hooker, (eds), *Contagion: Historical and Cultural Studies*, (London, Routledge, 2001), p106-128, which explores isolation as a means to keep society clean and pure.

¹⁵⁵ Nightingale, 'Notes on Nursing for the Labouring Classes', p156.

¹⁵⁶ Margaret Hitch, *Aids to Medicine for Nurses*, 2nd edition, (London, Baillière, Tindall and Cox, 1943), p113.

¹⁵⁷ Barbara Mortimer, *Sisters: Memories from the Courageous Nurses of World War Two*, (London, Hutchinson, 2012), p21.

¹⁵⁸ Currie, *Fever Hospitals and Fever Nurses*, p113.

¹⁵⁹ Tortora, Funke and Case, *Microbiology*, p12.

¹⁶⁰ Schilling and Hall, 'Prevention of Occupational Disease', p410-411.

¹⁶¹ John A. Lunn, 'Occupational Health Problems in Health Care Workers', Chapter 14 in A. Ward Gardner, *Current Approaches to Occupational Health 3*, (Bristol, Wright, 1987), p215-236.

considered an indirect means of preparing the body for exposure to an infecting micro-organism. An alternative strategy would be the avoidance of use or reduced use of antibiotics which would then allow susceptible strains of bacteria to re-emerge to either displace or dilute the presence of resistant strains.¹⁶² Another strategy is that of antibiotic recycling, which is claimed by some, to reduce the formation of resistant strains by rotating the choice of antibiotics to be prescribed for any given type of infection.¹⁶³ The natural evolution of some micro-organisms to strains which are less virulent could also be considered a reasonable means of substitution.¹⁶⁴ This is an effect that has been used, in part, to explain observations of reducing mortality from infectious disease made by McKeown.¹⁶⁵ It is probable that the advent of antibiotics has not only revealed strains resistant to antibiotic action, but also by targeting susceptible strains allowed the resistant strains to substitute into the void created.¹⁶⁶ The sum of the effect of these strategies refers to a post-antibiotic era. The ecological balance between susceptible and resistant strains of bacteria was unknown prior to the introduction of antibiotics.

2.9 Summary

Though germ theory had been developed from 1865 onwards there is some evidence that the state of knowledge of infection and its management at the start of the 1930s retained some practices based on sanitarian principles. Such principles which were originally grounded in an understanding that miasma was a cause of disease. Fear of infection was still a major concern in society, and public health measures to protect society from infection drew heavily on sanitarianism. Minor injuries and illnesses could develop into life threatening infections. Sanitarians considered environmental cleaning

¹⁶² Graham A. J. Ayliffe, Adam P. Fraiese, Alasdair M. Geddes, and Kathy Mitchell, *Control of Hospital Infection: A practical handbook*, 4th edition, (London, Arnold, 2000), p278.

¹⁶³ E. M. Brown and D. Nathwani, 'Antibiotic cycling or rotation: a systematic review of the evidence of efficacy', *Journal of Antibiotic Chemotherapy*, (2005) 55, (1), p6-9.

¹⁶⁴ Robert Axelrod and William D. Hamilton, 'The Evolution of Co-operation in Biological Systems', Chapter 5 in Robert Axelrod, *The Evolution of Co-operation*, (New York, Basic Books, 1984), p93-95; Tortora, Funke and Case, *Microbiology*, p9.

¹⁶⁵ McKeown, *The Role of Medicine*.

¹⁶⁶ Tortora, Funke and Case, *Microbiology*, p422.

important in minimising exposure to the risk of disease, to be supplemented by germ theorists' introduction of antiseptic hand lotions and disinfectants. The early 1930s was a time when germ theory was struggling to gain ground in finding practical expression in the management of specific infections. Understanding of pathogenic micro-organisms was developing but many issues remained unresolved in the field of immunology and in the identification of specific disease-causing organisms. The introduction of sulphonamide drugs and antibiotics brought significant changes to the management of infections and, consequentially, reports of radical changes in nursing practices.

Alongside these advances in medical technologies, nursing was experiencing significant difficulties with recruitment and retention, concerns about status, and the form that education and training for a career in nursing should take. These issues are explored in the next chapter.

Chapter 3

ISSUES IN THE HISTORY OF NURSING

3.1 Introduction

This chapter reviews concerns in the history of nursing as a profession relevant to the 1930s and 1940s. Status, the battle for registration, the implementation of the Nurses Act 1919, recruitment and retention, education and the development of the profession have all been investigated by historians of nursing in Britain.¹ These issues have concerned historians of nursing more than the clinical work that nurses undertook. The expansion in health services, an increasing involvement of the state in funding health services in the 1930s and the disruption caused by World War II (WWII) also directed attention away from the clinical work of nurses. The day to day work of the nurse at the bedside rarely appears in this secondary literature. Anecdotes of nursing activities appear in some autobiographies of nurses. Histories of named hospitals and collections of wartime experiences of nurses also yield information on nursing work.²

3.2 The Hiddenness of Nursing Work

It is widely recognised that there is a deficiency in historical accounts of the practical work of nurses.³ Evidence exists to suggest that exploring the work undertaken by

¹ See, for example, Brian Abel-Smith, *A History of the Nursing Profession*, (London, Heinemann Educational, 1960); Susan McGann, *The Battle of the Nurses*, (London, Scutari Press, 1992); Anne Marie Rafferty, *The Politics of Nursing Knowledge*, (London, Routledge, 1996); Penny Starns, *March of the Matrons*, (Peterborough, DSM, 2000).

² See, for example, John Bittiner and David Lowe, *Nottingham General Hospital: Personal reflections*, (Nottingham, Special Trustees for Nottingham University Hospitals, 1990), p71; Janet Wilks, *Carbolic and Leeches*, (Ilfracombe, Hyperion Books, 1991), p25; Nicola Tyrer, *Sisters in Arms: British Army Nurses Tell Their Story*, (London, Weidenfield and Nicolson, 2008).

³ See, for example, Jocalyn Lawler, *Behind the Screens: Nursing, Somology, and the Problem of the Body*, (Melbourne, Churchill Livingstone, 1991); Christopher Maggs, 'A history of nursing: a history of caring?', *Journal of Advanced Nursing*, (1996) 23, (3), p630–635; Geertje Boschma, Margaret Scaia, Nerrisa Bonifacio, and Erica Roberts, 'Oral History Research', Chapter 6 in Sandra B. Lewenson, and Eleanor Krohn Herrmann, (eds), *Capturing Nursing History: A guide to historical methods in*

nurses in the past is hampered by factors which conspire to limit such accounts. These include the intimate nature of nursing work, the expected character of a good nurse, and the doctor-nurse relationship. This has resulted in the work of nurses being hidden from the historical record, although more recently historians have begun to address this issue.⁴ This 'hiddenness' is recognised by a number of writers. Lawler led the way through her 1991 study of the intimate aspects of nursing in which she attempted to establish what happened behind the screens between the nurse and her patient.⁵ Lawler's study produced several themes emerging out of her interviews with 27 registered nurses, two third year students and five enrolled nurses. One of these themes was the invisibility of nursing work and the links this had to women's work and to the privatised body.⁶ In a more recent study, Christine Hallett explored nursing work in World War I through the accounts of practice written by nurses.⁷

Nurses provide support for the performance of activities of daily living including those which concern hygiene and cleanliness, toileting, feeding and hydration, providing a safe environment, and temperature management.⁸ These aspects of work deal with essential bodily matters which 'become embarrassing and disgusting to talk about' in civilised society.⁹ The nature of nursing tasks is one which society desires go unnoticed.¹⁰ Both Samuelson and Littlewood have argued that nurses learn to manage

research, (New York, Springer Publishing Co., 2008), p79-98; Christine E. Hallett, *Containing Trauma: Nursing Work in the First World War*, (Manchester, Manchester University Press, 2009), p1.

⁴ Karen Nolte, 'Protestant Nursing Care in Germany in the 19th Century', Chapter 10 in Patricia D'Antonio, Julie A. Fairman and Jean C. Whelan (eds), *Routledge handbook on the Global History of Nursing*, (Abingdon, Routledge, 2013), p167-182.

⁵ Lawler, *Behind the Screens*, see p1-26 for a description of her research methods.

⁶ Lawler, *Behind the Screens*, p24.

⁷ Hallett, *Containing Trauma*, p10-13.

⁸ These tasks were captured in the internationally adopted definition of nursing by Henderson which claimed that 'The unique function of the nurse is to assist the individual, sick or well, in the performance of those activities contributing to health or its recovery (or to peaceful death) that he would perform unaided if he had the necessary strength, will or knowledge'. Virginia Henderson, *The Nature of Nursing*, (New York, Macmillan, 1966), p15.

⁹ Simon J. Williams and Gillian Bendelow, *The Lived Body: Sociological Themes, Embodied Issues*, (Abingdon, Routledge, 1998), p38.

¹⁰ Jenny Littlewood, 'Care and Ambiguity: Towards a Concept of Nursing', Chapter 10 in Pat Holden and Jenny Littlewood, (eds), *Anthropology and Nursing*, (London, Routledge, 1991), p170-189; Lawler, *Behind the Screens*, p45.

ambiguity.¹¹ This character trait is seen in the need to interface the care of the patient's bodily functions with the taboo that society exerts in relation to discussion of bodily functions. Paradoxically, in learning to care for the patient, that may involve discussion of bodily functions, the nurse learns not to discuss these functions more openly.¹² The hidden nature of the work as being low status may also reflect nursing's emergence from domestic service.¹³ Another possibility for the hiddenness is that it reflects the relationship of a mainly female nursing workforce in a medically, mainly male, dominated health care system.¹⁴ Abigail Perry's analysis offers a view of hiddenness arising from the conflicts within health care systems which conspire to undervalue the caring role of nurses as non-scientific.¹⁵ Issues here concern not only gender relations, but also professional relations.

Anne Oakley, a sociologist whose research explores the role of women in society across a range of occupational roles, was particularly concerned with the subordination of women in patriarchal societies. Oakley recognised the hiddenness of nursing work when she admitted that even her studies of health services had largely ignored the contribution of nurses.¹⁶ Mick Carpenter's discussion of the hidden nature of nursing work has two, somewhat contradictory, dimensions. On the one hand he argues that invisibility confers formidable powers, arguing that invisibility created mystery, and mystery enabled the nurse to exert influence over medical staff.¹⁷ On the other hand, he notes that a 'good nurse traditionally is one who is not noticed, but quietly and in a

¹¹ Helle Samuelson, 'Nurses between disease and illness', Chapter 11 in Pat Holden and Jenny Littlewood, (eds), *Anthropology and Nursing*, (London, Routledge, 1991), p190-201; Littlewood, 'Care and Ambiguity', p170.

¹² Littlewood, 'Care and Ambiguity', p179.

¹³ see for example, Abel-Smith, *A History of the Nursing Profession*, p4.

¹⁴ Sylvia Walby, June Greenwell Lesley Mackay and Keith Soothill, *Medicine and Nursing: Professions in a Changing Health Service*, (London, Sage Publications Ltd., 1994), p67.

¹⁵ Abigail Perry, 'A Sociologist's View: the handmaiden theory', Chapter 3 in Moya Jolley and Gosia Brykczynska, *Nursing: Its Hidden Agendas*, (London: Edward Arnold, 1993), p43-79.

¹⁶ Anne Oakley, 'What price professionalism? The importance of being a nurse' *Nursing Times*, (1984) 80, (50), p24-27.

¹⁷ Mick Carpenter, 'The Subordination of Nurses in Health Care: towards a divisions approach', Chapter 5 in Elianne Riska and Katarina Wegar, *Gender, Work and Medicine*, (London, Sage Publications Ltd., (1993), p95-130.

self-effacing way goes about her allotted tasks'.¹⁸ This view is linked to the traditional role of women in Victorian and early twentieth century western societies. Nightingale argued that a good nurse was a 'confidential' nurse, who did not speak about her work except to people who had a right to know. This would inevitably conceal her work from a wider audience.¹⁹ Texts from the 1930s reflect this in their elaboration of the qualities of a good nurse.²⁰

The hiddenness of nursing work can be understood by reference to sociological concepts of male dominance and female subservience. Joan Kelly writing about the methodological issues in women's history recognises the invisibility of women in traditional history arising from the notion that traditional history concerned itself with male dominated activities such as politics and war.²¹ Bonnie Smith argued that gender issues, whether male or female, have not been explored within the practice of traditional history arguing that the facts about events not the gender of those involved had predominated historical narrative.²² David Morgan and Daphne Taylorson criticise conventional sociology in which women are 'less visible' in accounts about work and industry, and the public arena.²³ In line with Carpenter, noted above, Eva Gamarnikow suggested that nurses consciously managed the subordination to dominant male medical practitioners as a means to develop greater professional independence.²⁴ Some evidence for this view exists. Worboys reported that within surgery in

¹⁸ Carpenter, 'The Subordination of Nurses in Health Care', p95.

¹⁹ Nightingale, 'Notes on Nursing for the Labouring Classes' p146.

²⁰ see for example, A. Millicent Ashdown, *A Complete System of Nursing*, (London, J. M. Dent & Sons Ltd., 1928), p1-2; Margaret S. Riddell, *First Year Nursing Manual*, 5th edition, (London, Faber & Faber Ltd., 1939), p11; W.T.Gordon Pugh, *Practical Nursing including Hygiene and Dietetics*, 11th edition, (Edinburgh, William Blackwood and Sons, 1937), p4.

²¹ Joan Kelly, 'The Social Relations of the Sexes: methodological Implications of Women's History', in Joan Kelly, *Women, History and Theory: The essays of Joan Kelly*, (Chicago, The University of Chicago Press, 1984), p1-18.

²² Bonnie G. Smith, *The Gender of History: Men, Women and Historical Practice*, (Cambridge, Harvard University Press, 1998), p2.

²³ David H. J. Morgan and Daphne Taylorson, 'Introduction: Class and Work: Bringing Women Back In', Chapter 1 in Eva Gamarnikow, David H. J. Morgan, Jane Puris and Daphne Taylorson, (eds), *Gender, Class and Work*, (London, Heinemann Educational, 1983).

²⁴ Eva Gamarnikow, 'Nurse or Woman: Gender and Professionalism in Reformed Nursing 1860-1923', Chapter 7 in Pat Holden and Jenny Littlewood, (eds), *Anthropology and Nursing*, (London, Routledge, 1991), p110-129.

nineteenth century Britain there was a 'tacit division of labour between male surgeons' local management of the wound and female nurses' role in maintaining a hygienic environment and sustaining the holistic care that strengthened the human soil'.²⁵ This division of labour suggests that there was an interdependence of the roles of doctor and nurse to the benefit of each other. The 'traditional' dominant doctor and subservient nurse relationship is not universally supported and instances of an interdependent relationship between doctors and nurses can be found. Currie, for example, notes that fever nurses played a 'more and more important therapeutic role in the patient's recovery' on behalf of their medical colleagues.²⁶ Nurses were held in high regard by some medical practitioners. Gordon, a physician, praises Edwardian fever nurses for providing a better service than house surgeons or dressers.²⁷ However, Young's criticism of the nurse's routines in the management of lobar pneumonia that 'too strict an adherence to the routine of the sick-room, and too frequent disturbance of the patient ... may ... seriously jeopardize recovery' may be indicative of differences in perspective on the care of the patient.²⁸

The hiddenness of nursing is also evidenced by the failure to give prominence to the work of nurses in accounts of sanatoria found within histories of the management of Tuberculosis (TB). In 1791, a Quaker doctor, Lettsom, offered his patients a treatment of pure air, pure food, and pure water in a hospital he founded at Margate on the Kent coast.²⁹ Sanatoria were more widely introduced after 1840 following an essay on the management of TB by Dr George Bodington, a medical practitioner based in an English country practice.³⁰ Sanatoria were developed in many places within the western world, and in the 1920s and 1930s were important to the strategies for managing TB.³¹

²⁵ Worboys, *Spreading Germs*, p286.

²⁶ Margaret R. Currie, *Fever Hospitals and Fever Nurses: A British Social History of Fever Nursing: A National Service*, (London, Routledge, 2005), p6.

²⁷ A. Knyvett Gordon, 'The position of the Isolation Hospital in the Training of the Nurse', *The British Journal of Nursing*, (1907) 38, (26th January), p63-65.

²⁸ R. A. Young, 'Pneumonia, Lobar', in Humphry Rolleston, (ed.), *The British Encyclopaedia of Medical Practice*, (London, Butterworth and Co. (Publishers) Ltd., 1938), Volume 9, p713-742.

²⁹ René Dubos and Jean Dubos, *The White Plague: Tuberculosis, Man and Society*, (London, Victor Gollanz Ltd., 1953), p173-4.

³⁰ Dubos and Dubos, *The White Plague*, p174-7.

³¹ Dubos and Dubos, *The White Plague*, p144.

Despite treatment in a sanatorium being the best type of treatment for early and most chronic cases,³² neither Rene Dubos and Jean Dubos nor Harley Williams in their respective chapters on sanatoria mention the presence or work of the nurse,³³ even though they were the most numerous group of staff employed.³⁴ More recently Frank Ryan offers some sweeping generalisations about nurses who worked in sanatoria. He suggests that many were former consumptives and were selflessly devoted and caring in their vocation and adds that they were highly skilled with formidable expertise.³⁵ This observation is supported by Stephanie Kirkby who reported on the London County Council's active strategy to recruit former TB patients to train to become sanatoria nurses as well as to recruit nurses who had a history of TB.³⁶ Despite Ryan's observations he offers only minimal detail of the work of the nurse when he cites a quotation attributed to H. Corwin Hinshaw that 'Meals were spooned to each patient by registered nurses, bed baths and the universal bedpans were imposed...'.³⁷

In general, the clinical work of nurses is poorly represented in the literature. This leads to questions about both the status of nurses and the image of nursing as portrayed therein.

3.3 Status Issues in Nursing

Nursing has links with low status domestic work (environmental cleaning), and with cleaning the patient's body. Abel-Smith noted that in the early part of the nineteenth

³² R. A. Young and G. E. Beaumont, 'Diseases of the Lungs', in Frederick W. Price, (ed.), *A Textbook of the Practice of Medicine*, (London, Oxford University Press, 5th edn, 1937), p1164-1283, see page 1211.

³³ Dubos and Dubos, *The White Plague*, p174-181; Harley Williams, *Requiem for a Great Killer: The story of tuberculosis*. (London, Health Horizon, 1973), p33-7.

³⁴ John G. Jones, E. Mary Needham, Emyln Roberts, and Robert Owen, *A History of Abergele Hospital: Confronting the White Plague*, (Denbigh, Gee and Son (Denbigh) Ltd., 1999), p67.

³⁵ Frank Ryan, *Tuberculosis: The Greatest Story Never Told*. (Bromsgrove: Swift Publishers, 1992) p27.

³⁶ Stephanie Kirkby, 'Marketing the municipal model: the London County Council Nursing Service recruitment strategies 1930-45', *International History of Nursing Journal*, (1988) 4 (1) p17-23; Stephanie Kirby and Wendy Masden, 'Institutionalised isolation: tuberculosis nursing at Weswood Sanatorium, Queensland, Australia 1919-55', *Nursing Inquiry*, (2009) 16, (2), 122-132.

³⁷ Ryan, *Tuberculosis*, p27.

century 'virtually all the existing nurses were drawn from the domestic servant class'.³⁸ Muff follows this theme when she argues that 'the traditional work of nursing – caretaking and housekeeping – mimics the traditional work of women'.³⁹ Horsfield writes about the belief that cleaning a house is 'not fit work for ladies', and that most women would get someone else to do the work if they could.⁴⁰ Having to deal with low status work became an issue for middle and upper class women who became nurses in the Victorian era. Nightingale recognised this when a two tier system was established at St Thomas's Hospital as a means to attract and retain upper class probationers. The middle and upper class 'lady pupils', paid for their instruction and were exempted from the more menial nursing duties in contrast to the working-class recruits who undertook most of the domestic tasks and contributed longer hours of work than their middle and upper class colleagues.⁴¹ The two tier system of probationer training emerged at the Nightingale School at St Thomas' Hospital on the recommendation of Mrs Wardroper.⁴² The special scheme for middle and upper-class women commenced in 1867.⁴³ McDonald reports that 'lady probationers' were exempted from some, though not all, of the drudgery.⁴⁴ But this is an oversimplification, as the drudgery included nursing duties which might have been disliked, for example, the removal and disposal of excreta. Thus, Nightingale wrote, in notes of her meetings with probationers, that:

It is all very well at first to put lady probationers to exactly the same work as the others, viz., housemaid's work, making beds, dusting etc, etc. But after six months (say) surely they ought to be relieved of this, ie., of all housemaid's work.⁴⁵

³⁸ Abel-Smith, *A History of the Nursing Profession*, p5.

³⁹ Janet Muff, 'Of Images and Ideals: A Look at Socialization and Sexism in Nursing', Chapter 9 in Anne H. Jones, (Ed), *Images of Nurses: Perspectives from History, Art, and Literature*, (Philadelphia, University of Pennsylvania Press, 1988), p197-220.

⁴⁰ Horsfield, *Biting the Dust*, p29.

⁴¹ Starns, *March of the Matrons*, p18.

⁴² Lynn McDonald, (ed.), *The Nightingale School*, (Waterloo, Wilfrid Laurier University Press, 2009), p10.

⁴³ Jane Brooks, 'Visiting Rights Only': *The Early Experience of Nurses in Higher Education, 1918–1960*, (London, The London School of Hygiene and Tropical Medicine, PhD Thesis, 2005) p16.

⁴⁴ McDonald, (ed.), *The Nightingale School*, p10.

⁴⁵ Florence Nightingale, 'Notes of meetings with probationers, 1 February 1873', in Lynn McDonald, (ed.), *The Nightingale School*, (Waterloo, Wilfrid Laurier University Press, 2009), p241.

The 'lady probationers' of the nineteenth century expressed concern about some of their duties being below their status in society, and a demarcation in duties was sought. It is generally acknowledged that the nature of nurse training was aimed at creating obedience to one's seniors through discipline in the performance of routines. Bashford's analysis of nursing in the Victorian era has relevance here.⁴⁶ The discipline and obedience of a probationer to a sister can be likened to a novice to a superior in a religious order. Cook reproduced an extract from a letter to Hilary Bonham-Carter from Florence Nightingale in which she expressed a desire to establish a Protestant Sisterhood at West Wellow.⁴⁷ These plans were thwarted by family pressures.⁴⁸ In another sense they were achieved through the requirement for probationers and trained staff to live in the nurses' home of the employing hospital together with the expectation that they held a Christian vocation.⁴⁹ In this idealised conception there would be no complaints about status. However, not everyone subscribed to this ideal in its entirety, and questions about the relevance of the work routines and status emerged, continuing into the twentieth century.⁵⁰ By the 1930s and 1940s the complaints had reached levels of concern to warrant a number of major reports into nursing. These are reviewed in section 3.4.

Penny Starns has explored status at length.⁵¹ Her starting point is an examination of two types of militarism. The first type emerged in pre-industrial states, and she called it 'aristocratic militarism'. It was characterised by status arising from 'an emphasis on an all-pervasive militaristic spirit' created by indoctrination, paramilitary organisation, and preparation by means of an austerity programme.⁵² Classically, aristocratic

⁴⁶ See section 2.3 above.

⁴⁷ Sir Edward Cook, *The Life of Florence Nightingale*, (London, Macmillan, 1913), Volume 1, p44.

⁴⁸ Mark Bostridge, *Florence Nightingale: The Woman and Her Legend*, (London, Viking, 2008), p91.

⁴⁹ Bradshaw, *The Nurse Apprentice*, p1-28.

⁵⁰ See the collections of Florence Nightingale's correspondence in McDonald, (ed.), *Florence Nightingale: The Nightingale School*, and Lynn McDonald, (ed.), *Florence Nightingale: Extending Nursing*, (Waterloo, Wilfrid Laurier University Press, 2009) in which can be readily found examples of her frustration where nurses have not met her ideals.

⁵¹ Penny Starns, *March of the Matrons: Military Influence on the British Civilian Nursing profession, 1939-1969*, (Peterborough, DSM, 2000).

⁵² Starns, *March of the Matrons*, p13.

militarism draws its senior military leaders from the aristocratic classes, with officer classes drawn from the middle and upper classes. Starns' other form of militarism, 'Technocratic militarism', emerges as technological advances in military hardware demand educated leaders and sub-ordinates who understand the technology.⁵³ Whilst military historians generally agree that aristocratic militarism gave way to technocratic militarism, particularly after WWI, Starns provides evidence for both forms co-existing in nursing. The middle and upper class women probationers, noted above, were being groomed for leadership positions within the profession.⁵⁴ This reflects an aristocratic model, and served to help qualified nurses in the military achieve officer privileges though not status.⁵⁵ An officer would have clear and different duties to that of an army private or naval rating. Starns reports that the Voluntary Aid Detachment (VAD) Council had received many complaints from its nurses regarding conditions of service and accommodation. The Council were faced with the refusal by some VAD nurses to undertake some of the more menial nursing tasks.⁵⁶ Ultimately concessions were given by the Army Council that limited the range of duties for VADs and granted them officer privileges. A consequence of this concession was dissatisfaction amongst male nursing orderlies who were expected 'to perform all the unskilled nursing tasks'.⁵⁷ Starns' analysis of nursing hierarchies, formulated within a framework of aristocratic militarism, offers an explanation for concerns about status. Registered nurses in the military were able to gain some concessions to the range of duties in order to help differentiate their status from that of ward orderlies. Such concessions did not apply to civilian nurses. During WWII registered nurses in the military wanted to be recognised as professionals with technical skills. However, this ambition, and consequent status, was not reflected in the probationers' training since 'menial' tasks continued to dominate.⁵⁸ Starns claimed that little difference existed between qualified and unqualified nursing grades in terms of task allocation by the start of the 1950s.⁵⁹ For

⁵³ Starns, *March of the Matrons*, p13.

⁵⁴ Monica E. Baly, *Nursing and Social Change*, 3rd edition, (London, Routledge, 1995), p120.

⁵⁵ Starns, *March of the Matrons*, p39.

⁵⁶ Starns, *March of the Matrons*, p29.

⁵⁷ Starns, *March of the Matrons*, p30.

⁵⁸ Starns, *March of the Matrons*, p32.

⁵⁹ Starns, *March of the Matrons*, p33.

over eighty years in Britain, starting with lady probationers, but continuing with other recruits, menial duties were an issue of complaint amongst some probationer nurses. Despite these complaints no significant change to the range of duties took place during this period raising the question of why menial duties were considered to be such a necessary part of nursing work. This issue is considered further in Chapter 5 which examines cleaning as a nursing duty in more detail.

Status was also an issue in American nursing which used training schemes founded upon the Nightingale apprenticeship system.⁶⁰ Student nurses were expected to defer to their superiors, whether senior nurses or more senior students, even to the point where deference was required to those who had 'arrived at the training school' for the same cohort but ahead of the subservient student.⁶¹ Although there was a different system of registration, with the first licensing law not enacted until 1938, schools of nursing could be accredited from the mid-1920s.⁶² Barbara Melosh's study of American nursing in the period 1920 to 1955 lacks any detailed comment on clinical work. However, she identified that experiences in the first few months of training were comparable to British probationers with menial tasks being the order of the day adding that it enabled the probationer 'to observe and adjust to ward work'.⁶³ Complaints about the appointment of college trained graduate nurses to senior posts were made by hospital trained nurses who considered the graduate nurses to be incapable of doing the clinical work.⁶⁴ Nursing leaders, keen to raise the status of nursing, were also criticised by hospital trained nurses for ignoring their traditional skills in favour of skills in technical care.⁶⁵ Traditional skills, including 'menial' duties, were considered unworthy of qualified nurses.

⁶⁰ Barbara Melosh, *The Physician's Hand: Work Culture and Conflict in American Nursing*, (Philadelphia, Temple University Press, 1982), p29.

⁶¹ Melosh, *The Physician's Hand*, p51.

⁶² Melosh, *The Physician's Hand*, p39-40.

⁶³ Melosh, *The Physician's Hand*, p52.

⁶⁴ Melosh, *The Physician's Hand*, p68.

⁶⁵ Melosh, *The Physician's Hand*, p68.

Melosh notes that nursing in the United States 'faced a fundamental reorganization'.⁶⁶ One component was the move away from private duty nursing during the 1930s. Private duty nursing was a system of one-to-one nursing with the nurse being contracted by a patient (or their representative) to work with the patient at home. However, with increasing use of hospitalisation, private duty nurses would go with their patients into hospital and work on a one-to-one basis with them.⁶⁷ By the start of the 1930s, 80 percent of private duty nurses attended hospitalised cases.⁶⁸ American hospitals increasingly imported work study methods aimed at efficiency improvements in order to deal with recruitment problems. This led to rationalisation of hospital nursing with less private duty work and increases in routinisation of care provided by hospital employed nursing staff.⁶⁹ Routinisation was deemed to increase efficiency, but also sought to allocate tasks according to skill level such that a patient could be attended by several different care staff. For nurses used to a system of private duty nursing, this form of care was seen as depersonalised, and towards the end of Melosh's study period was being challenged with attempts to create systems of care that reflected the one-to-one nature of private duty, exemplified by the system known as 'primary nursing'.⁷⁰

Having to undertake 'menial' duties was the principal concern for nurses regarding their status. The debates were more in evidence prior to the introduction of penicillin. Starns blames penicillin for challenging any improvement in the status of nursing.⁷¹ The dramatic impact of penicillin caused her to question 'How were nurses able to justify their professional status when one drug could undermine most of their traditional nursing techniques?'.⁷² This issue will be explored further in Chapter 8.

⁶⁶ Melosh, *The Physician's Hand*, p9.

⁶⁷ Melosh, *The Physician's Hand*, p92.

⁶⁸ Melosh, *The Physician's Hand*, p92.

⁶⁹ Melosh, *The Physician's Hand*, p168-183.

⁷⁰ Melosh, *The Physician's Hand*, p204.

⁷¹ Penny Starns, *Nurses at War: Women on the Frontline 1939-45*, (Stroud, Sutton Publishing, 2000), p73.

⁷² Starns, *Nurses at War*, p73.

It is evident that Nightingale had recognised that a distinction was possible between tasks, some of which may be considered domestic and others, though unpleasant, are directly relevant to patient care. Nevertheless, she did expect that probationers would undertake a range of tasks that might be considered housemaids' work as well as tasks which were unpleasant but necessary for the proper care of the patient. Such tasks, described as 'menial' in many instances, were the focus of debates about the nature of nursing work. This is discussed in the next section.

3.4 The Context of Nursing Work

The Victorian era was, amongst other things, one of hope arising from revival in Christianity,⁷³ and the economic advances brought by science and new technologies.⁷⁴ Nursing in the Victorian era was strongly influenced by Nightingale's Christian calling, and her hope for a sisterhood of nurses. By the 1930s society had experienced major trauma through the horrors and losses of WWI,⁷⁵ and the Great Depression.⁷⁶ Christianity as represented by church attendance was in decline, and people needed work.⁷⁷ Women had achieved enfranchisement and some degree of emancipation, and there were increasing opportunities for employment.⁷⁸ Against this backdrop of major social change, probationers and qualified nursing staff of general hospitals were required to live in residence (often in the hospital grounds), and were subjected to rigorous discipline that demanded subservience and obedience to one's superiors.⁷⁹ The nature of nursing work and the nature of training regimes were matters of concern as nursing experienced recruitment difficulties. The work was physically demanding in a potentially dangerous environment. Newly recruited probationers were

⁷³ Martha Vicinus, *Independent Women: Work and Community for Single Women 1850-1920*, (London, Virago Press Ltd., 1985), p47.

⁷⁴ James Burke, *The Day the Universe Changed*, (London, Guild Publishing Ltd, 1985), p193.

⁷⁵ Charles More, *Britain in the Twentieth Century*, (Harlow, Pearson Education Ltd, 2007), p29-48.

⁷⁶ José Harris, 'Society and the State in Twentieth Century Britain' Chapter 2 in F. M. L. Thompson, *The Cambridge Social History of Britain 1750 -1950, Volume 3, Social Agencies and Institutions*, (Cambridge, Cambridge University Press, 1990), p63-117.

⁷⁷ More, *Britain in the Twentieth Century*, p91-92.

⁷⁸ More, *Britain in the Twentieth Century*, p46.

⁷⁹ Christopher Hart, *Behind The Mask: Nurses, Their Unions and Nursing Policy*, (London, Baillière Tindall, 1994), p56.

often assigned tasks which kept them away from direct contact with patients.⁸⁰ This was not isolated to Britain. Melosh discussed shortfalls in hospital recruitment in the USA, and Fealy mentions shortages at the Adelaide Hospital in Dublin, Ireland.⁸¹ The difficulties in recruitment in Britain came under scrutiny and a number of influential reports were produced, such that Bradshaw describes the period from 1925 to 1948 as the 'age of reports'.⁸² Whilst each report made recommendations for change that would alter the delivery of patient care, there was a failure to implement them. The data presented in the following chapters of this thesis and the discussion in Chapter 8 suggest the reason for this failure was the ongoing demand to manage the infection risk in a pre-antibiotic environment. The reports are described chronologically before a discussion of their implications for this study.

The Lancet Commission (1930-1932)

The Commission was brought together in 1930 to 'inquire into the reasons for the shortage of candidates trained and untrained, for nursing the sick in general and special hospitals throughout the country and to offer recommendations for making the service more attractive to women suitable for this necessary work'.⁸³ In 1994, Christopher Hart, a Regional Officer with the Trade Union 'Unison', took an anti-establishment stance on the report, expressing veiled criticism that the report looked to further the 'vocational appeal favoured by Ms Nightingale and recruit better educated young women from the "upper classes"'.⁸⁴ This is perhaps unsurprising as the membership of the Commission was dominated by representatives from the voluntary hospitals, and included two matrons as the only nurse representatives.⁸⁵ The Commission's data collection has been criticised. Hart reports that insufficient data

⁸⁰ Sheila M. Bevington, *Nursing Life and Discipline: A study based on over five hundred interviews*, (London, H. K. Lewis and Co. Ltd., 1943), p6.

⁸¹ Melosh, *The Physician's Hand*, p166; Gerard M. Fealy, *The Adelaide Hospital: School of Nursing, 1859-2009*, (Blackrock, The Columba Press, 2009), p81.

⁸² Bradshaw, *The Nurse Apprentice*, p82.

⁸³ *The Lancet Commission on Nursing: Final Report*, (London, The Lancet, 1932), Preface.

⁸⁴ Hart, *Behind The Mask*, p55.

⁸⁵ Robert Dingwall, Anne Marie Rafferty, and Charles Webster, *An Introduction to the Social History of Nursing*, (London, Routledge, 1988), p99.

were collected on shortages of nursing staff leading the Commission to conclude that staffing levels were appropriate despite lack of evidence on safe minimal staffing levels.⁸⁶ Historians, McGann, Crowther and Dougall, suggested that the Royal College of Nursing collected data from more hospitals than the Commission when preparing its evidence to the Commission.⁸⁷ The Commission considered the form of training, and dismissed long hours of duty, isolation from friends, and the hardness of the work as misconceptions.⁸⁸ Some blame was placed on matrons for perpetuating the apprenticeship training in a quest to perpetuate 'the vocational spirit'.⁸⁹ Whilst some senior nurses were considered to be more alert to 1930s expectations for better training environments, the Commission considered these nurses to be constrained by 'the conservative attitude of valued members of their senior staffs'.⁹⁰ This suggests there was reluctance by those who had risen to positions of authority through long service to allow change. In a particular criticism of ward sisters, the Commission observed that long serving sisters 'may be intolerant of attempts to induce them to allow others a discipline less severe than that which they willingly impose on themselves'.⁹¹ The Commission was supportive of the vocational emphasis placed on nursing that was considered to have 'prevented the shortage of suitable candidates from lowering at all the standards of nursing in the country'.⁹² This vocational emphasis would enable matrons to keep power over probationers, and also continue the development of deference to medical staff which the medically-dominated Commission would wish to see continue. Whilst the Lancet Commission's report generated a lot of discussion, it failed to stem concerns about the menial tasks which probationers complained since these reappeared in the report of the Athlone Committee. The government sponsored Athlone Committee began its work in 1937, five years after the Lancet Commissions report appeared, with a similar brief and in

⁸⁶ Hart, *Behind The Mask*, p55.

⁸⁷ Susan McGann, Anne Crowther, and Rona Dougall, *A History of the Royal College of Nursing 1916–1990: A voice for Nurses*, (Manchester, Manchester University Press, 2009). p76.

⁸⁸ McGann, Crowther, and Dougall, *A History of the Royal College of Nursing 1916–1990*, p77.

⁸⁹ McGann, Crowther, and Dougall, *A History of the Royal College of Nursing 1916–1990*, p77.

⁹⁰ *The Lancet Commission on Nursing: Final Report*, p30.

⁹¹ *The Lancet Commission on Nursing: Final Report*, p30.

⁹² *The Lancet Commission on Nursing: Final Report*, p166.

the light of continuing concerns about the recruitment, training and retention of nursing staff.

Athlone Committee (1937-1939)

The Inter-departmental Committee on Nursing Services was chaired by the Earl of Athlone, and was a joint committee of the Ministry of Health and the Board of Education. Its work was curtailed by the outbreak of WWII, but produced its report in 1939 as an interim report.⁹³ The terms of reference for the committee were to:

inquire into the arrangements at present in operation with regard to the recruitment, training and registration and terms and conditions of service of persons engaged in nursing the sick and to report whether any changes in those arrangements or any other measures are expedient for the purpose of maintaining an adequate service both for institutional and domiciliary nursing.⁹⁴

The report concluded that the shortage of nurses was not due to a lack of applicants or wastage during training but to an increasing demand for nurses.⁹⁵ Unlike the Lancet Commission the Athlone Committee recognised that changes in society meant nursing could no longer expect a 'sense of vocation' as a central tenet of recruitment.⁹⁶ Nevertheless, the vocational element within nursing was not dismissed out-of-hand. The notion of self-sacrifice in the nurse's commitment to her physically and mentally demanding work should be rewarded with improvements in pay and conditions of service.⁹⁷ This was seen as a means to encourage recruitment and retain staff. Amongst its other recommendations, Athlone suggested that recruits into nursing could be drawn from elementary school leavers into pre-nursing courses. This would enable school leavers to experience care giving whilst awaiting the maturity to enter formal probationer training, and avoid the problem of potential nurses being lost to other work. This recommendation was deplored by the Royal College of Nursing,

⁹³ Ministry of Health and Board of Education, *Interim Report of the Inter-departmental Committee on Nursing Services*, the Right Hon. The Earl of Athlone, Chairman, (London, HMSO, 1939). Hereafter referred to as the Athlone Committee, *Interim Report*.

⁹⁴ Athlone Committee, *Interim Report*, p4.

⁹⁵ Bradshaw, *The Nurse Apprentice*, p90.

⁹⁶ Athlone Committee, *Interim Report*, p8.

⁹⁷ Athlone Committee, *Interim Report*, p9.

concerned that it would reduce applications from 'the better-educated girl'.⁹⁸ Another recommendation proposed increasing the numbers of ancillary staff to 'relieve nurses of non-nursing duties'.⁹⁹ The Athlone Committee identified that major changes were required in nursing, one of which was the need to have other staff undertake non-nursing duties. This was a significant recommendation that failed to be implemented. However, it recognised that the opportunity for change had arrived. Whereas the Lancet Commission had indicated that many probationers had 'no objection to domestic work in itself' it did suggest limiting the amount sufficient only to show that the probationer had acquired the skills to achieve environmental cleanliness 'without disturbing the patient by too much bustle and clatter'.¹⁰⁰

Sulphonamides were introduced into clinical practice between the Lancet Commission and Athlone Committee reports. Whilst these drugs do not feature as a contributory factor in the Athlone Committee's reasoning for making recommendations to increase the numbers of ancillary staff, and lessen the expectation of vocational commitment in nursing recruitment, they were beginning to change the clinical practices of nurses in a way that could support the recommendations. Implementation of the recommendations in the report was delayed by WWII and provided the government with a 'convenient excuse for inaction'.¹⁰¹

Rushcliffe Committee (1941-1948)

Formed in October 1941 the Nurses' Salaries Committee for England and Wales (known as the Rushcliffe Committee), and a similar committee for Scotland reported for the first time in January 1943.¹⁰² The Committee was established to address

⁹⁸ McGann, Crowther, and Dougall, *A History of the Royal College of Nursing 1916-1990*, p101.

⁹⁹ Baly, *Nursing and Social Change*, p166.

¹⁰⁰ *The Lancet Commission on Nursing: Final Report*, p130.

¹⁰¹ Dingwall, Rafferty, and Webster, *An Introduction to the Social History of Nursing*, p103.

¹⁰² McGann, Crowther, and Dougall, *A History of the Royal College of Nursing 1916-1990*, p111.

nurses' levels of pay, although extended the remit to consider conditions of service.¹⁰³

The Committee needed to address concerns over pay inequalities after the Civil Nursing Reserve (CNR), in 1941, set pay rates more generous than those available in local authority hospitals.¹⁰⁴ Trained nurses could expect to earn around £20 per annum more with the CNR than the average £70 per annum paid by hospitals.¹⁰⁵ The CNR was created to support civilian nursing services that had been depleted by trained nurses volunteering for military and territorial service.¹⁰⁶ The CNR provided mainly assistants and auxiliaries rather than registered nurses. Replacing trained nurses by assistants was a dilution of nursing expertise and Starns claims it became a deliberate attempt on the part of some hospitals to reduce their wage bills.¹⁰⁷ She suggests that by November 1939 'over 2,000 registered nurses had been forced out of their jobs in London' with equivalent actions occurring elsewhere in the country.¹⁰⁸ Hart's very similar analysis of the event suggests that the 2000 nurses included assistant nurses.¹⁰⁹ However, the CNR was also expected to provide trained nurses, but experienced some difficulty in attracting qualified recruits. The discrepancy and subsequent discord created by the CNR prompted the government to establish the Nurses' Salaries Committee.¹¹⁰ In addition to recommending rates of pay, the Committee recommended a 96-hour fortnight which was accepted by the government.¹¹¹ The Committee did not seek directly to influence recruitment, nor did they consider the nature of nursing work. In response the Royal College of Nursing established the Horder Committee as a means to collect evidence to put before the Rushcliffe Committee. Both the Rushcliffe Committee and its Scottish counterpart, established in 1943, were the forerunners of the Whitley Councils set up on creation of the National Health Service.

¹⁰³ Baly, *Nursing and Social Change*, p172.

¹⁰⁴ Dingwall, Rafferty, and Webster, *An Introduction to the Social History of Nursing*, p104.

¹⁰⁵ Starns, *March of the Matrons*, p29.

¹⁰⁶ Starns, *March of the Matrons*, p28.

¹⁰⁷ Starns, *March of the Matrons*, p29.

¹⁰⁸ Starns, *March of the Matrons*, p29.

¹⁰⁹ Hart, *Behind the Mask*, p66.

¹¹⁰ Dingwall, Rafferty, and Webster, *An Introduction to the Social History of Nursing*, p104.

¹¹¹ McGann, Crowther, and Dougall, *A History of the Royal College of Nursing 1916-1990*, p111.

Horder Committee (1942-1950)

Chaired by Lord Horder, the Royal College of Nursing's Nursing Reconstruction Committee was established in 1942.¹¹² The Committee produced four influential reports over its eight years in existence, addressing firstly the role of the assistant nurse, then education and training, recruitment, and finally examining nurses' economic and social circumstances.¹¹³ These reports were advisory in that they carried only the weight of the Royal College of Nursing. Nonetheless, the recommendations contained within the report on assistant nurses were encapsulated within the Nurses Act 1943, enabling enrolment and regulation of the assistant nurse.¹¹⁴

The nature of nursing work was addressed in more detail by the Lancet Commission and the Athlone Committee than by either the Rushcliffe or Horder Committees which concentrated on pay and conditions of service. Both the Lancet Commission and Athlone Committee commented on the 'sense of vocation' as an element of nurse recruitment. For the Lancet Commission the expectation was that it was an important characteristic to be sought in the applicant, whereas seven years later the Athlone Committee was suggesting the need to reduce emphasis on vocation. Both the Lancet Commission and Athlone Committee commented on the range of duties undertaken by probationers. The Lancet Committee saw no need to change, whereas the Athlone Committee commended greater use of auxiliary staff to undertake the more menial tasks. Both the Lancet Commission and the Athlone Committee made recommendations for change to the form of probationer education. The Lancet Commission was more critical of senior nurses seemingly resisting change and perpetuating the apprenticeship system, whereas the Athlone Committee was more radical in the proposals for restructuring the education of probationers. Two other reports of significance to this thesis are those of Bevington and Goddard and these are considered in Chapter 5.

¹¹² Baly, *Nursing and Social Change*, p190.

¹¹³ McGann, Crowther, and Dougall, *A History of the Royal College of Nursing 1916-1990*, p112.

¹¹⁴ McGann, Crowther, and Dougall, *A History of the Royal College of Nursing 1916-1990*, p114.

The detailed nature of nursing work in the 1930s and 1940s cannot be elucidated from the reports into working conditions, recruitment and retention in nursing. Historical studies that examine nurses at work may offer more insight. Elaine Thomson has explored the work of nurses through advertisements aimed at nurses. In relation to the 1930s she observed that advertisements portrayed the nurse as young and emancipated with an active social life, with a duty to look slim and attractive both in and out of work.¹¹⁵ The examples of products that feature in the advertisements do little to shed light on the actual work of the nurse.¹¹⁶ Examination of texts exploring art and literature in nursing similarly provide little evidence about the practice of nursing. Thus, Apple writing about the use of photographs to study the history of nursing, notes 'the paucity of such pictures' and 'the meagre sample of photographs depicting routine patient care'.¹¹⁷ The photographic record depicts nurses in groups, or with patients, usually in posed and hence artificial representations, but rarely of nurses actually at work undertaking care-giving tasks.¹¹⁸ Those that do exist have a tendency, according to Apple, to highlight more about housekeeping and domestic type work rather than clinical work.¹¹⁹ Melosh examined accounts of nurses as they appear in short stories written in the twentieth century.¹²⁰ Recognising the spatial limitations of the short story, Melosh notes that 'even the most positive portrayals give little indication of the content and skill of nursing'.¹²¹ Short journal articles by former nurses offer only limited insights. Thus, Elizabeth Merson recalls aspects of her early career starting in 1940 with comments about cleaning routines, discipline and

¹¹⁵ Elaine Thomson, 'Beware of worthless imitations: advertising in nursing periodicals, c.1888–1945'. Chapter 10 in Barbara Mortimer and Susan McGann, (eds), *New Directions in the History of Nursing: International Perspectives*, (Abingdon, Routledge, 2005), p158-178.

¹¹⁶ Thomson, 'Beware of worthless imitations', p174.

¹¹⁷ Rima D. Apple, 'Image or Reality? Photographs in the History of Nursing', Chapter 2 in Anne H. Jones, (Ed), *Images of Nurses: Perspectives from History, Art, and Literature*, (Philadelphia, University of Pennsylvania Press,1988), p40-62, quotations from p52 and p54 respectively.

¹¹⁸ Apple, 'Image or Reality?', p53.

¹¹⁹ Apple, 'Image or Reality?', p49.

¹²⁰ Barbara Melosh, 'A special relationship: Nurses and patients in Twentieth Century Short Stories', Chapter 6 in Anne H. Jones, (Ed), *Images of Nurses: Perspectives from History, Art, and Literature*, (Philadelphia, University of Pennsylvania Press,1988), p128-149.

¹²¹ Melosh, A special relationship, p146.

technical skills. She demonstrated a rebellious streak against the authoritarian demands to write up lecture notes in great detail as a means to demonstrate knowledge of a procedure by overstating the need to orientate the filler knobs of hot water bottles towards the ward door.¹²² Audrey Fogarty and her colleagues remembered avoiding the cleaning of the men's toilet by leaving the cubicle door closed.¹²³

Accounts of nursing practice were sought in reports of cases brought before the Disciplinary and Penal Committee of the General Nursing Council for England and Wales (GNC). Eve Bendall and Elizabeth Raybould offer only a summary report to illustrate the reasons why nurses were removed from the register.¹²⁴ They give no details of practice, and reported only the types of offences giving rise to removal from the register. These reflect a demand for very high moral and ethical standards of behaviour observing that 'one is forcibly struck by the public and professional attitude to those convicted of what, today, would be regarded as minor offences'.¹²⁵ Similarly, Reg Pyne, in his historical review of professional discipline, noted that only four of the first thirty cases to appear before the Disciplinary and Penal Cases Committee of the GNC were related to practice.¹²⁶ One case was that of 'taking and unlawfully possessing Morphine' though no further details are given save that the nurse was removed from the register. Three cases concerned abuse of patients. Because of the nature of his evidence, Pyne's review lacks description of practices undertaken by the nurses which had given rise to the charge of abuse. Of the remaining twenty six cases, (of which seven related to personal conduct, sixteen concerned theft, one for forgery and two for being drunk on duty), twenty five were removed on the grounds of character failings.¹²⁷

¹²² Elizabeth Merson, 'Nursing in Wartime', *International History of Nursing Journal*, (1998) 3, (4), p43-6.

¹²³ Audrey Fogarty, Laura Lewis, Eyleen Storck, and Enid Senn, 'Looking Back', *Kai Tiaki Nursing New Zealand*, (2005) 11, (7), p24-25.

¹²⁴ Eve R. D. Bendall and Elizabeth Raybould, *A History of the General Nursing Council for England and Wales 1919-1969*, (London, H. K. Lewis & Co. Ltd., 1969).

¹²⁵ Bendall and Raybould, *A History of the General Nursing Council*, p114.

¹²⁶ Reginald H. Pyne, *Professional Discipline in Nursing: Theory and Practice*, (Oxford, Blackwell Scientific, 1981), p21.

¹²⁷ Pyne, *Professional Discipline in Nursing*, p22.

The secondary literature appears to recognise that there is a lack of evidence about the performance of nursing practice in the past. Possible reasons for this might be a simple failure by historians to study the practices of nurses, or factors which conspire to hide the work of nurses.

3.5 The Character of the Nurse

Widespread within the literature is the expectation that nursing requires practitioners who are selflessly devoted to their work.¹²⁸ Nightingale's emphasis was on sobriety, honesty, and most importantly to be 'a religious and devoted woman'.¹²⁹ This suggests a person who is seen as pure, a view which is addressed by both Bashford and Vicinus.¹³⁰ Martha Vicinus examined the demand for 'impeccable moral standards' in nineteenth century nurses, and linked this to the pursuit of sanitarianism.¹³¹ The concept of purity is reflected in imagery of the nurse as a ministering angel.¹³² Pyne notes that in a case of a nurse who had stolen a hat, a letter was received by the GNC from the secretary of an un-named nursing organisation expressing the view that Council 'must remove the lady from the Register' on the grounds that Council must 'maintain the purity of the profession'.¹³³ Pyne continues the discussion and reports that the phrase was often used in subsequent professional discipline cases in the 1920s and 1930s. Even in the 1940s a nurse was disciplined for having an illegitimate child, and thus Pyne notes that 'maintaining the purity of the profession was still a

¹²⁸ See, for example, Nightingale, 'Notes on Nursing for the Labouring Classes', p141-46; Ashdown, *A Complete System of Nursing*, p1-2; K. D. Keele, *Modern Home Nursing*, (London, Odhams Press Ltd., undated) Chapter 1; Gamarnikow, 'Nurse or Woman', p110; Ryan, *Tuberculosis*, p27.

¹²⁹ Nightingale, 'Notes on Nursing for the Labouring Classes', p146.

¹³⁰ Bashford, *Purity and Pollution*, chapters 2 and 3 are relevant, analysing female bodies at work, and disciplines to achieve purity; Vicinus, *Independent Women*.

¹³¹ Vicinus, *Independent Women*, p85-90.

¹³² See, for example, Jones, (Ed), *Images of Nurses*; Brigid Lusk and Julie F. Robertson, 'US organized medicine's perspective of nursing: review of the Journal of the American Medical Association, 1883-1935', Chapter 6 in Barbara Mortimer and Susan McGann, (eds), *New Directions in the History of Nursing: International Perspectives*, (Abingdon, Routledge, 2005), p86-108; Thomson, 'Beware of worthless imitations', p174.

¹³³ Pyne, *Professional Discipline in Nursing*, p22.

force to be reckoned with'.¹³⁴ Pyne was referring to the purity of the nurse's character, which adds another dimension on purity. The earlier discussion of purity considered the purity of actions. Using iconography of nurses from before the time of Florence Nightingale, Kampen argues that nursing emerged out of domestic nurturing, and that 'the nurse as saintly domestic is no modern invention'.¹³⁵ The imagery, however, is not exclusively that of an angel or saint.¹³⁶ Nevertheless, the vision of a nurse as someone who is pure predominates in respect to the character of the nurse.

3.6 Leadership of Nurses

Whilst this study addresses the work of nurses in hospital wards in the 1930s and 1940s, it is useful to consider the climate of leadership for nursing both nationally and within the hospitals which created the environments within which nurses worked. Hospital services in the decades prior to 1948 consisted of voluntary hospitals and local authority hospitals, also known as municipal hospitals. Voluntary hospitals relied on voluntary income and included those with large endowments, often centres for medical teaching, and smaller public subscription institutions like cottage hospitals.¹³⁷ Local authority hospitals generally included both the former poor law hospitals and fever hospitals and were funded by local authorities.¹³⁸ The Local Government Act 1929 placed previous poor law hospitals under local authority control.¹³⁹ These hospitals tended to care for the elderly and destitute, although the 1929 act enabled acceptance of patients from all sectors of the community, including those who could

¹³⁴ Pyne, *Professional Discipline in Nursing*, p26.

¹³⁵ Natalie B. Kampen, 'Before Florence Nightingale: A Prehistory of Nursing in Painting and Sculpture', Chapter 1 in Anne H. Jones, (Ed), *Images of Nurses: Perspectives from History, Art, and Literature*, (Philadelphia, University of Pennsylvania Press, 1988), p6-39, quotation from p36.

¹³⁶ Jones, (Ed), *Images of Nurses*; Barbara Mortimer, 'Introduction: the history of nursing: yesterday, today and tomorrow', Chapter 1 in Barbara Mortimer and Susan McGann, (eds), *New Directions in the History of Nursing: International Perspectives*, (Abingdon, Routledge, 2005), p1-21; Thomson, 'Beware of worthless imitations', p166 for surrogate mother and trusted advice giver.

¹³⁷ Lindsay Granshaw, 'The Rise of the Modern Hospital', in Andrew Wear, (ed.), *Medicine in Society: Historical Essays*, (Cambridge, Cambridge University Press, 1992), p197-218.

¹³⁸ Baly, *Nursing and Social Change*, p164.

¹³⁹ Virginia Berridge, Mark Harrison and Paul Weindling, 'The impact of war and depression, 1918 to 1948', Chapter 5 in Charles Webster, (ed.), *Caring for Health: History and Diversity*, (Ballmoor, The Open University Press, 1993), p90.

pay.¹⁴⁰ The organisation of nursing care was similar in both, though typically staffing levels were less favourable in Local Authority institutions regarding numbers of trained staff compared to untrained, but more favourable in terms of salaries paid.¹⁴¹ As noted in the Lancet Commission, the problems of attracting recruits to be probationers had increased during the inter-war years due to a variety of potential causes, although increasing demand was the most probable as hospital services expanded.¹⁴²

The implementation of the Nurse Registration Act 1919 has been studied through a number of histories of nursing.¹⁴³ An important issue for a study of nursing in the 1930s and 1940s was the registration status held by the senior nurses in hospitals at that time. Many had completed their training prior to 1925. The General Nursing Council for England and Wales accepted nurses for registration prior to 1925 without them having undertaken a nationally-organised state examination providing certain criteria had been met.¹⁴⁴ For admission to the register, trained nurses needed to demonstrate a minimum of one year of training or, if not trained, should demonstrate long experience or produce 'certificates of good character' from a medical man.¹⁴⁵ However, Broadley reported that The London Hospital believed its trained nursing staff to be 'above any requirement laid down by the law' regarding registration, and so not all trained staff applied for registration prior to 1948.¹⁴⁶ Broadley began her nursing career in 1923, and remembered that not everyone in her cohort of probationers elected to take the State Registration examinations. Whilst hospitals expected nursing staff to seek registration, it was not until the creation of the National Health Service that registration became an absolute requirement to hold a qualified nurse post. Broadley, a nurse tutor, recalled that she was 'expected to coach about half a dozen of

¹⁴⁰ William Robertson, *An Introduction to Hygiene*, 2nd edition, (Edinburgh, E. and S. Livingstone, 1939), p111; Lindsay Granshaw, 'The Rise of the Modern Hospital', p214.

¹⁴¹ Abel-Smith, *A History of the Nursing Profession*, p121.

¹⁴² Bradshaw, *The Nurse Apprentice*, p90.

¹⁴³ See, for example, Abel-Smith, *A History of the Nursing Profession*; Baly, *Nursing and Social Change*, especially Chapter 12; Bendall and Raybould, *A History of the General Nursing Council*.

¹⁴⁴ Baly, *Nursing and Social Change*, p153.

¹⁴⁵ McGann, Crowther, and Dougall, *A History of the Royal College of Nursing 1916–1990*, p32–33.

¹⁴⁶ Margaret E. Broadley, *Patients Come First: Nursing at 'The London' between the two World Wars*, (London, The London Hospital Special Trustees, 1980), p90.

my contemporaries who were faced with taking the State Examination or leaving nursing'.¹⁴⁷ Given this scenario it is possible that many matrons in the 1930s and 1940s were faced with encouraging established ward sisters to register with the General Nursing Council. It is also possible that probationers might be placed into training areas where the ward sister was herself not registered.¹⁴⁸

3.7 Education

Historical reviews of education and training in nursing are generally focussed on the political debates for registration and a national standardisation of training programmes.¹⁴⁹ Registration brought with it the need for a national syllabus for nurse training in an attempt to create a national standard for entry to the register. This section explores the evidence about the content of training provision relevant to the study period in order to glean what the nursing profession's leadership deemed important for nurses to learn at that time.

McGann refers to Florence Nightingale's well known opposition to registration in the belief 'the emphasis of a nurse's training would shift from practical nursing skills to theory and examinations, and the essential qualities of a good nurse would become secondary'.¹⁵⁰ The debate about the need for the national registration of nurses in the United Kingdom has been well documented.¹⁵¹ McGann's discussion of Eva Luckes' contribution indicates she introduced the concept of a Preliminary Training School (PTS) in 1895.¹⁵² This began as a seven-week programme covering topics of bed-

¹⁴⁷ Broadley, *Patients Come First*, p91.

¹⁴⁸ Anne Marie Rafferty, *The Politics of Nursing Knowledge*, (London, Routledge, 1996), p113-117.

¹⁴⁹ See for example Abel-Smith, *A History of the Nursing Profession*; Susan McGann, *The Battle of the Nurses*, (London, Scutari Press, 1992); Baly, *Nursing and Social Change*; Rafferty, *The Politics of Nursing Knowledge*.

¹⁵⁰ McGann, *The Battle of the Nurses*, p3. See for example, Florence Nightingale, 'Address 12: To the Probationer Nurses in the "Nightingale Fund" School at St Thomas' Hospital, 16th May 1888' in Lynn McDonald, (ed.), *Florence Nightingale: The Nightingale School*, (Waterloo, Wilfrid Laurier University Press, 2009), p865.

¹⁵¹ See, for example, McGann, *The Battle of the Nurses*; Baly, *Nursing and Social Change*; Rafferty, *The Politics of Nursing Knowledge*.

¹⁵² McGann, *The Battle of the Nurses*, p19-20.

making and bandaging, anatomy and physiology, hygiene and sick room cookery.¹⁵³

The expectation was that, by the end of the PTS, probationers would learn to perform routine tasks, have adjusted to hospital life, and have decided if nursing was work they wanted to do. Other London hospitals followed within the next 20 years introducing their own PTS.¹⁵⁴ Margaret Huxley developed a similar curriculum in Dublin in 1893.¹⁵⁵ Sarah Swift at Guy's Hospital added practical housework to the programme in 1902.¹⁵⁶ Elsewhere, at St Batholomew's Hospital, Isla Stewart, sometime after 1894, recommended that the study of bacteriology should be introduced with reference to surgical nursing in the light of new concepts of asepsis.¹⁵⁷ McGann presents Isla Stewart as a leader who had regard for the development of the technical aspects of nursing, providing nurses with education about developments in medicine.¹⁵⁸ McGann argued that Rebecca Strong, Matron at the Glasgow Royal Infirmary (1891-1907), was also in favour of preliminary training, believing the advantages of preparation in anatomy, physiology and hygiene could be standardised and taught in common with nurse probationers from other hospitals.¹⁵⁹ Clinical instruction would remain the prerogative of individual hospitals.

Currie refers to early fever nurse training, which had many features in common with general nursing. She reports the syllabus at one Edinburgh hospital to include 'lectures on physiology, hygiene, fever nursing, sick cooking and ambulance' work.¹⁶⁰ Fever nurses might be required to accompany ambulances when transferring infected patients from home to hospital. With life threatening infections like Diphtheria, there might be a need to act quickly. The nurse, therefore, needed to develop specialist skills in working in the limited environment of the ambulance. The requirement to

¹⁵³ McGann, *The Battle of the Nurses*, p20.

¹⁵⁴ McGann, *The Battle of the Nurses*, p32.

¹⁵⁵ Fealy, *The Adelaide Hospital*, p77.

¹⁵⁶ McGann, *The Battle of the Nurses*, p163.

¹⁵⁷ McGann, *The Battle of the Nurses*, p62.

¹⁵⁸ McGann, *The Battle of the Nurses*, p61-63.

¹⁵⁹ McGann, *The Battle of the Nurses*, p109-112.

¹⁶⁰ Currie, *Fever Hospitals and Fever Nurses*, p27.

train in nursing care of the ambulance patient continued through to the end of the WWII.¹⁶¹

The content of training reflected the nursing issues of the day. Hygiene and sanitation were high on the agenda amongst these issues. The syllabus introduced by the GNC is discussed by Bendall and Raybould.¹⁶² Although short on specific detail, the 1921 draft syllabus required 'elementary science including hygiene, sanitation and bacteriology'.¹⁶³ In addition the GNC proposed a means of recording nurses' practical training 'to be initialled by the ward sister'.¹⁶⁴ This initial outline remained largely unchanged throughout several decades and was evident in the 1962 syllabus.¹⁶⁵ The development of skills in the clinical setting through repetition was alluded to by Norman Matheson when he observed that 'dexterity comes with repetition, practice solves most of the early difficulties'.¹⁶⁶ A record of practical training continued through until 1977 when it ceased to be required by the GNC.¹⁶⁷

In a discussion on the need to attract women into domestic service, Horsfield comments on the advances made in the 1920s within nursing, highlighting education and improved conditions.¹⁶⁸ The introduction of science subjects was seen as a key attraction in raising the status of the profession. Horsfield argued that redefining cleaning within the new field of domestic science was an appropriate strategy for the education of domestic staff. The provision of education gave a higher status to the task of cleaning.¹⁶⁹ Using a feminist perspective, Bashford argues that the modernization of the early twentieth century was gendered whereby scientific and

¹⁶¹ Currie, *Fever Hospitals and Fever Nurses*, p101.

¹⁶² Bendall and Raybould, *A History of the General Nursing Council*.

¹⁶³ Bendall and Raybould, *A History of the General Nursing Council*, p44.

¹⁶⁴ Bendall and Raybould, *A History of the General Nursing Council*, p44.

¹⁶⁵ Bendall and Raybould, *A History of the General Nursing Council*, p101.

¹⁶⁶ Norman M. Matheson, 'Assisting at Operations', Chapter 6 in Hamilton Bailey (ed.), *Pye's Surgical Handicraft: A manual of surgical manipulations, minor surgery, and other matters connected with the work of house surgeons and of surgical dressers*, (Bristol, John Wright and Sons Ltd, 11th edn, 1939), p28.

¹⁶⁷ General Nursing Council for England and Wales, *Educational Policy: Syllabus and Practical Experiences required for Admission to the General Part of the Register, Revising Council's Circular 69/4/3, 77/19/B*, (London, General Nursing Council, 1977).

¹⁶⁸ Horsfield, *Biting the Dust*, p105-122.

¹⁶⁹ Horsfield, *Biting the Dust*, p106.

technological developments were predominantly led by men with women focusing on keeping the developments relevant and explainable to society.¹⁷⁰ She examined the transition for nurses of the shift in interpretations of health and illness from miasmatic theories to biological understandings, suggesting this transition both coincided with and mirrored the changes from a philanthropic, charitable model of health care to one which was more scientific, professional, and state based.¹⁷¹ Bashford argued that both models were problematic for nurses, as women. Firstly there was a need to keep pace with professionalization through developing a scientific and technological base. This led to discussions about the place of science in nursing knowledge and practice. The creation of 'domestic science' offered one way in which nurses could conceptualize their work as modern and scientific, while retaining its basis in the feminine world of domesticity. The second was the problem of assisting patients in an increasingly unfamiliar environment.¹⁷²

Character training continued to be seen as fundamental and appropriate to be a good nurse.¹⁷³ McGann reports on the inauguration of the Glasgow Royal Infirmary's Nurses' League in 1921 at which Rebecca Strong's advice to nurses was based on Florence Nightingale's advice in 1869, 'do not lose your ideals ...keep your souls as well as your bodies'.¹⁷⁴ The character training was closely aligned to the discipline and routines underpinning ward work. This has resulted in a standard interpretation in the history of nursing that purports that the discipline exerted and routinisation of work especially with environmental cleaning expected of first year probationers existed for the purpose of character building alone.¹⁷⁵

¹⁷⁰ Alison Bashford, 'Domestic Scientists: Modernity, Gender, and the Negotiation of Science in Australian Nursing, 1880-1910', *Journal of Women's History*, (2000) 12, (2), p127-146

¹⁷¹ Bashford, 'Domestic Scientists'.

¹⁷² Bashford, 'Domestic Scientists'.

¹⁷³ see for example, McGann, *The Battle of the Nurses* and Rafferty, *The Politics of Nursing Knowledge*. Bradshaw, *The Nurse Apprentice*, provides a review from p41-49.

¹⁷⁴ McGann, *The Battle of the Nurses*, p122.

¹⁷⁵ See, for example, Ashdown, *A Complete System of Nursing*, p1; Pugh, *Practical Nursing*, 11th edition, p5; Bradshaw, *The Nurse Apprentice*, p59.

There is a lack of detail in many primary texts about the acquisition of skills through practical training. Instruction manuals exist which explain procedures, and such textbooks were often linked to particular institutions.¹⁷⁶ Thus Ashdown was indebted to King's College Hospital, London, and Riddell acknowledges St Mary's Hospital, Hampton.¹⁷⁷ Learning how to deal with the body became a crucial aspect of nurses' education. Drawing on the use of manuals in the training of nurses, Lawler discusses the dogmatic and detached style that characterises instruction in personal care procedures. She suggests that the ritualistic and procedural nature of this care assisted nurses to manage their work, allowing them to overcome the 'normal social conventions about seeing people naked, undressing people and touching the bodies of others' and enabled them to concentrate on the task whilst preventing 'social rules being broken'.¹⁷⁸ Mortimer hinted at a reason for the lack of documentary evidence about nursing practice, noting that nursing skills are 'honed and practiced in the sickroom'.¹⁷⁹ She goes on to comment that 'they are part of the private experience of illness for the nurse and her patient, and are passed on as part of an oral tradition'.¹⁸⁰ This echoes Zane Wolf's observation that nurses 'passed on their subcultural knowledge about nursing and patient care chiefly by word of mouth and by demonstration'.¹⁸¹ The consequence of the passing on of knowledge and the teaching of skills in this way is that there is little evidence to be found in the written record.¹⁸²

Examining the literature on education and training of nurses identifies suggested topics on which they might be taught but offers little insight into the actual work of nurses in the study period. The literature is either concerned with the content and standards of provision of training programmes, or, on a more practical level, provides manuals and textbooks for use by nurses which set down the procedures to be

¹⁷⁶ See, for example, Ashdown, *A Complete System of Nursing*; Riddell, *First Year Nursing Manual*.

¹⁷⁷ Ashdown, *A Complete System of Nursing*, preface; Riddell, *First Year Nursing Manual*, preface.

¹⁷⁸ Lawler, *Behind the Screens*, p128–129; This point helps with understanding the hiddenness of nursing work discussed in section 3.2.

¹⁷⁹ Mortimer, 'Introduction: the history of nursing', p12.

¹⁸⁰ Mortimer, 'Introduction: the history of nursing', p12.

¹⁸¹ Zane R. Wolf, *Nurses' Work: The Sacred and The Profane* (Philadelphia, University of Pennsylvania Press, 1988), px.

¹⁸² Mortimer, 'Introduction: the history of nursing', p12.

followed. No evidence could be found in the literature that reports the extent to which procedures were followed or varied in practice in the 1930s and 1940s.

3.8 Summary

Much of nursing history concerns professional issues rather than practice. The hiddenness of nursing practices from the historical record raises questions about the actual practices performed by nurses. The literature reports concerns about nurses undertaking 'menial' duties. For some nurses these were duties best left to another grade of staff, despite evidence that such duties were fundamental to a sanitarian construction for nursing. Histories of nursing suggest that menial duties were undertaken to develop discipline and obedience in the quest to develop a purity of character in the nurse. Despite observations in the Lancet Commission report and more so in the Athlone Committee report that nursing needed to update its practices, the literature shows little evidence of change arising from recommendations in these reports regarding practice, leadership and education.

During the 1930s and 1940s, probationers were being trained in a structured approach which began with low status duties in environments where the infection risk needed to be managed. It is suggested in this thesis that the structured approach enabled the new probationer to develop skills in personal hygiene and managing the environment to ensure she was not a risk to her patient. By the time she became involved in intimate care she was less likely to be either a risk to her patient or to acquire any potential infection from the patient for herself or onward transmission to others. The extent to which this interpretation is supported will be considered through an analysis of the oral testimonies reported in the following chapters.

Chapter 4

CARE OF SELF - HEALTH AND SAFETY OF THE NURSE

4.1 Introduction

The nurse in the 1930s and early 1940s undertook work which carried enormous risks to her own health and safety. Debbie Palmer identified that in the 1890s the *Pall Mall Gazette* reported that a few nurses would be killed in order to help save the lives of a million sick people.¹ Little had changed by the 1930s. Wesley Spink refers to fifty seven American nurses who were hospitalised with a streptococcal pharyngitis over an eighteen month period from January 1933, eleven of whom developed rheumatic fever and one died.² The risks were mainly those arising from acquired infection, as identified in tuberculosis nursing by Stephanie Kirby.³ The range of protective vaccinations available was limited. For example, the surgeon Gordon Pugh, in 1937, advocated the nurse should be vaccinated against smallpox, diphtheria, scarlet fever and enteric fevers, though uptake of the small range of available immunisations was low, and difficulties persisted in providing reliable products.⁴ Nurses were exposed to a range of infections and infectious disease in general hospitals. The driving force for managing the infection risk in the pre-antibiotic era was cleanliness. Chapter 5 examines the nurses' role in maintaining a clean environment. Chapter 6 explores issues of patient hygiene, comfort and nutrition all of which contributed to minimise the risk of the patient contracting an infection. Exploring features of wound redressing in Chapter 7 demonstrates how the more technical aspects of nursing continued a

¹ Deborah Palmer, 'To Help a Million Sick, You Must Kill a Few Nurses: Nurses' Occupational Health, 1890-1914', *Nursing History Review*, (2012) 20, (1), p14-45.

² Wesley. W. Spink, *Infectious Diseases: Prevention and Treatment in the Nineteenth and Twentieth Centuries*, (Folkstone, Wm Dawson, 1978), p269.

³ Stephanie Kirby, 'Sputum and the Scent of Wallflowers: Nursing in Tuberculosis Sanatoria 1920-1970', *Social History of Medicine*, (2010) 23, (3), 602-620.

⁴ W.T. Gordon Pugh, *Practical Nursing including Hygiene and Dietetics*, 11th edition, (Edinburgh, William Blackwood and Sons, 1937), p39; Horder, A. E. Gow, and John Matthews, 'Immune Therapy', in Frederick W. Price, (ed.), *A Textbook of the Practice of Medicine*, 5th edition, (London, Oxford University Press, 1937), p15-24; William Robertson, *An Introduction to Hygiene*, 2nd edition, (Edinburgh, E. and S. Livingstone, 1939), p37.

clear focus on the need for cleanliness of materials, and technique. This chapter examines the general risks facing nurses in the quest to achieve cleanliness, and considers some common strategies used to prevent the exposure of nurses, whether in training or qualified, to infection. The chapter introduces oral testimony data collected from participants in this study.

Beverly Byers noted, in her doctoral study, that nurses often put their patients' needs before attending to their own, and seldom thought of themselves when attending patients.⁵ Reflecting the idea of self-sacrifice, Pugh wrote that the nurse 'should not, of course, put her own safety first', though he qualifies this with the caution that nurses should take more care for themselves.⁶ There is no contradiction here, since a little forethought would enable the nurse to minimise the risks to herself. The self-sacrificing nature of nursing was a commonly-held view endorsed by an examination of other nursing texts of the period. Thus Margaret Riddell emphasised that 'To the general public, one of the great virtues of a trained nurse is that, where illness is concerned, her own safety is not considered'.⁷ Millicent Ashdown wrote that a characteristic of nursing was to 'bring out all that is great, noble, and self-sacrificing'.⁸ In her analysis of nursing, Martha Vicinus commented that self-sacrifice by women was something adored by the Victorian public, and was explicitly promoted in Victorian literature which represented nurses as heroines.⁹ The notion of self-sacrifice is explored in Alison Bashford's analysis of nineteenth and early twentieth century nursing.¹⁰ The implications of Bashford's work, which interprets nursing as having a sacrificial nature, are twofold. Firstly, that nurses needed to be sacrificial to achieve purity (or cleanliness) and so be the embodiment of the sanitarian ideal of cleanliness.

⁵ Beverly K. Byers, *The Lived Experience of Registered Nurses, 1930 -1950: A Phenomenological Study*, Doctor of Education Thesis, (Lubbock, Texas Tech University, 1999), p145.

⁶ Pugh, *Practical Nursing*, 11th edition, p39.

⁷ Margaret S. Riddell, *First Year Nursing Manual*, 5th edition, (London, Faber & Faber Ltd., 1939), p12.

⁸ A. Millicent Ashdown, *A Complete System of Nursing*, (London, J. M. Dent & Sons Ltd., 1928), p2.

⁹ Martha Vicinus, *Independent Women: Work and Community for Single Women 1850-1920*, (London, Virago Press Ltd., 1985), p112.

¹⁰ Alison Bashford, *Purity and Pollution: Gender, Embodiment and Victorian Medicine*, (Houndmills, Macmillan Press Ltd., 1998), p41-61.

By being clean the nurse could then absorb the unclean even if it meant putting her own life in jeopardy.¹¹ Secondly, the sacrifice of self enables the depersonalisation of the individual.¹² This was achieved through the use of uniform, living in nursing homes, and restrictions to time off duty. Being depersonalised enabled the cultural barriers arising between the nurse (conceived, or aspiring, to be a middle class female) providing intimate care for a working class male patient to be overcome.¹³

4.2 Death of Colleagues in Service

In the pre-antibiotic era the infection risks to which nurses were exposed could result in death. A number of respondents recalled colleagues or relations who had died in service as a result of contracting an infection from a patient.¹⁴ Once qualified, *Violet Vickers* was allocated to work in the nurses' home where the nurses' sick bay was located. She recalled a 'spate of nurses with TB' and lost a few friends from tuberculosis just before the introduction of streptomycin as the first effective treatment against the disease.¹⁵ *Vickers* was inspired to pursue nursing as a career by her aunt who had been a missionary nurse working in Gambia. Her aunt died from contracting an unspecified infection acquired from nursing children. *Carol Clark* recalled three colleagues who died from contracting TB whilst working, although she herself never did, putting her resistance down to 'being an outdoor girl'.¹⁶ She explained that whenever she was off duty she would be outside in the 'fresh air', riding her bicycle.¹⁷ *Alice Allen* described how two colleagues lost their lives from contracting gastro-enteritis, during her experience of nursing children. She explained:

¹¹ Bashford, *Purity and Pollution*, p56.

¹² See for example, Jane Brooks and Anne Marie Rafferty, 'Dress and Distinction in Nursing, 1860–1939: A corporate (as well as corporeal) armour of probity and purity', *Women's History Review*, (2007) 16, (1), p41-57.

¹³ Bashford, *Purity and Pollution*, p55.

¹⁴ For example, *Alice Allen*, interviewed by David Justham on 14 July 2008 at Sheffield. Began SRN training in London in 1942; *Carol Clark*, interviewed by David Justham on 16 July 2008 at Abergele. Began State Registered Nurse (SRN) training in Manchester in 1934; *Violet Vickers*, interviewed by David Justham on 24 May 2010 at Nottingham, Began SRN training in Nottingham in 1947.

¹⁵ *Vickers*, interviewed on 24 May 2010.

¹⁶ *Clark*, interviewed on 16 July 2008.

¹⁷ *Clark*, interviewed on 16 July 2008

we had a gastro-enteritis epidemic and we had a whole ward of children – we didn't have enough intravenous sets and in any case we didn't have enough nurses to cope with them. We had two nurses die from contracting it.¹⁸

Margaret Broadley reported an instance at The London Hospital where one junior sister providing a guided tour of the hospital to candidates for probationer training took the entourage to the hospital chapel as the first port of call to show them the memorial board listing the names of nurses who had died in service – 'practically every year took its toll'.¹⁹ Unsurprisingly, Broadley notes, that the sister never saw any of the candidates as probationers – they had been dissuaded by the risk of death from becoming a nurse, at least at The London. Markham noted that 'several of my colleagues had died – diphtheria, pneumonia, and tuberculosis had taken their toll of nurses'.²⁰ The evidence of the participants and supported by the literature identifies nursing as an occupation that carried a risk of death from exposure to infection at work. This risk was known in the Victorian era. Agnes Jones died from typhus contracted at work.²¹ Florence Nightingale wrote of a Nurse Harvey's death in 1896 from scarlet fever acquired whilst nursing at St Thomas's Hospital.²² With a risk of acquired infection ever present it was important for the nurse to develop skills and good habits that would minimise the risk of contracting an infection.

4.3 Becoming Ill through Work

A number of respondents had personal experience of colleagues becoming ill through their work. *Edith Evans* recounted a memory of a patient who had typhoid fever when working as a missionary in Africa.²³ The patient needed a colectomy and had been waiting about 25 years to be clear of typhoid. One day, *Evans* noticed the ward sister

¹⁸ Allen, interviewed on 14 July 2008.

¹⁹ Margaret E. Broadley, *Patients Come First: Nursing at 'The London' between the two World Wars*, (London, The London Hospital Special Trustees, 1980), p25.

²⁰ Joan Markham, *The Lamp was Dimmed: The Story of a Nurse's Training*, (London, Robert Hale, 1975), p202.

²¹ Lynn McDonald, (ed.), *The Nightingale School*, (Waterloo, Wilfrid Laurier University Press, 2009), p35.

²² Florence Nightingale, *Letter to Henry Bonham Carter dated 20th November 1896* in Lynn McDonald, (ed.), *The Nightingale School*, (Waterloo, Wilfrid Laurier University Press, 2009), p490-1.

²³ Edith Evans, interviewed by David Justham on 18 July 2008 at Lymm. Began SRN training in Manchester in 1936.

in a distressed state with her head bowed down onto her desk and enquired if she was ill. The answer was that she was well, but that her staff nurse had contracted typhoid from contact with the patient, who was still not clear of the disease. Fortunately, the staff nurse recovered, although the patient, unable to have the operation, subsequently died.²⁴ *Kate King* recalled the concern she had for her sister, also a nurse, who had contracted TB.²⁵ Brenda McBryde recounts her development of whooping cough 3 weeks into a 6-week Preliminary Training School (PTS) in 1938:

I was less popular than ever with the authorities. "Bringing her germs in here...."... but at the Isolation Hospital I discovered, as a patient, what nursing is all about.²⁶

The advice given by Pugh identified the risk that a careless nurse could transmit infection to others, and therefore, in addition to vaccination, the nurse:

should keep her finger-nails short, and use a nail brush before meals; she should not go on duty fasting; she should keep her mouth closed while her patient coughs; and she should get all the fresh air she can.²⁷

Pugh recognised that not many nurses put their own safety first, and 'more often one has to blame them for not taking enough care of themselves'.²⁸ His argument stressed the quest for personal purity and cleanliness, outside of work as well as in work, because those 'who are careless about themselves are apt to be the same about other people, and hence are more likely to carry contagion away with them from the sick room'.²⁹

That nurses died in service or became ill from acquired infections is a strong indication of the threat posed by infectious disease in the pre-antibiotic era. However, it was not just exposure to infectious disease that proved a risk. Infections could be contracted by handling potentially infected materials, for example wound dressings, sputum and excreta. Scrupulous cleaning and the development of skill when providing patient care or handling equipment for routine care or technical procedures was sought to avoid

²⁴ Evans, interviewed on 18 July 2008.

²⁵ King, interviewed by David Justham on 7 August 2008.

²⁶ Brenda McBryde, *A Nurse's War*, (London, Chatto and Windus, 1979), p13-14.

²⁷ Pugh, *Practical Nursing*, 11th edition, p39.

²⁸ Pugh, *Practical Nursing*, 11th edition, p39.

²⁹ Pugh, *Practical Nursing*, 11th edition, p39.

contact with potentially infective matter. The evidence reported in subsequent chapters of this thesis reveals that first year probationers undertook a lot of the environmental cleaning and other indirect care duties involving cleaning work in the sluice. This approach can be seen as a means of protecting unskilful and inexperienced recruits by minimising direct contact with sources of infection. At the same time, first year probationers would be able to observe the skills and behaviours of more experienced staff in their closer work with patients. Ultimately, as competence in hand hygiene and cleaning skills, and skills in managing patient hygiene developed, probationers would be allowed to practice the more technical aspects of nursing work. Technical work could expose them directly to infectious material, particularly when, for example, redressing open pus filled sores.

4.4 Health and Safety at Work

Nurses were exposed to a range of hazards in the workplace in their pursuit of cleanliness. *King* noted that the quest for cleanliness was 'so important'.³⁰ Such an emphasis, driven by ward sisters and hospital matrons, contributed to the protection of staff as well as patients from infection risks. Not only was the risk of infection ever present, but the quest to achieve cleanliness meant that exposures to damaging chemicals and physical hazards were possible.

In the 1930s and 1940s Health and Safety legislation did not apply to nurses in hospitals. Stronger concentrations of carbolic and Lysol than those used for hand washing were used as general disinfectants and for chemical sterilisation of instruments. It was inevitable that hands could be contaminated with these chemicals.

Ashdown reported that:

Izal, Jeyes' fluid, carbolic (1-20), and perchloride of mercury (1-1000) are reliable disinfectants. The two last drugs being poisonous should only be handled by the nurse.³¹

³⁰ Kate King, interviewed by David Justham on 7 August 2008 at Heswall. Began SRN training in Manchester in 1939.

³¹ Ashdown, *A Complete System of Nursing*, p4.

It appears that Ashdown considered it acceptable for the nurse to be exposed to these risks to her own health and safety. Exposure to carbolic and Lysol was reported by participants. *Phyllis Porter* commented that both Lysol and carbolic were strong substances that caused chemical burns to the hands 'unless it was washed off'.³² *Farmer* noted that carbolic would stop infection but 'if you weren't careful it would burn your hands – you just had to be careful'.³³

In addition to chemical hazards, there were physical hazards also. *Jones*, commenting on the cleaning routines she experienced, noted that, if there was a quiet period at the weekend, she might be asked to clean lampshades which required her to climb a ladder. There was 'no health and safety in those days'.³⁴ *Farmer* remembered that, once a week on Sunday, as a probationer she was required to do some high level cleaning. This meant dusting lights by climbing seven rungs up a ladder. She added that no one that she knew ever fell off a ladder but sometimes she wished she had, believing this might spare her from having to do it again.³⁵ *Evelyn Prentis* wrote about falling off a ladder whilst cleaning in a bathroom, although she makes no comment about sustaining any injury.³⁶

Exposure to bodily products could also be a source of infection. Rinsing soiled sheets in the sluice to remove faeces before the sheets were sent to the laundry was one such task. Another task was cleaning bedpans. *Vickers* commented on spending afternoons, as a junior probationer, in the sluice cleaning bedpans before they were placed in the steamer for a final wash and rinse at high temperature.³⁷ Cleaning

³² *Phyllis Porter*, interviewed by David Justham on 24 May 2010 at Nottingham. Began SRN training in Nottingham in 1939.

³³ *Florence Farmer*, interviewed by David Justham on 4 August 2008 at Preston. Began SRN training in Manchester in 1936.

³⁴ *Jane Jones*, interviewed by David Justham on 6 August 2008 at Preston. Began SRN training in Manchester in 1944.

³⁵ *Farmer*, interviewed on 4 August 2008.

³⁶ *Evelyn Prentis*, *A Nurse in Time*, (London, Hutchinson & Co., 1977), p75.

³⁷ *Vickers*, interviewed on 24 May 2010.

sputum mugs was a task *Michelle Moore* disliked intensely.³⁸ *Clark* was more

circumspect, describing the care needed when handling sputum from TB patients:

So the bed patients had sputum boxes where they were moved everyday and disposed of or sometimes twice a day as necessary if they had a terrific amount of sputum as some of them did in the adult section. And then ambulant patients had a blue flask, some of them, with a silver top and graduations on and they had, I think it was, half an ounce of one in 20 carbolic in the bottom, and they had graduations so that you could measure the amount of sputum they'd got afterwards you see. I can remember that. And then the flasks went down to a special incinerator place to be emptied and have their first wash and after that they came back to the ward and the nurses had to wash them and the nurses had to gown up and put a mask on and rubber gloves and even then, although they'd been emptied and cleaned once, she was responsible for cleaning these flasks. You thought you were about to do a surgical operation. You were dressed up and had your bottle brush and they had to shine like new, you see, afterwards.³⁹

This lengthy extract illustrates the extent to which the nurse attempted to protect herself from infective material. Several common features in the protection against infection applied to all grades of staff. These features are identified as hand hygiene, use of protective clothing, diet, and protection from exposure to infection outside of the workplace.

4.5 Hand Hygiene

The use of hand-washing in the prevention of infectious disease transmission is ascribed to Ignaz Semmelweiss (1818-65) who was looking at the cause of puerperal fever.⁴⁰ He showed that midwives who practised hand washing had a lower rate of puerperal sepsis amongst their patients than doctors who did not. Whilst hand hygiene was commonplace in clinical practice, it was not until the 1930s that its absence was demonstrated, through laboratory studies, to increase the transmission of infection.⁴¹ By the late 1940s hand hygiene was considered the most important aspect of preventing cross-infection.⁴² It was a feature of the times that good hand hygiene was

³⁸ *Michelle Moore*, interviewed by David Justham on 3 September 2008 at London. Began SRN training in Birmingham in 1940.

³⁹ *Clark*, interviewed on 16 July 2008.

⁴⁰ Graham A. J. Ayliffe, and Mary P. English, *Hospital Infection: From Miasmas to MRSA*, (Cambridge, Cambridge University Press, 2003), p109-110.

⁴¹ Ayliffe, and English, *Hospital Infection: From Miasmas to MRSA*, p109-110.

⁴² See, for example, Gerald E. Breen, *Essentials of Fevers*, 2nd edition, (Edinburgh, E. and S. Livingstone, 1948), p58.

commonplace amongst sectors of the population. Many recruits were experienced in hand hygiene before starting nursing. *Nancy Newton* reported that people in general were 'good at hand-washing'.⁴³ In her hospital, wards had sinks with elbow taps 'in the middle of the ward' which she considered encouraged hand-washing. *Barbara Bennett* stated it was 'automatic – you were trained at home to wash hands – whatever you did you washed your hands'.⁴⁴ Likewise, for *Florence Farmer* hand-washing was 'automatic'. For her 'you just did it'.⁴⁵ *Susan Shaw* recalled that you washed hands 'religiously'.⁴⁶ *Thelma Taylor* reported that hands were washed before undertaking wound dressings with forceps being used to remove dirty dressings.⁴⁷ The comments suggest that nurses were very aware of the need for hand washing.

Hand washing was not without its risks to health. Constant washing made hands sore. Chapped hands in winter became dry. Dry epidermal skin cracked revealing a tender dermal layer and the potential source of entry for pathogenic organisms. In the nineteenth century, finger poisoning, or paronychia, from damaged hands was common. Lynn McDonald summarises instances of nurses becoming seriously ill from finger poisoning.⁴⁸ In 1878 St Thomas's Hospital posted a memorandum for probationers detailing the need to take care of hands which included the statement that:

No nurse who, being warned, poisons her finger is fit to be a Nurse. If she cannot take care of her own cleanliness, how can she take care of her Patient's [cleanliness].⁴⁹

The need of hand care continues through to texts of the 1930s. Thus, both Pugh and Riddell stress the necessity for excellence in hand care.⁵⁰ In the 1940s Evelyn Pearce

⁴³ Nancy Newton, interviewed by David Justham on 19 December 2008 at Sturton by Stow. Began SRN training in London in 1939.

⁴⁴ Barbara Bennett, interviewed by David Justham on 15 July 2008 at Dyserth. Began SRN training in Manchester in 1938.

⁴⁵ Farmer, interviewed on 4 August 2008.

⁴⁶ Susan Shaw, interviewed by David Justham on 18 May 2010 at Nottingham. Began SRN training in Nottingham in 1943.

⁴⁷ Thelma Taylor, interviewed by David Justham on 24 May 2010 at Nottingham. Began SRN training in Nottingham in 1943.

⁴⁸ Lynn McDonald, (ed.), *The Nightingale School*, (Waterloo, Wilfrid Laurier University Press, 2009), p28-29.

⁴⁹ McDonald, (ed.), *The Nightingale School*, p753.

⁵⁰ Pugh, *Practical Nursing*, 11th edition, p31. Riddell, *First Year Nursing Manual*, p12.

emphasised the need for hands to be clean always, ensuring that no abrasions or cracks occur in the skin.⁵¹ *Woods* reported that hands could be 'terribly chapped'.⁵² *Jones* reported getting sore hands in winter.⁵³ *Nancy Newton* remembered getting sore hands but did not link this to any particular season of the year.⁵⁴ By contrast, *Shaw* specifically mentioned that she did not get sore hands.⁵⁵

The most common washing agents reported were the use of soap and water. Thus *Shaw* remembered that it was 'just soap and water in those days'.⁵⁶ *Rita Reed* referred to soap and water scrub before changing wound dressings.⁵⁷ Hand-washing was frequent but the frequency was unspecified. *Dora Davies* remembers that she was 'always washing hands – we did not have gloves'.⁵⁸ Participants generally referred to a hand-washing procedure that included use of a disinfectant rather than the more intensive surgical scrub. *Jane Jones* did recall a surgical scrub, which took 5 minutes and which left her with sore hands in winter.⁵⁹

Wendy Woods recalled being taught hand-washing in her PTS. The technique involved the use of a nail brush and immersion in a bowl of Dettol.⁶⁰ These comments, which mention Lysol, carbolic and Dettol, refer to immersion of the hands in disinfectant. This was a technique in use in the United Kingdom upto the 1960s.⁶¹ A solution of carbolic was used in some hospitals as a hand antiseptic. *Riddell* noted that 'hands are then immersed in a solution of biniodide of mercury, 1 in 2000, carbolic lotion, 1 in 60, or methylated spirit and covered with sterile rubber gloves' as part of the surgical

⁵¹ Evelyn Pearce, *Medical and Nursing Dictionary*, 6th edition, (London, Faber & Faber Ltd., 1943), p282.

⁵² *Wendy Woods*, interviewed by David Justham on 1 June 2010 at Nottingham. Began SRN training in Nottingham in 1950.

⁵³ *Jones*, interviewed on 6 August 2008.

⁵⁴ *Newton*, interviewed on 19 December 2008.

⁵⁵ *Shaw*, interviewed on 18 May 2010.

⁵⁶ *Shaw*, interviewed on 18 May 2010.

⁵⁷ *Rita Reed*, interviewed by David Justham on 18 May 2010 at Nottingham. Began SRN training in Nottingham in 1943.

⁵⁸ *Dora Davies*, interviewed by David Justham on 17 July 2008 at Glossop. Began SRN training in Manchester in 1932.

⁵⁹ *Jones*, interviewed on 6 August 2008.

⁶⁰ *Woods*, interviewed on 1 June 2010.

⁶¹ *Zsolt Filetoth*, *Hospital Acquired Infection*, (London, Whurr Publishers, 2003), p152.

scrub procedure for hand hygiene.⁶² Riddell does not suggest rinsing the hands following immersion in the toxic solutions. Pugh offered some comfort, suggesting that rinsing in sterile water or saline solution as a final step before putting on gloves.⁶³ Protection against dry hands with the use of moisturising creams and lotions was identified by respondents. *Woods* recalled that hand lotions were available in ward areas. She applied the lotion 'when she finished work or before going for a meal'.⁶⁴ *Jones* referred to the use of a zinc and Vaseline based ointment which she applied at night, before putting on gloves to sleep in.⁶⁵ However, *Newton* mentioned not having a 'lot of creams' available to help prevent soreness.⁶⁶

With the risk of damage to hands well recognised, Pugh stated that the nurse 'should she be careful of her hands, for the opportunities of infecting them are many'.⁶⁷ He advocated that she should avoid contamination with discharge from sores or wounds. Swabs were to be held in a way that fingers would not be soiled, and dirty dressings needed removal with forceps. Care was to be taken not to break the skin on the hands, and no bandage or towel soiled with pus should be washed by hand. Furthermore Pugh advised that chapping should be prevented by thorough drying of the hands, followed by the application of an emollient if there was any tendency to chapping. The extent of the concern about damaged hands being an infection risk was detailed by Pugh:

A nurse must take particular care not to prick her finger when fastening a buckle; the point of a pin used for fastening papers together should be buried between the papers. Any prick or abrasion should be treated seriously, carefully washed, painted with iodine, and kept covered until healed, thin rubber stalls being useful for this purpose. A tender or painful spot on the hand should be *at once* reported.⁶⁸

Riddell provided similar guidance. Writing for the new probationer, she warned her

to take particular care of her hands... Chapped hands, pinpricks or scratches are liable to become infected; an emollient should be used to keep the hands

⁶² Riddell, *First Year Nursing Manual*, p120.

⁶³ Pugh, *Practical Nursing*, 11th edition, p168.

⁶⁴ Woods, interviewed on 1 June 2010.

⁶⁵ Jones, interviewed on 6 August 2008.

⁶⁶ Newton, interviewed on 19 December 2008.

⁶⁷ Pugh, *Practical Nursing*, 11th edition, p31.

⁶⁸ Pugh, *Practical Nursing*, 11th edition, p31.

soft, and, in the case of a prick or scratch the part should be painted with iodine and protected by a dressing.⁶⁹

Similar sentiments were expressed by Edith Funnell who advised that hands 'should be kept free from cracks and roughness due to cold wind or constant use of antiseptic solutions.'⁷⁰ She proceeded to recommend actions or applications to prevent damage, commenting on keeping hands clean and nails trimmed in a curve. Funnell stated that nurses 'should never have pointed or painted' nails.⁷¹ They should avoid cutting the protective cuticle that might give rise to ragged ends, or cause puncture wounds where bacteria can gain entrance, since a '*Paronychia* (whitlow) may be caused in this way'.⁷² The seriousness of developing an infection in a finger could not be ignored, and Riddell insisted that such 'should be reported to the proper authority, and on no account should a nurse attempt to treat herself.'⁷³

4.6 Strategies for Reducing the Risks of Acquiring Infection.

In the era before effective treatments for bacterial infections nurses were working in dangerous environments. In order to minimise the risk of acquiring infections a number of other general strategies were in place in addition to hand hygiene. This section addresses protective clothing, diet, and limiting contact with infection outside of the workplace as well as the role of matron of the hospital in the overall management of the nursing workforce. *Vickers* said of her first matron that 'the welfare of nurses was paramount' to her.⁷⁴ In a poorly referenced study exploring the role of matrons, Peter Ardern suggests matrons had influence on preventing the spread of infection.⁷⁵ He wrote:

Prior to 1941, the only way to prevent cross-infection was by scrupulous cleanliness, carefully supervised by the matron. Matron, as head of nursing care, was the key figure in the fight against infection, and cleanliness was her

⁶⁹ Riddell, *First Year Nursing Manual*, p12.

⁷⁰ Edith M. Funnell, *Aids to Hygiene for Nurses*, (London, Baillière, Tindall & Cox 1940, 9th reprint 1946) p188-9.

⁷¹ Funnell, *Aids to Hygiene for Nurses*, p188-9.

⁷² Funnell, *Aids to Hygiene for Nurses*, p188-9.

⁷³ Riddell, *First Year Nursing Manual* p12.

⁷⁴ *Vickers*, interviewed on 24 May 2010.

⁷⁵ Peter Ardern, *When Matron Ruled*, (London, Robert Hale, 2002).

primary weapon. Matron's activities are often viewed as overly obsessive. Her emphasis was on the tidiness of linen rooms, neatness of dress and cleanliness of wards, also on nurses' deportment, attitudes and habits.⁷⁶

Matrons were known for their pursuit of cleanliness and would expect ward sisters to ensure that the ward was clean, neat and tidy ready for inspection. The extract illustrates a range of responsibilities held by the matron, though it was her staff that enacted her demands. *Vickers* recalled that she had to clean the sluice ready for inspection by the ward sister.⁷⁷ It is evident that there was close supervision to ensure that standards of cleanliness were high.

Harris' memories of Miss Lucy Duff Grant, Matron of Manchester Royal Infirmary were of a 'canny Scot' who introduced a number of reforms that had a bearing on infection control, including strict controls on wearing uniforms.⁷⁸ Wearing protective clothing was a strategy to help protect the nurses. *King* reported that masks, that covered the nurse's mouth and nose, were worn a lot when redressing wounds and for 'anything risky'. These masks were sent to the laundry for cleaning after use.⁷⁹ However, most comments were reserved for aprons. Aprons were worn to protect uniform dresses from contamination. *Reed* recalled that aprons were changed each day after all the beds were made.⁸⁰ *Garner*, likewise, reported that aprons were changed daily just before morning coffee break, and *Jones*, whilst not specifying a time, mentioned that aprons were changed every day.⁸¹ *Jones* also added that if the apron was contaminated, 'got anything on it', then she was expected change the apron. Similarly, *Vickers* would need to change her apron in the event of 'an accident', as well as routinely at morning coffee time.⁸² Waterproof aprons made from rubber were used for added protection. *Lloyd's* memory was of the need to wear a rubber apron, 'old

⁷⁶ Arden, *When Matron Ruled*, p161.

⁷⁷ *Vickers*, interviewed on 24 May 2010.

⁷⁸ Hilary Harris, interviewed by David Justham on 6 August 2008 at Clitheroe. Began SRN training in Manchester in 1934.

⁷⁹ *King*, interviewed on 7 August 2008.

⁸⁰ *Reed*, interviewed on 18 May 2010.

⁸¹ Gloria Garner, interviewed by David Justham on 5 August 2008 at Grange-over-Sands. Began SRN training in Manchester in 1940; *Jones*, interviewed on 6 August 2008.

⁸² *Vickers*, interviewed on 24 May 2010.

fashioned rubber things', on top of her uniform when undertaking a bed pan round.⁸³ However, *Woods*, whose training commenced in 1950 did not remember nurses having to change aprons during a shift, but did remember that sisters removed their aprons prior to going for lunch.⁸⁴ In *Reed's* experience, a clean apron was required 'when you had to visit Matron'.⁸⁵

Staff needed resistance against infection. Poor nutrition, especially reduced vitamin A intake, was linked to lowered resistance to infections.⁸⁶ Mealtimes were an important part of the social structure of nursing. The gathering together of nurses from the different clinical areas, however, would increase the risk of cross infection. The removal of aprons provided a symbolic, if not actual, indication of the removal of contamination allowing meals to be taken in a clean state. Not only might aprons be removed, but *Shaw* reported that 'cuffs were taken off, sleeves rolled down, and [uniform] cloak was put on'.⁸⁷ At Manchester Royal Infirmary no theatre clothes were worn in the dining room.⁸⁸ There was a hierarchy within dining rooms, with some hospitals having separate dining rooms for sisters.⁸⁹ The food itself could also protect nurses against infection. A good meal provided both calories and nutritional value and prevented a reduction in the immune system.⁹⁰ *Davies*, a lifelong vegetarian, remembered that the food provided at her hospital nurses' dining room was good, with good nutritional value. Having two cooked meals a day was 'better than one's own home' and the nurses could have as little or as much they wanted.⁹¹ *Harris*, who trained at the same hospital, recalled that breakfasts included bacon (five days a

⁸³ Louise Lloyd, interviewed by David Justham on 12 August 2008 at Grantham. Began SRN training in Leicester in 1940.

⁸⁴ Woods, interviewed on 1 June 2010.

⁸⁵ Reed, interviewed on 18 May 2010.

⁸⁶ R.H.A. Plimmer, *Vitamins* in Frederick.W. Price (ed.), *A Textbook of the Practice of Medicine*, 5th edition, (London, Oxford University Press, 1937), p448-57.

⁸⁷ Shaw, interviewed on 18 May 2010.

⁸⁸ Harris, interviewed on 6 August 2008.

⁸⁹ Woods, interviewed on 1 June 2010.

⁹⁰ Stephan Strobel, and Anne Ferguson, with a contribution by Andrew Tomkins, 'Immune function, food allergies and food intolerance, Chapter 26 in Catherine Geissler and Hilary Powers, (eds), *Human Nutrition*, 11th edition, (Edinburgh, Elsevier Churchill Livingstone, 2005), p479-501.

⁹¹ Davies, interviewed on 17 July 2008.

week), eggs on Friday, and boiled ham another day.⁹² The Hospital's Medical Officer had advocated that the health of nurses would be better with fruit in the diet, and apples, oranges and bananas were provided in rotation.⁹³ *Shaw* recalled that staff members were well fed, even during World War II.⁹⁴ Well fed staff had the energy to undertake the demands of the job. Good nutrition had been understood as contributing to resistance against infectious disease and it was part of the sanitarian ideal to provide wholesome, clean, food.⁹⁵

Life in the Nurses' Home was controlled and monitored. In an extensive extract based on Honor Pitt's memories of starting PTS at a Nottingham hospital in 1935, bedrooms in the Nurses' Home had to be ready for inspection by 10.30am each day, with no more than five articles allowed on the dressing table.⁹⁶ *Allen* reported 'in the regional PTS we had to clean our own rooms and they were very thoroughly inspected'. The nurse's bedroom was not a private space. It would be inspected. *Shaw* recalled that the Sister Tutor would regularly check wardrobe tops for cleanliness.⁹⁷ *Harris* referred to her matron's imposition of a rule that no more than eight articles were allowed on the nurse's dressing table because the maid had to clean these tables.⁹⁸ *Sheila Bevington* found one hospital where 69 percent of Nurses' Home residents resented the intrusiveness of the 'Home-Sister entering their bedrooms at any hour either unannounced or immediately after knocking' without allowing time for a response. The purpose of such visits was 'extreme tidiness was insisted upon by the Home-Sister for the purpose of training rather than of helping the cleaners.'⁹⁹

⁹² Harris, interviewed on 6 August 2008.

⁹³ Harris, interviewed on 6 August 2008.

⁹⁴ Shaw, interviewed on 18 May 2010.

⁹⁵ See, for example, Lionel E.H. Whitby, *The Nurses' Handbook of Hygiene: An Elementary Text*, (London, Faber and Gwyer Ltd., 1925), p60.

⁹⁶ John Bittiner and David Lowe, *Nottingham General Hospital: Personal reflections*, (Nottingham, Special Trustees for Nottingham University Hospitals, 1990), p71.

⁹⁷ Shaw, interviewed on 18 May 2010.

⁹⁸ Harris, interviewed on 6 August 2008.

⁹⁹ Sheila M. Bevington, *Nursing Life and Discipline: A study based on over five hundred interviews*, (London, H. K. Lewis and Co. Ltd., 1943), p23.

The degree of discipline invoked aimed to develop conformity to a vocational ideal which emphasised purity.¹⁰⁰ It was common practice for probationers to live in accommodation provided by the hospital. The Nurses' Home was home, not only to probationers, but other nursing staff also, although at some hospitals separate accommodation was provided for senior nurses. Routines that were imposed on probationers required them to maintain cleanliness and tidiness in their bedrooms. Curfews were imposed on absence from the hospital during off-duty times. Restrictions were placed on visitors to the home. *Newton's* husband recalled being pursued by the Home Sister after he 'escaped' from the nurses home sometime after the 10.30pm curfew. 'There were two of us', he said, 'I got out, the other chap got caught on a drain pipe. He was an officer in the navy. He was scared stiff – we all were'.¹⁰¹

Some of the rules imposed by the matrons could reflect a sense of responsibility 'in loco parentis' for the generally young probationers.¹⁰² Another interpretation reinforces *Bashford's* argument for the development of purity in nurses by limiting contact with potential sources of infection.¹⁰³ Most hospitals, at this time, had a 'sick bay' for staff, and that hospital matrons took the care of their staff very seriously. *Bevington's* study of nursing identified that nurses were generally satisfied with care for major illness arising through work, although provision was less than satisfactory to address the psychological aspects.¹⁰⁴ Minor illnesses were less favourably addressed in the opinion of the staff she surveyed. In one hospital she found 91% of staff expressing the service was 'unsatisfactory'.¹⁰⁵ Another approach adopted was for nursing staff that had been in contact with an infectious case to be quarantined before

¹⁰⁰ *Bashford, Purity and Pollution*, 56.

¹⁰¹ *Newton*, interviewed on 19 December 2008. Her husband was present during the interview and added this anecdote which occurred during his courtship of Nancy.

¹⁰² *Arden, When Matron Ruled*, p173; *Gerard M. Fealy, A History of Apprenticeship Nurse Training in Ireland*, London, Routledge, 2006), p126.

¹⁰³ *Bashford, Purity and Pollution*, p48-56.

¹⁰⁴ *Bevington, Nursing Life and Discipline*, p19.

¹⁰⁵ *Bevington, Nursing Life and Discipline* p18.

attending another case.¹⁰⁶ *Vickers* recalls her matron sending her home on her days off to spend them 'in the garden' to get fresh air following possible exposure to TB.¹⁰⁷

Supervising the nurses' appearance was a role *Vickers'* matron held. Reprimands were forthcoming from her matron if rings were worn, or lipstick used, or hair was allowed to fall onto the uniform collar, or dresses were more than nine inches off the floor.¹⁰⁸

Nurses were forbidden to wear uniform outside of the hospital grounds. 'God help you if you slipped your coat on over your uniform – if somebody spotted a bit of lilac and white check [uniform] you were "on the mat" before matron'.¹⁰⁹ Whilst tempted to go out in uniform 'you resisted if you had any sense' added *Hilary Harris*.¹¹⁰ Not wearing uniform outside of the hospital was a feature of *Bennett's* nursing experience.¹¹¹

Markham wrote of an incident when a group of nurses went out in uniform over which they wore uniform raincoats. They visited the local cinema and were initially mistaken for a group of noisy schoolgirls rather than nurses.¹¹²

Another strategy adopted recognised the value of acquired immunity. Evidence regarding minimising the risk of acquiring disease is found in relation to staff employed by sanatoria. The acquired immunity from prior exposure to disease was sometimes used as a part of the recruitment strategy. Deliberate strategies to recruit recovered TB patients were implemented. Ryan, writing of nurses working with TB patients, noted that many were 'former consumptives',¹¹³ and thus would have a degree of immunity. Nevertheless, he considered that they were skilled with 'formidable expertise' and were selflessly devoted to their vocation of caring.¹¹⁴ This observation was supported by Stephanie Kirkby who reports on the London County Council's active strategy to recruit former TB patients to train to become sanatoria

¹⁰⁶ Ashdown, *A Complete System of Nursing*, p10.

¹⁰⁷ *Vickers*, interviewed on 24 May 2010.

¹⁰⁸ *Vickers*, interviewed on 24 May 2010.

¹⁰⁹ *Harris*, interviewed on 6 August 2008.

¹¹⁰ *Harris*, interviewed on 6 August 2008.

¹¹¹ *Bennett*, interviewed on 15 July 2008.

¹¹² *Markham*, *The Lamp was Dimmed*, p97.

¹¹³ *Frank Ryan*, *Tuberculosis: The greatest story never told*, (Bromsgrove, Swift Publishers, 1992), p30.

¹¹⁴ *Ryan*, *Tuberculosis*, p27.

nurses as well as to recruit nurses who had a history of TB.¹¹⁵ There was no evidence found to suggest that a similar strategy was employed by general hospitals. However Pugh advocated the need for staff in the general hospital to be immunised and thus acquire passive immunity.¹¹⁶

4.7 The Spiritual Dimension

A number of participants commented about the spiritual dimension of their nursing experience. However, none expressed any outright resentment regarding religious intrusion into their lives. However, *Davies* used to 'have to go to the Chapel on Sundays even if not on duty' was said matter-of-fact rather than with any sense of religious desire.¹¹⁷ *Allen* was the only participant to indicate her own outward expression of her faith within her work, and this was in relation to Terry, a young boy who was so desperately ill that she used to go to the hospital's chapel during her meal break to pray for him. He recovered consciousness and became well again.¹¹⁸ The sense in which *Allen* referred to this episode of care was that prayer worked. It could also be interpreted to indicate a sense of hopelessness experienced by *Allen* who sought comfort and strength through her faith. *King* referred to nursing that 'it was a calling as well, I never once felt like giving up'.¹¹⁹ The sense of Christian vocation helped to give these nurses the strength to undertake the duties expected of them.

Other respondents also entered nursing out of a sense of Christian vocation. *Vickers* started nursing at 19 years of age, but at 17 years she attended a conference on missionary work for young people, and on the morning she was due to leave the conference the Hiroshima and Nagasaki Atom Bombs had been reported which had a profound effect on many of the conference attendees.¹²⁰ The consequence for *Vickers*

¹¹⁵ Stephanie Kirkby, 'Marketing the municipal model: the London County Council Nursing Service recruitment strategies 1930-45', *International History of Nursing Journal*, (1988) 4, (1), p17-23.

¹¹⁶ See for example, Pugh, *Practical Nursing*, 11th edition, p39.

¹¹⁷ Davies, interviewed on 17 July 2008.

¹¹⁸ Allen, interviewed on 14 July 2008.

¹¹⁹ King, interviewed on 7 August 2008.

¹²⁰ Vickers, interviewed on 24 May 2010.

was her decision to enter nursing. Another influence had been an aunt who had been a missionary to Africa working in Child Health.¹²¹ *Lloyd* also had been influenced by a missionary working in Africa with orphaned children.¹²² *Shaw* recalled that communion was available to staff several mornings a week, but there was no pressure on staff to attend.¹²³ *Woods* remembers a service on Sunday afternoons to which staff and patients could attend.¹²⁴ At the end of her PTS there was a service in the chapel, 'a kind of dedication service' at which each was given a New Testament.¹²⁵ *Lloyd* mentioned that every morning after breakfast, the matron would lead everyone in prayers before the start of work.¹²⁶

Florence Nightingale's Christian faith had a profound influence on her views for the development of the profession.¹²⁷ In her writings she professed her Christian faith as evidenced in numerous places.¹²⁸ Such strong expectation of Christian commitment is found in nursing texts of the early 1930s.¹²⁹ *Ashdown's* reminds her readers that of 'the sacredness of their profession', and that a characteristic of nursing work is to bring out 'all that is great, noble, and self-sacrificing'.¹³⁰ Later texts tend to stress vocational rather than religious commitment. Thus, *Riddell* required that women have 'a desire to help suffering humanity'.¹³¹ *Hitch* stresses that nursing 'at its best is vocational'.¹³² Although avoiding any overt associations to any of the principal religions, of which Christianity through its various denominational interpretations was the dominant religion in Britain in the 1930s and 1940s, nevertheless each writer emphasised the ethical, moral or otherwise spiritual dimension to the work of nursing.

¹²¹ Vickers, interviewed on 24 May 2010.

¹²² Lloyd, interviewed on 12 August 2008.

¹²³ Shaw, interviewed on 18 May 2010.

¹²⁴ Woods, interviewed on 1 June 2010.

¹²⁵ Woods, interviewed on 1 June 2010.

¹²⁶ Lloyd, interviewed on 12 August 2008.

¹²⁷ Ann Bradshaw, *The Nurse Apprentice, 1860–1977*, (Aldershot, Ashgate, 2001), p1-28.

¹²⁸ See, for example, collections of Nightingale's writings reproduced in Lynn McDonald, (ed.), *Florence Nightingale on Public Health Care*, (Waterloo, Wilfrid Laurier University Press, 2004), and Lynn McDonald, (ed.), *The Nightingale School*; Mark Bostridge, *Florence Nightingale: The Woman and Her Legend*, (London, Viking, 2008).

¹²⁹ See Bradshaw, *The Nurse Apprentice*, p29-35 provides a summary review of texts.

¹³⁰ *Ashdown, A Complete System of Nursing*, p1-2.

¹³¹ *Riddell, First Year Nursing Manual*, p9.

¹³² *Hitch, Aids to Medicine for Nurses*, p1.

The sense of vocational self-sacrifice would give the nurse strength to continue her work when working with seriously ill patients for whom any hope of recovery rested in sometimes prolonged nursing care and courage to work with a risk of exposure to potentially life-threatening infection. The analyses of Victorian nursing by both Vicinus and Bashford relate the concept of sisterhoods as communities of women which may well have been the origin of vocational self-sacrifice in nursing.¹³³

4.8 Summary

Before sulphonamide drugs and antibiotics became available infection could become life threatening. Nursing manuals give advice on the character and qualities required to be a nurse emphasising that nursing is both vocational and self-sacrificial. However, there is no overt mention of the extent of the infection risk to the nurse. This may have been a deliberate and hidden strategy to avoid openly discussing the risk for fear of losing potential recruits as suggested by Broadley.¹³⁴ It is more probable that training regimes to address the risk of nurses acquiring an infection would be implemented. Such training would take account of the need to develop behaviours and skills to work safely with biological hazards. It is usual to find comment in texts from the 1930s on the need to look after oneself with the advice in some texts for vaccination or inoculation to be obtained.¹³⁵ In all nursing manuals from the 1930s and 1940s consulted, the need to take special care of the hands was mentioned.¹³⁶ Good hand care is only one aspect of managing the infection risk. Examining the clinical work of nurses in the 1930s and 1940s has revealed that, as probationer training progressed, rigorous cleanliness was practiced at an increasing level of sophistication as exposure to potential infection risks increased.

There is an apparent tension between the idea the self-sacrificial nature of nursing and the need for the nurse to protect herself. How can someone give of themselves

¹³³ Vicinus, *Independent Women*, p46-120; Bashford, *Purity and Pollution*, p21-61.

¹³⁴ Broadley, *Patients Come First*, p25.

¹³⁵ See, for example, Pugh, *Practical Nursing*, 11th edition, p39.

¹³⁶ See, for example, Ashdown, *A Complete System of Nursing*, p45; Riddell, *First Year Nursing Manual*, p12; Pearce, *Medical and Nursing Dictionary*, p282.

completely when at the same time they have regard to their own protection? An answer, according to Patricia Benner, lies in the development of well practiced and rehearsed skills through a progressive series of increasingly demanding tasks that lead to the unconscious competence of the expert practitioner.¹³⁷

¹³⁷ Patricia Benner, *Novice to Expert: Excellence and Power in Clinical Nursing Practice*, (Menlo Park, CA, Addison-Wesley, 1984); Sarah A. Smith, 'Nurse Competence: A Concept Analysis', *International Journal of Nursing Knowledge*, (2012) 23, (3), p172-82.

Chapter 5

NURSES AND ENVIRONMENTAL CLEANING

5.1 Introduction

The sanitarian roots of nursing and the emergence of modern nursing, in part from domestic service, are general and universally accepted features in the history of nursing.¹ Many domestic servants undertook household cleaning duties.² Sanitarians were also concerned about environmental hygiene. The extent to which nurses of the 1930s and 1940s were involved in environmental cleaning is explored in this chapter. It was a topic on which all participants commented. Environmental cleaning was a feature of the routine of the clinical area and was frequently the predominant memory of life as a first year probationer. Cleaning was disliked by some but accepted as part of the necessary work of the nurse. In some instances nurses were assisted by, or worked alongside other staff in completing the morning's cleaning tasks.³ Most often the cleaning was reported as the work task to be completed first of all when arriving on duty. Histories of nursing, to date, perpetuate the interpretation that these duties were part of the process of developing discipline and obedience in probationers. The evidence reported in this chapter suggests a more subtle strategy associated with developing skills to work in an environment where the risk of infection was high.

5.2 'More Like a Domestic'

The evidence presented in this section illustrates the expectations placed upon probationer nurses to clean the environment in which they worked. There were different cleaning tasks undertaken. Some cleaning tasks could be described as heavy,

¹ Brian Abel-Smith, *A History of the Nursing Profession*, (London, Heinemann Educational, 1960), p4.

² For a review of domestic service in Victorian times see Pamela Horn, *The Rise and Fall of the Victorian Servant*, (Dublin, Gill and Macmillan Ltd., 1975).

³ 'Other staff' were variously described as ward maids, domestics, and orderlies.

for example moving beds and cleaning floors.⁴ Flower arranging, cleaning bedpans and sluice work were duties reasonably described as light cleaning by Goddard.⁵ *Carol Clark* reported that 'Every morning beds were pulled out from the wall. The junior nurse swept behind them and wiped the walls with a damp duster and disinfectant'.⁶ This experience was often repeated in the accounts of the participants. It was a common practice that the early morning routine involved moving beds, cleaning behind them, damp dusting walls, damp dusting bed frames (bedsteads) and lockers. The probationer was generally involved in part or all of this activity. This was often undertaken with help from night staff, who would be responsible for one half of the ward (often described as one side of the ward). Thus *Hilary Harris* recalled that the ward routine required that the first task in the morning was for all the beds 'to be dragged out from the wall' (with the patients still in them) and the beds made whilst ward maids swept behind them.⁷ *Susan Shaw* also noted that that when she went onto the wards it was the routine that 'every morning beds were pulled out and dusted behind'.⁸ Nurses then dusted the bed frames and pushed them back against the wall.⁹ Although both *Clark* and *Harris* began training in 1934 they trained at different hospitals, and their accounts differ in one manner; *Clark* did not mention working with ward maids, whereas *Harris* did. This issue is discussed later in the chapter. *Florence Farmer* remembered that in addition to the daily routine once a week, on Sunday, as a probationer she was required to do some high level cleaning.¹⁰ At *Shaw's* hospital, the cleaners did 'a big polish once a week, but nurses swept behind beds routinely'.¹¹

Likewise, *Violet Vickers* recalled that 'Once a week all beds pulled out into middle of

⁴ See, for example, Editorial, 'Women Orderlies in the L.C.C. Hospitals', *The British Journal of Nursing*, August 1935, p208-9 about the heavy (or rough) cleaning being done by ward maids to release nurses from such duties; Nuffield Provincial Hospitals Trust, *The Work of Nurses in Hospital Wards*, (London, Nuffield Provincial Hospitals Trust, 1953) (H. A. Goddard, Director), for a description of differences between heavy and light cleaning duties, p151-152.

⁵ Nuffield Provincial Hospitals Trust, *The Work of Nurses in Hospital Wards*, p152.

⁶ *Carol Clark*, interviewed by David Justham on 16 July 2008 at Abergele. Began State Registered Nurse (SRN) training in Manchester in 1934.

⁷ *Hilary Harris*, interviewed by David Justham on 6 August 2008 at Clitheroe. Began SRN training in Manchester in 1934.

⁸ *Susan Shaw*, interviewed by David Justham on 18 May 2010 at Nottingham. Began SRN training in Nottingham in 1943.

⁹ *Harris*, interviewed on 6 August 2008.

¹⁰ *Florence Farmer*, interviewed by David Justham on 4 August 2008 at Preston. Began SRN training in Manchester in 1936.

¹¹ *Shaw*, interviewed on 18 May 2010.

ward for big clean'.¹² She remembered that she was required to have to use a floor cleaning machine known as a 'dummy'.¹³ This was not an isolated event as Markham also remembered using a dummy.¹⁴

Farmer's evidence also suggests that the cleaning work involved a degree of personal risk through climbing ladders.¹⁵ However, *Rita Reed* also reported that probationers undertook some high level dusting, but ladders were not used, having been replaced by a duster on a long pole.¹⁶ *Reed* began her probation in 1943 in contrast to the 1936 start of *Farmer*. However it is unclear whether the difference in account was due to different training location, or the passage of time, or more concern for health and safety.

King, who started her nursing career in Shropshire (before moving to Manchester to continue with her training in 1939) described her role as being 'more like a domestic'.¹⁷ She reported that her duties included having to clean toilets and baths when on night duty. By contrast, when she moved to Manchester, she found a lot of emphasis was placed on patient cleanliness.¹⁸ Even so, environmental cleaning was still required. She reported that every morning beds as well as lockers were 'pulled out from the wall', the ward maid cleaned behind them, and nurses moved the beds and lockers back into place. The nurses cleaned castors on beds, and cleaned locker tops. *King* added that the 'Sisters were quite harsh with you if there was evidence of fluff on chair legs etc.'.¹⁹ The discipline exerted by ward sisters is discussed below.

¹² Violet Vickers, interviewed by David Justham on 24 May 2010 at Nottingham. Began SRN training in Nottingham in 1947.

¹³ The 'dummy' was/is an electrically operated heavy floor cleaning machine with interchangeable pads for washing, scrubbing and polishing floors.

¹⁴ Joan Markham, *The Lamp was Dimmed: The Story of a Nurse's Training*, (London, Robert Hale, 1975)

¹⁵ Farmer, interviewed on 4 August 2008.

¹⁶ Rita Reed interviewed by David Justham on 18 May 2010 at Nottingham. Began SRN training in Nottingham in 1943.

¹⁷ Kate King, interviewed by David Justham on 7 August 2008 at Heswall. Began SRN training in Manchester in 1939.

¹⁸ King, interviewed on 7 August 2008.

¹⁹ King, interviewed on 7 August 2008.

In some hospitals cleaning duties were shared with the night nursing staff. *Reed* reported that

'half beds done by night staff, (ill patients who needed sheets changing etc) pull beds out ward maid cleaned behind (far sighted in those days as many nurses had to clean) then nurses damp dusted. When Sister came on at 9.00am she expected all beds done, wheels aligned, corners done properly'.²⁰

Shaw reported a similar experience mentioning that cleaning was completed before sister came on at 8.00am.²¹ *Woods* reported that morning duty started at 7.00am, and the first task was to receive a report from the night staff after which they would work together 'to make beds (with the patient still in the bed), then pull the bed out from wall in towards the centre of the ward, and ward maid would then clean behind'.²² When all the beds were made 'juniors would damp cloth behind every bed on one side and the orderly on the other'. The aim was to have the work done by the time sister came on duty at 8.00am.²³ This suggests a very demanding schedule, and the cleaning work was expected to be completed early. This allowed sufficient time for the ward environment to settle before wound re-dressings were undertaken. The recommendation of the Medical Research Council was for 'a quiet interval of at least one hour' to elapse between any dust raising activity taking place and wound redressings occurring.²⁴

Overall, the accounts show that night and day staff worked together during the shift handover period. The accounts also identify two features of the ward sister's role. Firstly, she did not clean, but arrived on duty after the cleaning was completed. Secondly, she inspected the quality of the cleaning.

Inspection of probationers' cleaning standards also occurred away from the ward.

Shaw reported that it was expected that the probationer would clean their own

²⁰ Reed, interviewed on 18 May 2010.

²¹ Shaw, interviewed on 18 May 2010.

²² Wendy Woods, interviewed by David Justham on 1 June 2010 at Nottingham, Began SRN training in Nottingham in 1950.

²³ Woods, interviewed on 1 June 2010.

²⁴ Medical Research Council War Wounds Committee and Committee of London Sector Pathologists, *The Prevention of "Hospital Infection" of Wounds*, MRC War Memorandum No. 6, (London, His Majesty's Stationery Office, 1941), p15.

bedrooms.²⁵ During the initial three months of the Preliminary Training School, the Sister Tutor would visit each probationer's bedroom and check, using a white cloth to wipe across wardrobe tops to see if there was dust left behind.²⁶ *Allen* offered more explanation regarding her experience in the regional PTS. She reported 'we had to clean our own rooms and they were very thoroughly inspected and so what we were taught that by the time we went on the ward at 3 months we should know what the domestics work was, what the ward orderly's was and we should be able to do it twice as well in half the time'.²⁷ This was a point found in nursing textbooks from 1937. Thus, Gordon Pugh stated that the nurse needed to learn to understand how cleaning duties were performed whether she did them or not.²⁸ Likewise Evelyn Pearce wrote that 'A nurse is not often required to sweep' but she should 'know how to do it and she helps to prepare the ward for sweeping'.²⁹

Two themes emerged regarding techniques used in cleaning. These were the use of damp dusting, and the use of damp (or wet) tea leaves. *Clark* mentioned that 'everything was damp dusted'.³⁰ *Jones* reported that after receiving the morning report, the cleaning routine was entered which required that all beds were pulled out from the wall, the bed cleaned behind (though her account is unclear as to whether ward maids swept the floor), and 'nurses damp dusted all lockers'.³¹ She recalls night nursing staff helped by cleaning one side of the ward. *Vickers* remembers, as a first year probationer cleaning every single morning. This included 'bed frames, wheels, lockers were damp dusted and you damp mopped the floor'.³² *Allen* commented that 'especially again in the orthopaedics wards, everything was damp dusted'.³³ *Allen*

²⁵ Shaw, interviewed on 18 May 2010.

²⁶ Shaw, interviewed on 18 May 2010.

²⁷ Alice Allen, interviewed by David Justham on 14 July 2008 at Sheffield. Began SRN training in London in 1942.

²⁸ W.T.Gordon Pugh, *Practical Nursing including Hygiene and Dietetics*, 11th edition, (Edinburgh, William Blackwood and Sons, 1937), p93.

²⁹ Evelyn C. Pearce, *A General Textbook of Nursing: A comprehensive guide to the final state examination*, (London, Faber and Faber, 1937), p86.

³⁰ Clark, interviewed on 16 July 2008.

³¹ Jane Jones, interviewed by David Justham on 6 August 2008 at Preston. Began SRN training in Manchester in 1944.

³² Vickers, interviewed on 24 May 2010.

³³ Allen, interviewed on 14 July 2008.

never clarified why the orthopaedic wards were singled out for special treatment, though it was well known that the complication of infection in the bone, osteomyelitis, could lead to a fatal septicaemia.³⁴ *Allen* recalled that 'Every morning for certain, depending on your grade, the juniors scrubbed all the enamel ware and it was boiled up in the steriliser and then the ward floors they [the domestics] sprinkled damp tea leaves and swept them'.³⁵ Although *Allen* referred to domestics using damp tea leaves, it was *Vickers* who remembered damp mopping floors herself. *Clark* offered her understanding about damp dusting that 'Germs were not allowed to fly about the wards so it was all damp dusted, beds were cleaned under, before they were pushed back every bedstead and every locker was damp dusted'.³⁶ The dampness suppressed the dust preventing its dispersal into the atmosphere.³⁷

There were differences in the extent of the environmental cleaning work undertaken by probationers, either at any one point in time or at different locations. Some probationers described involvement in heavy cleaning duties, whereas others only had light duties to perform with ward maids doing the heavier work. Nevertheless, the evidence shows that probationer nurses were involved in some form of cleaning work. Indeed, Jennifer Craig in her collection of anecdotes about nursing in Leeds in the early 1950s described first year probationer nurses as 'more like maids than nurses'.³⁸ Early morning cleaning was often undertaken by probationers and ward maids together, but with each having specific duties. All accounts emphasised that cleaning was a morning activity, though *King* identified that some heavy cleaning of baths and toilets took place at night time. Invariably probationers were involved in dusting locker tops. This was normally reported as damp dusting. Damp dusting frequently extended to the cleaning of bed frames.

³⁴ A. Millicent Ashdown, *A Complete System of Nursing*, (London, J. M. Dent & Sons Ltd., 1928), p484-5; Evelyn Pearce, *Medical and Nursing Dictionary*, 6th edition, (London, Faber & Faber Ltd., 1943), p440-1.

³⁵ *Allen*, interviewed on 14 July 2008.

³⁶ *Clark*, interviewed on 16 July 2008.

³⁷ See, for example, Richard S. F. Schilling and S. A. Hall, 'Prevention of Occupational Disease', Chapter 20 in Richard S. F. Schilling, (ed.), *Occupational Health Practice*, (London, Butterworth, 1973), p413; and Donald Hunter, *The Diseases of Occupations*, 5th edition, (London, Hodder and Stoughton, 1975), p964.

³⁸ Jennifer Craig, *Yes Sister, No Sister: A Leeds Nurse in the 1950s*, (Derby, Breeden Books Publishing Ltd., 2006), p72.

Whilst many participants made comments about working with ward maids these were recalled as a matter of fact. Ward maids might be responsible for cleaning the floor. This was reported by some participants who began training in the 1930s, but more frequently reported by those who began their nursing in the 1940s. However, in some wards, albeit only one respondent noted this, damp tea leaves were scattered across the floor as a medium for collecting dust during floor sweeping. Two participants identified involvement in high level cleaning, in both accounts this was a Sunday activity. Dusting activities were invariably identified as damp dusting.

Ward maids were often permanent members of the ward establishment. The ward maid was reported to have a higher status, because of her permanent role, than probationers. *Allen* noted that the domestic was attached to the ward and 'had the ear of sister'.³⁹ *Allen's* account illustrates a good working relationship between nursing and domestic staff, stating 'They were wonderful domestics and orderlies and they did the work properly'.⁴⁰ Pugh recognised that, in some hospitals at least, ward maids and orderlies, or other similarly named staff, were being employed to undertake environmental cleaning duties under the management control of the ward sister.⁴¹ For some participants the environmental cleaning was a shared activity with ward maids. Some participants expressed dislike for the environmental cleaning duties they were expected to undertake. For some participants cleaning duties were not regarded by them as nursing duties. The majority of participants did not question the involvement in cleaning duties as a necessary part of their probationer training.

Why were probationer nurses, especially first year probationers, so involved in aspects of environmental cleaning? Patient work was something that probationers were not immediately involved with. Rather they had to 'work up' to this. *Phyllis Porter*, recalled her first year in Nottingham as 'being eased in gently', with first year probationers

³⁹ Allen, interviewed on 14 July 2008.

⁴⁰ Allen, interviewed on 14 July 2008.

⁴¹ W.T.Gordon Pugh, *Practical Nursing including Hygiene and Dietetics*, 8th edition, (Edinburgh, William Blackwood and Sons, 1933), p93.

undertaking flower arranging, then cleaning bedpans and sluice work, and that not much work was undertaken with patients.⁴² There was a hierarchy of duties suggested by *Farmer's* comment about daily and weekly routines. Bevington describes the shattered illusion of nursing experienced by new probationers who expected to undertake 'real nursing' but instead were faced with a year or more of cleaning and other non-patient contact duties.⁴³ In 1948 Patricia Turner indicated that the work of second year nurse was more directly patient care, though light cleaning was also undertaken.⁴⁴ Riddell wrote of first year probationers that their duty was 'to maintain a high standard of cleanliness'.⁴⁵ In a sanitarian conception of nursing, ensuring a clean environment for patients was important. By undertaking cleaning duties new (and unskilled) probationers would be exposed to the clinical environment in a way that enabled them to learn about the importance of cleaning. It was also a safer way to learn. For the probationer, who had yet to learn strategies for direct contact with patients that could be a source of infection, it involved less direct contact time with a source of infection. The unskilled probationer would have opportunities to observe the skills used by more senior colleagues as these colleagues interacted with patients. For the patient, there was less risk of cross infection from a probationer who might not have developed competence in avoiding contamination with infective material.

5.3 Attitudes to Cleaning During the Study Period

Prior to the 1940s the participants remembered the cleaning duties required of them as a part of the work of nursing. While cleaning duties were an important part of developing skill in controlling the infection risk, the duties were not always welcome.

Nancy Newton frequently referred to her time as a first year probationer as a

⁴² Phyllis Porter, interviewed by David Justham on 24 May 2010 at Nottingham. Began her nursing career near Sheffield in 1939 where she obtained her Orthopaedic Nursing Certificate before moving to Nottingham in 1941 to undertake her SRN.

⁴³ Sheila M. Bevington, *Nursing Life and Discipline: A study based on over five hundred interviews*, (London, H. K. Lewis and Co. Ltd., 1943), p6.

⁴⁴ Patricia M. Turner, 'A Day in the Life of a Moorfields Nurse', *The British Journal of Nursing*, April 1948, p49

⁴⁵ Riddell, *First Year Nursing Manual*, p13.

'dogsbody' to describe menial tasks which she did not consider to be nursing.⁴⁶ As *Newton* progressed through her training she did more technical work and a little less of the tedious reporting 'whereas before you were a dogsbody, as a third year you gave out medicines and had the more difficult dressings to do'.⁴⁷ *Jones*, saw cleaning as different from nursing 'In those days of course you did an awful lot of cleaning as well as nursing'.⁴⁸ In similar vein was *Thelma Taylor's* assertion that cleaning was domestic work, 'You started at 6.30am or 7.00am in some places and until 9 o'clock it was domestic work. You were given a side of the ward, and when you got promoted you were given the middle of the ward which was a bit easier as a rule'.⁴⁹ The domestic work was described by *Taylor* as 'sweeping and dusting and going around lockers and that sort of thing, collecting in sputum mugs and things like that. Pulled all beds out and did behind'.⁵⁰ *King* described her role as more like a domestic, 'In our early days we did a lot of cleaning' with everything being carbolized, 'the smell of disinfectant [was] everywhere'.⁵¹ Rooms needed cleaning down after infected patients had left. The tone of these comments suggests that the cleaning duties were considered to be those to be undertaken by domestic staff. Negativity about nursing staff undertaking domestic duties was conveyed by these participants. *Taylor* trained during World War II and she suggested that the environmental cleaning tasks might have been as prescribed because of staffing restrictions, by implying that there might have been limited availability of domestic staff so that nurses had to do more cleaning duties.⁵² Evidence is found in a number of other sources for a distinction to be made between cleaning duties and nursing. *Mary Vass* considered that half her time was domestic work and comprised cleaning and washing of lockers, collecting jugs and

⁴⁶ Nancy Newton, interviewed by David Justham on 19 December 2008 at Sturton by Stow. Began SRN training in London in 1939.

⁴⁷ Newton, interviewed on 19 December 2008.

⁴⁸ Jones, interviewed on 6 August 2008.

⁴⁹ Thelma Taylor, interviewed by David Justham on 24 May 2010 at Nottingham. Began SRN training in Nottingham in 1943.

⁵⁰ Taylor, interviewed on 24 May 2010.

⁵¹ King, interviewed on 7 August 2008; 'Carbolized' refers to the use of a dilution of carbolic acid (1 part) in water (20 parts) as a disinfectant, see for example, Ashdown, *A Complete System of Nursing*, 41; Pearce, *Medical and Nursing Dictionary*, p693.

⁵² Taylor, interviewed on 24 May 2010.

glasses and giving out breakfasts.⁵³ Ina Kelly recalled that she did not enjoy the work: 'Beginning at 6.30am half of ward beds pulled out from wall, swept behind, waxed floors, then had a break, and on return at 7.30am polished floors, then started on other side of ward. The central floor area of the ward was cleaned last of all'.⁵⁴ Merson, recalls a friend who only stayed in the PTS for one month leaving nursing because she could not endure the intensity of the cleaning routines and the associated rigour anymore.⁵⁵

All participants experienced some form of environmental cleaning. The accounts from the participants, and others, suggest drudgery in the cleaning work and dislike of the tasks, sometimes described as menial. Whilst not all participants aired such views, there was an expectation that progression through training would see fewer cleaning duties being placed upon the probationer. However, cleaning was never entirely absent. From the participants' accounts above, the ward sister rarely undertook cleaning but was on duty in time to inspect the cleanliness achieved. Junior staff, and particularly probationer nurses, were delegated cleaning tasks, and in some instances worked alongside ward maids and orderlies.

None of the participants, apart from *Clark*, offered an explanation for cleaning which, for her, was to prevent germs flying about the ward.⁵⁶ The next section examines why environmental cleaning was considered to be a nursing duty.

5.4 Environmental Cleaning as a Nursing Duty

The evidence suggests probationer nurses were required to undertake cleaning duties, whether they considered it to be a nursing duty or not. The roots for environmental

⁵³ Mary Vass, interviewed by Maragret R. Currie on 14 September 1994. Recording held at Rcn Archives, Edinburgh, (data extracted 15th September 2008).

⁵⁴ Thomasina (Ina) Kelly, interviewed by Susan McGann on 5 May 1994. recording held at Rcn Archives, Edinburgh. (Rcn Tape 70). Ina Kelly started nursing in 1934 at Springfield Hospital in Scotland, (data extracted 15 September 2008).

⁵⁵ Elizabeth Merson, 'Nursing in Wartime', *International History of Nursing Journal* (1998) 3, (4), p43-6.

⁵⁶ Clark, interviewed on 16 July 2008.

cleaning lay in the sanitarian influences which drove nineteenth century nursing. Whilst Florence Nightingale was not the only contributor to the development of nursing in the Victorian period, her work was influential to the extent that her views about environmental cleanliness continued to be reflected in texts on nursing available in the 1930s and 1940s, as evidenced in the texts by John Guy and G. J. I. Linklater (see below).⁵⁷ In *Notes on Nursing* Nightingale wrote about the nature of nursing work to be 'the proper use of fresh air, light, warmth, cleanliness, quiet, and the proper selection and administration of diet'.⁵⁸ Nightingale devotes a whole chapter in *Notes on Nursing: What It Is and What It Is Not* to the cleanliness of rooms and walls.⁵⁹ This chapter opens with the sentence 'It cannot be necessary to tell the nurse that she should be clean or that she should keep her patient clean – seeing that the greater part of nursing consists in preserving cleanliness'.⁶⁰ Here Nightingale identifies two additional elements to cleanliness – those of cleanliness of the nurse herself, and cleanliness of the patient. Nightingale advised that 'Very few people, be they of what class they may, have any idea of the exquisite cleanliness required in the sickroom'.⁶¹ In this she stresses a supreme importance to cleaning the environment. From her sanitarian perspective this would be to remove the potential for disease miasma arising from foul air or filth in the room.

Beeton's (1836–1865) schedule for a housemaid required her to be up at dawn, to clean and polish grates, lay fires, dust and polish furniture, sweep the main rooms and stairs and halls, clean steps, and lay the table for breakfast, before the family breakfast.⁶² Using iconography of nurses before Florence Nightingale, Kampen argued

⁵⁷ See the following editions of John Guy and G. J. I. Linklater, *Hygiene for Nurses*, (Edinburgh, E. and S. Livingstone) 1st edition 1930, p43; 2nd edition 1933, p144; 4th edition 1937, p146; 5th edition 1940, p158-159; 6th edition 1943, p160; and 7th edition 1948.

⁵⁸ see, for example, Florence Nightingale, 'Notes on Nursing for the Labouring Classes', in Lynn McDonald, (ed.), *Florence Nightingale on Public Health Care*, (Waterloo, Wilfrid Laurier University Press, 2004), p31; and Florence Nightingale, 'Notes on Nursing: What it is and What it is not' in Lynn McDonald, (ed.), *The Nightingale School*, (Waterloo, Wilfrid Laurier University Press, 2009), p580.

⁵⁹ Florence Nightingale, 'Notes on Nursing: What it is and What it is not', p646-51.

⁶⁰ Florence Nightingale, 'Notes on Nursing: What it is and What it is not', p646.

⁶¹ Florence Nightingale, 'Notes on Nursing: What it is and What it is not', p650.

⁶² Margaret Horsfield, *Biting the Dust: The Joys of Housework*, (London, Fourth Estate, 1997), p51-2.

that nursing emerged out of domestic nurturing, and that 'the nurse as saintly domestic is no modern invention'.⁶³ Muff follows this theme when she argued that nursing work was caretaking and housekeeping, reflecting the traditional work of women'.⁶⁴ Pamela Horn in her exploration of the Victorian servant reported that 'before breakfast the housemaid was expected to sweep and dust'.⁶⁵ This comment is reminiscent of participants' comments above that cleaning was the first task of the day. Nursing texts also reflect this expectation.⁶⁶

Nightingale not only required cleaning to be done as part of the nursing role, she also advocated how it should be done.

The only clean floor is a floor planed, saturated with "drying" linseed oil, well rubbed in, stained (for appearance' sake), not too dark, so as not to hide the dirt, and bees-waxed with turpentine and polished. The floor to be wiped with a damp cloth and dried with a floor brush, or cleaned with a brush with a cloth tied over it.⁶⁷

The bees-waxing process required an intense effort, and to perform this twice a week was a demanding regime. Dusting of furniture, Nightingale stressed, was to be 'with a damp cloth'.⁶⁸ The damp dusting routine was to be performed regularly, at least daily if not more frequently.⁶⁹ Nightingale's emphasis on environmental cleaning as a duty of the nurse can be associated with the nurse's duty to protect her patients from harm by removing dirt and, with it, miasma from the environment.⁷⁰ Text books of the

⁶³ Natalie B. Kampen 'Before Florence Nightingale: A Prehistory of Nursing in Painting and Sculpture', Chapter 1 in Anne H. Jones,(Ed), *Images of Nurses: Perspectives from History, Art, and Literature*, (Philadelphia, University of Pennsylvania Press, 1988), p36.

⁶⁴ Janet Muff, 'Socialization and Sexism in Nursing', Chapter 9 in Anne H. Jones,(Ed), *Images of Nurses: Perspectives from History, Art, and Literature*, (Philadelphia, University of Pennsylvania Press, 1988), p200.

⁶⁵ Pamela Horn, *The Rise and Fall of the Victorian Servant*, (Dublin, Gill and Macmillan Ltd., 1975), p64.

⁶⁶ See, for example, A.Millicent Ashdown, *A Complete System of Nursing*, (London, J. M. Dent & Sons Ltd., 1928), Margaret S. Riddell, *First Year Nursing Manual*, 5th edition, (London, Faber & Faber Ltd., 1939); Nightingale, 'Notes on Nursing for the Labouring Classes'.

⁶⁷ Florence Nightingale, 'Nursing the Sick' in Richard Quain, *Dictionary of Medicine*, reproduced in Lynn McDonald, (ed.), *The Nightingale School*, (Waterloo, Wilfrid Laurier University Press, 2009), p739.

⁶⁸ See, for example, Florence Nightingale, 'Nursing the Sick', p739; Florence Nightingale, 'Notes on Nursing: What it is and What it is not', p647.

⁶⁹ Riddell, *First Year Nursing Manual*, p13-14.

⁷⁰ Lynn McDonald, (ed.), *Florence Nightingale on Public Health Care*, (Waterloo, Wilfrid Laurier University Press, 2004), p23 records that Nightingale advocated 'vigorous

1920s, 1930s and 1940s continued to use language reminiscent of Nightingale, though they do not cite her by name. Whitby's *The Nurses' Handbook of Hygiene* ran through six editions between 1925 and 1938, and expounded in each edition that:

The community at large is steadily realizing how much its health depends on pure air, pure food, pure water, cleanliness, the disposal in a sanitary manner of noxious disease-producing matter, and the extermination of parasites and insects which have proved to be disease carriers.⁷¹

The language here illustrates that the work of nurses in promoting health required them to address the cleanliness of the environment. The evidence that Whitby refers to the environment here lies in the location of cleanliness within the sequence of points raised. The pureness of air, food and water arise from addressing environmental considerations. The mention of 'noxious disease producing matter' is a remnant of the miasmatic theories of disease causation.⁷²

Guy and Linklater's, *Hygiene for Nurses*, ran through seven editions between 1930 and 1948. They comment about dusting and polishing as a means of the cleaning the sickroom thus:

In the cleaning of rooms, especially where sickness is, dry dusting is inadequate. Some of the dust is removed in dry dusting, but the remainder is only stirred up into the air, to settle again as soon as the air becomes still. A damp duster should be used. Wet tea leaves, or damp sawdust, sprinkled on the floor before sweeping 'picks up' the dust which adheres to the moist surfaces. Polishing floor surfaces with bees-wax and turpentine diminishes dust, and gives a 'clean odour' to the air, but washing at intervals to remove the wax completely is necessary, because dust is liable to adhere to the wax.⁷³

The similarity with Nightingale's entry in Quain's *Dictionary of Medicine* suggests a continuation of ideas for cleaning grounded in sanitarian ideals. Guy and Linklater's rationale that their use also gives a 'clean odour' shows a lingering in their psyche of

methods to remove "filth" in its various forms, the approach of the "miasma" theory she preferred'.

⁷¹ All the following editions of Lionel E. H. Whitby, *The Nurses' Handbook of Hygiene: An Elementary Text*, (London, Faber and Gwyer Ltd.), 2nd edition 1929, 3rd edition 1931, 5th edition 1934, and 6th edition 1938, have the quotation in the 'Introduction'.

⁷² Harold W. Jones, Norman L. Hoerr, and Arthur Osol, (eds), *Blakiston's New Gould Medical Dictionary*, (London, H. K. Lewis and Co. Ltd., 1951), p678 defines 'noxious' as harmful, poisonous or deleterious.

⁷³ Guy and Linklater, *Hygiene for Nurses*, 1st edition 1930, p43; 2nd edition 1933, p144; 4th edition 1937 p146; 5th edition 1940 p158-9; 6th edition 1943, p160; and 7th edition 1948, p160. 'Wet tea leaves' changed to 'Special Powder' from 4th edition onwards.

miasmatic theory. In this approach the need for cleanliness is enhanced if the cleaned environment also smells clean, a view which was expressed by Nightingale when she wrote 'And if you never clean your furniture properly, how can your rooms or wards be anything but musty? Ventilate as you please the rooms will never be sweet'.⁷⁴ The texts by Whitby, and Guy and Linklater discuss the need for cleaning, and its place as part of the work of nurses. Writing in 1966, Mary Douglas reminded her readers 'to make the effort to think back beyond the last 100 years and to analyse the bases of dirt avoidance, before it was transformed by bacteriology'.⁷⁵ The environmental cleaning advocated by Nightingale emerged from a time when the germ theory of disease had not been developed, and disease causation was uncertain.

The text book evidence suggests that these cleaning strategies continued to feature in nursing work in the 1930s. But change did occur, and quite rapidly in some nursing texts from the late 1930s onwards. Pugh continued to insist that the nurse needed to learn to understand how cleaning duties were performed whether she did them or not.⁷⁶ In 1937, Pearce wrote that 'A nurse is not often required to sweep a ward' insisting that ward maids do this, but, like Pugh, expected the nurse to 'know how to do it and she helps to prepare the ward for sweeping'.⁷⁷ Subsequent editions in 1940, 1942, 1945 and 1949 of Pearce's text give an insight into a changing emphasis on the cleaning role of nurses since these editions neither mention cleaning duties, nor the need for nurses to know how cleaning should be done.⁷⁸ In parallel with this development, Pearce's texts show increasing detail of the sulphonamide drugs in the 1940 edition and of the use of penicillin in the 1949 edition.⁷⁹ This may be a significant

⁷⁴ Florence Nightingale, 'Notes on Nursing: What it is and What it is not', p650.

⁷⁵ Mary Douglas, *Purity and Danger: An analysis of concepts of pollution and danger*, (London, Routledge Classics, 2002), p44.

⁷⁶ W.T.Gordon Pugh, *Practical Nursing including Hygiene and Dietetics*, 11th edition, (Edinburgh, William Blackwood and Sons, 1937), p93.

⁷⁷ Evelyn C. Pearce, *A General Textbook of Nursing: A comprehensive guide to the final state examination*, 1st edition, (London, Faber and Faber, 1937), p86.

⁷⁸ See, for example, Evelyn C. Pearce, *A General Textbook of Nursing: A comprehensive guide to the final state examination*, (London, Faber and Faber,) 2nd edition 1940 (text removed though chapter legend still exists), 3rd edition 1942 (and subsequent editions in 1945 and 1949 both text and chapter legend removed).

⁷⁹ See, for example, Pearce, *A General Textbook of Nursing*, (1st edition 1937), contains no material on sulphonamide drugs or penicillin, but Evelyn C. Pearce, *A*

development as it suggests that these drugs have an impact on the need for nurses to clean since the mention of cleaning duties diminishes and ultimately is extinguished from the texts as more discussion of these drugs is included.

The material about cleaning processes emerging from the oral history accounts is corroborated by the literature. There is nothing new in the factual detail remembered by the participants. There is some change in the evidence found in the texts on nursing practice suggesting that cleaning was not always a task performed by nurses, but supervised by nurses. Some participants did not classify the environmental cleaning tasks as nursing, considering themselves to be undertaking menial domestic work. Horsfield makes the observation that the job of cleaning is a task which society does not rate highly and in consequence attracts the lowliest and least trained individuals.⁸⁰ In the hierarchy of nursing, first year probationers would be the least trained. Horsfield's point raises questions about the status of cleaning work, and will be addressed through a wider discussion of status within nursing in the next section.

5.5 Status, Discipline and Retention Issues

The problem of status has been with modern nursing since its inception. Nightingale recognised this when a two tier probationer system was established at St Thomas's Hospital as a means of attracting and retaining upper class recruits. Lady probationers came from middle and upper class families, paid for their instruction, and were exempted from the more menial nursing duties.⁸¹ Probationers from working-class backgrounds undertook most of the domestic tasks and contributed longer hours of work than their middle class colleagues.⁸² But this is an oversimplification. Nightingale wrote, in notes of her meetings with probationers, that lady probationers could be relieved of some housemaid work, but she 'would not relieve them of emptying slops,

General Textbook of Nursing: A comprehensive guide to the final state examination, (London, Faber and Faber, 1949) contains sections on sulphonamides and use of penicillin.

⁸⁰ Horsfield, *Biting the Dust*, p237.

⁸¹ McDonald, (ed.), *The Nightingale School*, p10

⁸² Penny Starns, *March of the Matrons*, (Peterborough, DSM, 2000), p18.

etc., the like, for this is strictly nurse's work'.⁸³ This extract demonstrates that Nightingale made a distinction between duties which only a nurse could do (eg emptying slops), and duties undertaken by nurses that were also within the work of housemaids.⁸⁴ This distinction was not made on the basis of perceived menial nature or distaste of the task, but on its relationship to the direct care of the patient. The implication is that lady probationers should experience the menial work but could move away from it more quickly. Yet, the role of the lady-nurses was to lead by example in self discipline, spiritual commitment, morals, and nursing work.⁸⁵ Horsfield records the belief that cleaning a house is 'not fit work for ladies' and minimising the amount of cleaning duties undertaken by lady probationers demonstrates this belief.⁸⁶ Horsfield observed that most women would get someone else to do the domestic work if they could.⁸⁷ The status issues in nursing appear to stem from undertaking duties that others could do under supervision.

In late 1927, the *British Journal of Nursing* ran a series of letters debating the nature of menial work in nursing and questioned whether it existed at all. The opening salvo by Margaret Robertson, a Fellow of the British College of Nursing, was that nursing and menial work do not go together and to continue will both lessen the respect patients have for probationers and exclude 'the better class girl' from nursing.⁸⁸ A response in support of menial work was received from Hilda Lamb, a Sister Tutor, who explained that:

menial work was both "a great relief from the mental strain" of nursing duties, and a necessary part of the probationers' education.⁸⁹

⁸³ Florence Nightingale, 'Notes of meetings with probationers, 1 February 1873', in Lynn McDonald, (ed.), *The Nightingale School*, (Waterloo, Wilfrid Laurier University Press, 2009), p241.

⁸⁴ Nightingale, 'Notes of meetings with probationers, 1 February 1873', p241.

⁸⁵ Florence Nightingale, 'Address 5, To the Probationer Nurses in the "Nightingale Fund" School at St Thomas's Hospital and the Nurses who were Formerly Trained There, 28th April 1876' in Lynn McDonald, (ed.), *The Nightingale School*, (Waterloo, Wilfrid Laurier University Press, 2009), p827-840.

⁸⁶ Horsfield, *Biting the Dust*, p29.

⁸⁷ Horsfield, *Biting the Dust*, p29.

⁸⁸ Margaret Robertson, 'Letter to the Editor', *British Journal of Nursing*, October 1927, p255.

⁸⁹ Hilda K. Lamb, 'Letter to the Editor', *British Journal of Nursing*, November 1927, p282.

Robertson's, reply was to suggest the appointment of ward maids to undertake all environmental cleaning duties.⁹⁰ Transferring cleaning duties traditionally assigned to nurses to other lower grade staff features in analyses of the status of nurses. Status was a concern in Starns' analysis of nursing in which she used a theoretical framework based upon the conceptualisations of 'aristocratic militarism' and 'technological militarism'.⁹¹ For example, aristocratic militarism is evidenced in the elitist recruitment practices of the army where nurses were appointed 'primarily from the ranks of officers' wives, widows and daughters'.⁹² Officers were drawn from the middle and upper classes, and hence their wives, widows and daughters would carry this status. Exploring the quest by military nurses for officer status, Starns argues that menial duties, which she equates in part to domestic work, were relegated from the work of the qualified nurse.

The efforts to claim professional status for nursing have been adversely affected by the ambiguity of nursing work in relation to that of domestic staff. Thus, Littlewood, in her anthropological analysis of nursing work made the distinction between different types of dirt, nurses being required to deal with 'sick dirt' rather than the ordinary dirt for which the domestic was responsible.⁹³ The issue of status was addressed in part by some of the major reports into nursing during the 1930s and 1940s. The vocational spirit was considered essential in nursing at the start of the 1930s.⁹⁴ By 1939 the Athlone Committee report suggested that vocation was no longer an essential requirement for recruitment to nursing.⁹⁵

⁹⁰ Margaret Robertson, 'Letter to the Editor', *British Journal of Nursing*, December 1927, p311.

⁹¹ Starns, *March of the Matrons*, p15.

⁹² Starns, *March of the Matrons*, p39.

⁹³ Jenny Littlewood, 'Care and Ambiguity: Towards a Concept of Nursing', Chapter 10 in Pat Holden and Jenny Littlewood, (eds), *Anthropology and Nursing*, (London, Routledge, 1991), p170-189, see especially p177-8.

⁹⁴ *The Lancet Commission on Nursing: Final Report*, (London, The Lancet, 1932), p35.

⁹⁵ Ministry of Health and Board of Education, *Interim Report of the Inter-departmental Committee on Nursing Services*, the Right Hon. The Earl of Athlone, Chairman, (London, HMSO, 1939). Hereafter referred to as the Athlone Committee, *Interim Report*, p8.

The indication, from the documentary evidence, suggests that nursing's nineteenth century vocational expectations were less attractive to recruits in the 1930s and 1940s. Training routines invariably emphasised domestic duties in the early stages of training. This has been seen by historians of nursing as part of the character training which required obedience to professional superiors. The discipline exerted by superiors to achieve obedience was not always welcome. Nursing in America was experiencing a similar resistance to environmental cleaning. One source, known only as RN from Oregon, hints at the image problem in her contrast between pre-war nursing and nursing in 1945 noting that in 1945 there was a 'lack of interest in maintaining even minimum standards of cleanliness and nursing care'.⁹⁶ Keddy and Lukan, in their study of nursing apprenticeships in Nova Scotia in the 1920s and 1930s, report on the nurse as housekeeper. One respondent in their study expressed dismay that there were no nursing aides but that they, as trainees, were the nurses' aides.⁹⁷

In Britain, Bevington's large study was based on interviews conducted before the spring of 1940. Her study addressed issues of discipline within nursing. The discrepancy between the expectation of first year probationers regarding their vision of nursing and the reality has been referred to above. Bevington also addressed the management of nursing work. Regulations in relation to the discipline expected of probationers was 'patently clear to the more imaginative', she wrote, though this requirement was not always appreciated, for example, by nursing reformers and parents of probationer nurses.⁹⁸ She reported that ward sisters needed rules to help manage their wards. Etiquette and discipline were necessary requirements for a probationer to function well as a member of the ward team, creating a proper understanding of her duties, correct relationships with patients and with other members of the ward staff.⁹⁹ This included a requirement to have a sufficient grasp of hygienic principles, to ensure the strict observance of regulations framed to guard against sepsis, 'for on her prompt obedience and skill often depends partly the issue of

⁹⁶ RN, 'Conditions Appall', *American Journal of Nursing*, (1946) 46, (3), p194.

⁹⁷ Barbara Keddy and Evelyn Lukan, 'The Nursing Apprentice: An Historical Perspective' *Nursing Papers: Perspectives en nursing* (1985) 17, (1), p35-46.

⁹⁸ Bevington, *Nursing Life and Discipline*, p53.

⁹⁹ Bevington, *Nursing Life and Discipline*, p53.

life or death'.¹⁰⁰ The linking of hygienic principles, incorporating the cleaning tasks, to the protection against infection, reflects the experience of Janet Wilks, who began her training in November 1935. She wrote about her disenchantment with the reality of being a first year probationer: 'not for many a weary day was I to reach the heights of giving any nursing care ... As the lowest of the low, my special job was cleaning and yet more cleaning'.¹⁰¹ She became very disillusioned, but the Ward Sister of the time explained why cleaning was an essential duty of the nurse:

You may think that the excess of cleaning and polishing is unnecessary and very irksome, but there is one very important fact you may have overlooked. In a surgical ward we wage a continual war against deadly bacteria, staphylococci and streptococci. These can infect wounds and debilitate patients and can kill, and we do endless battle against them.

This means a meticulous, continuous fight to eliminate infection by constant, careful and conscientious cleaning and disinfecting ... Only by these hard rules can my ward be called a clean ward and my patients heal without complications. And this I insist on. And that is why each nurse placed with me for training, will be well grounded in my strict rules for cleanliness, until such careful precautions become second nature to her.¹⁰²

Although written some fifty five years after the event, with the words attributed to the ward sister unlikely to be verbatim, the message is clear in its essential facts.

Environmental cleaning was considered by senior nurses to be a necessary part of nursing. Rules were needed to prevent the spread of infection. Nurses needed to abide by these rules. The point this account raises is that the rules were unlikely to be universal, since the ward sister is reported as emphasising that the rules were her rules. There is no suggestion that these were hospital rules, however probable this may have been.

Nurses undertaking cleaning duties continued beyond 1949. A study of the work, including domestic work, of hospital nurses was published in 1953 by the Nuffield Provincial Hospitals Trust. It was based on observations of the work of nurses from 26 wards across 12 hospitals (3 in Scotland and 9 in England). The data were collected between January 1949 and July 1950, and thus reflect the situation found in this eclectic sample of hospitals in the newly formed National Health Service at the end of

¹⁰⁰ Bevington, *Nursing Life and Discipline*, p53-54.

¹⁰¹ Janet Wilks, *Carbolic and Leeches*, (Ilfracombe, Hyperion Books, 1991), p25.

¹⁰² Wilks, *Carbolic and Leeches*, p27.

the 1940s. Data were collected by observers not trained as nurses, who observed the work of ward staff, not only nurses but ward maids and orderlies. Ward staff were observed at one minute intervals throughout the 24 hours of each day and for a seven-day period. All activity was recorded. Activities were categorised as ward organisation, technical nursing, basic nursing or domestic work. Most cleaning duties were included in the domestic work category. The nature of cleaning duties was defined as either heavy cleaning, for example, sweeping, scrubbing, polishing and vacuuming, cleaning paintwork or walls, scouring baths, sinks and lavatory pans, or light cleaning, that is general tidying, dusting, polishing patients' lockers, tidying cupboards, cleaning brass and other metal ware. Washing crockery reserved for infectious patients was seen as a separate activity. The overall share of domestic activity undertaken by student nurses was as high as 18.7 percent, although often less. The authors of the report led by Goddard reported that students 'don't do as much domestic work as they think they do'.¹⁰³ There was variation between the hospitals with some students involved with heavy cleaning, although generally, cleaning duties were mostly categorised to be in the light cleaning category.¹⁰⁴ Discussing the availability of domestic workers, that is ward maids, the report recognised that:

When there is an overall shortage some domestic duties will, as a matter of course, have to be performed by nursing staff. Then, when it is not possible to cover all the days off or absences through illness of the domestic workers with relief staff allocated full time to a particular ward, nursing staff will have to make good the deficiency on these occasions, and work which needs doing at times of the day when the domestic staff are not on duty will have to be done by nurses. Instances of each of these have been noted and they account for an appreciable amount of the domestic work which student nurses were called upon to do.¹⁰⁵

The report's authors recognised on the one hand that 'the dividing line between what is nursing and what is domestic work is by no means easy to draw', and on the other that the amount of domestic duties performed by student nurses is unacceptable.¹⁰⁶ Their hostility to nurses undertaking cleaning work is evident in their observation that:

¹⁰³ Nuffield Provincial Hospitals Trust, *The Work of Nurses in Hospital Wards*, p74.

¹⁰⁴ Nuffield Provincial Hospitals Trust, *The Work of Nurses in Hospital Wards*, p151-152.

¹⁰⁵ Nuffield Provincial Hospitals Trust, *The Work of Nurses in Hospital Wards*, p109.

¹⁰⁶ Nuffield Provincial Hospitals Trust, *The Work of Nurses in Hospital Wards*, p85.

it is significant that in some wards *all* the student nurses available and not only the first year nurses, who might be assumed to be doing such work as part of their training, took part in the morning orgy of dusting and tidying the ward'.¹⁰⁷

Later in the report, they argue for the nurse to concentrate on bedside nursing, 'the aim being to secure the maximum of direct personal contact between trained nurse and patient'.¹⁰⁸

The secondary literature and primary reports into recruitment and retention comment on the problems of retaining nursing staff. These difficulties are reported to emerge from the discipline and rigours of probationer training. Such discipline within the training regimes was considered necessary to engender obedience to ward sisters and was fundamental to the concept of nursing as a vocation. Environmental cleaning was often a task that formed part of the training, though the evidence suggests that environmental cleaning was considered, by some, to be not nursing work but menial domestic work. Environmental cleaning was disliked by many, of these some would have been lost to nursing early in their probationary period. Why, in the light of the evidence which considers cleaning to be low status menial work, did nursing continue to place an emphasis on environmental cleaning through to the 1940s? An explanation lies in the management of infection risks, and will be explored in the next section and further in Chapter 8.

5.6 Environmental Cleaning and Infection Risk

It is of relevance to this thesis that environmental cleaning featured as a necessary duty within the work of nurses. It was not always a welcome duty, and opportunities were sought to off-load the responsibility to others. The emergence of nursing from its domestic servant roots, introduced a dilemma for nursing. This dilemma can be expressed as to whether cleaning is a proper function of the nurse. All participants clearly recalled involvement with the cleaning of the ward environment as a first year probationer nurse, and it was the first memory of ward work they reported. It is

¹⁰⁷ Nuffield Provincial Hospitals Trust, *The Work of Nurses in Hospital Wards*, p97.

¹⁰⁸ Nuffield Provincial Hospitals Trust, *The Work of Nurses in Hospital Wards*, p133.

reasonable to expect that the significant life event of starting a career in nursing would hold particular memories.¹⁰⁹ All respondents recalled the expectations placed on them to contribute to the cleaning of the clinical area. That it featured strongly in their initial probationer experience indicates, to some extent, not only the status of the work but also the important message that cleaning conveyed at that time about the nature of nursing work, and the impact that such physically demanding work had on (generally) young women. The accounts of cleaning, by respondents and elsewhere in the published literature, demonstrate differences in this aspect of the work of nurses between 1929 and 1947. Various reports were published during this period which examined the work of nurses with a primary focus to address aspects of recruitment and retention of nurses.¹¹⁰

There is a subtle difference in the accounts of cleaning over time. There is some evidence from the participants that the dependency on nurses as cleaners of the environment diminished during the 1940s. More of the environmental cleaning work was undertaken by ward maids. Nursing texts reflect this change over time.¹¹¹

Secondly, differences are seen between different hospitals. For the probationer nurse, some cleaning was a fact of life. This started with learning to clean during PTS. In some instances respondents recalled sister tutors inspecting the nurse's own room within the nurses' home with regard to its cleanliness and tidiness. Cleaning was not a duty exclusively undertaken by first year probationer nurses. All grades of nursing staff up to and including staff nurses would be involved. Ward sisters supervised the cleaning.

¹⁰⁹ See, for example, David C. Rubin, Tamara A. Rahhal and Leonard W. Poon, 'Things learned in early adulthood are remembered best', *Memory and Cognition*, (1998) 26, 1, p3-19; Michael W. Eysenck, *Psychology: An International Perspective*, (Hove, Psychology Press Ltd., 2004), p328-329 discusses autobiographical memory, in particular the reminiscence bump which refers to older people being having more memories of their early adult years than any other period of their lives; Lynn Abrams, *Oral History Theory*, (London, Routledge, 2010), p90 describes 'flash-bulb' memory. As the participants in this study all started their nursing careers in early adulthood, this period would be well remembered, particularly if overlaid with significant 'flash bulb' events as might occur during the early experiences of ward work.

¹¹⁰ See, for example, *The Lancet Commission on Nursing: Final Report*; Athlone Committee, *Interim Report*; Bevington, *Nursing Life and Discipline*; and Nuffield Provincial Hospitals Trust, *The Work of Nurses in Hospital Wards*.

¹¹¹ See, for example, changes in the various editions of Pearce, *A General Textbook of Nursing* from 1937-1949.

Changes during the 1930s and 1940s in social attitudes, standards of living and the way of life, whilst adding pressures on the recruitment and retention of nurses, do not provide adequate explanations for changes in the nature of nursing work. The debates about the status of a registered nurse had not resolved whether environmental cleaning was a necessary task of nursing. Other drivers should be considered from within changes to clinical practice itself. That cleaning duties were heaped upon first year probationers in particular was dispiriting and contributed to significant wastage of staff. But another explanation exists for the emphasis on cleaning. Nursing work was dangerous work with exposure to infection always a risk.¹¹² Recruits were inexperienced in ward work, and the need to develop skills in managing the environment would be less risky than learning skills through direct care with patients. Infected patients could be a source of cross-infection, or the inexperienced probationer could be a risk to patients through cross contamination. Too much exposure to patients would increase the risk.¹¹³ Learning cleaning skills in the ward would give the nurse a solid grounding in managing the infection risk, whilst having the opportunity to have some contact with patients.

The sanitarian ideal pervaded nursing through to the 1930s and 1940s. Infections were a particular threat to life, with a limited range of readily available, effective and acceptable treatments.¹¹⁴ Germ theory had yet to achieve a major breakthrough in the treatment of acquired infections. *Clark's* evidence that germs were not allowed to fly about the environment through regular damp dusting, is supported by Janet Wilk's account, and Bevington's mention of 'ward rules' in part to guard against sepsis.¹¹⁵ Before the introduction of the sulphonamides and antibiotics, cleaning duties were regarded as an important and necessary part of the nursing work. However, as evidenced by changes in successive editions of Pearce's text, cleaning was becoming

¹¹² See Chapter 4 for comments about the risks faced by participants.

¹¹³ Richard S. F. Schilling and S. A. Hall, 'Prevention of Occupational Disease', Chapter 20 in Richard S. F. Schilling, (ed.), *Occupational Health Practice*, (London, Butterworth, 1973), p 408-420.

¹¹⁴ See chapters 6 and 7 of this thesis for an exploration of the nursing management of patients with infections.

¹¹⁵ Wilks, *Carbolic and Leeches*, p27; Bevington, *Nursing Life and Discipline*, p53.

less of a nursing requirement. Firstly, as Pugh's text recorded, nurses needed to know about environmental cleaning in order to supervise others. Such changes coincided with the introduction of sulphonamides and then antibiotics. This is explored further in Chapter 8.

5.7 Summary

All participants reported involvement, particularly as first year probationers, in environmental cleaning activities, with some reporting this was undertaken alongside ward maids. A few participants disliked this aspect of the work, and some considered the work to be domestic work rather than nursing work. There was a routine to the work which was also one of the first tasks to be undertaken at the start of morning duties. Until the arrival of antibiotics to treat infections, environmental cleaning was considered to be an important nursing task as part of the quest to minimise the risk of infection. The next chapter explores the care of the patient, and identifies the continuation of the theme of cleaning as represented in aspects of the management of the patient's hygiene.

Chapter 6

CARE OF THE PATIENT

6.1 Introduction

The early sanitarian quest for cleanliness is seen to continue when the care of the patient is explored. The argument is that some elements of nurses' fundamental care of their patients were undertaken to reduce the risks of acquired infection. Having learnt skills in cleaning through cleaning of the ward environment, probationers were then introduced to patient hygiene and maintaining their cleanliness. The evidence derived from the oral histories points to practices in the admission of patients, the routines associated with general care of the patients, and the management of visitors to wards as having relevance for reducing or containing the infection risk by limiting exposure to dirt. There is some evidence of change in nursing practices regarding the general care of patients as a consequence of introducing sulphonamides and antibiotics. When participants remembered the use of these drugs they often made 'before and after' comparisons.

One of the challenges in collecting the data reported in this chapter, more so than in any other chapter of this thesis, was that respondents tended to draw comparisons between their nursing experiences in the 1930s or 1940s with more recent experiences of the National Health Service. Although this study did not set out to compare and contrast the past with the present, it seemed ubiquitous among participants that they wanted to make such observations. Making links between the past and present is found by other oral historians.¹ The observations were of the type that nursing care today was not as thorough, with a lack of attention to detail, with more patients experiencing pressure ulcers, and inadequate nutrition and hydration all of which were contrasted with the study period. Many of the comments were linked to

¹ See, for example, Ann L. Stoler and Karen Strassler, 'Memory-work in Java: A Cautionary Tale', Chapter 23 in Robert Perks, and Alastair Thomson, (eds), *The Oral History Reader*, (London, Routledge, 1998), p298.

changes in pre-registration education.² The extraction of illustrative data from the interview recordings includes some comparative comments.

Another feature of these memories concerning the general care of patients is the routines of the work. Work was allocated by task, and the system of allocation generally meant that more junior staff members were allocated a higher proportion of cleaning, domestic and supporting duties whereas the more senior staff members were allocated more technical nursing duties.³ This was illustrated by *Jane Jones* who recalled that there was a definite difference between being a first year probationer and being a second year.⁴ As a first year she was a general dogsbody, doing a lot of 'fetching and carrying' whereas as a second year she was given more responsibilities for patient care.⁵ Evelyn Prentis wrote similarly, referring to seniors giving medicines and injections, arranging fallen pillows and providing care behind screens, when she, as a new probationer was cleaning the ward environment.⁶ Janet Wilks was more explicit about having to wait for some considerable time before being able to give any nursing care directly to patients, although she was allowed to give out washing bowls and bed pans and help with serving meals. Her job as a junior was to clean.⁷

6.2 Background of Patients

The patient admitted to a voluntary hospital in the 1930s and 1940s prior to the introduction of the National Health Service was expected to make a contribution to the costs of the hospital stay via a means tested payment, unless they were part of a

² See, for example, United Kingdom Central Council, *Project 2000: A New Preparation for Practice*, (London, United Kingdom Central Council, 1986); Sylvia Walby, June Greenwell Lesley Mackay and Keith Soothill, *Medicine and Nursing: Professions in a Changing Health Service*, (London, Sage Publications Ltd., 1994) for an overview. Pre-registration education for nurses in Britain has been delivered through the university sector since the middle of the 1990s rather than previously within employing organisations.

³ Nuffield Provincial Hospitals Trust, *The Work of Nurses in Hospital Wards: Report of a Job Analysis*, (London, Nuffield provincial Hospitals Trust, 1953) (H. A. Goddard, Director).

⁴ Jane Jones, interviewed by David Justham on 6 August 2008 at Preston. Began SRN training in Manchester in 1944.

⁵ Jones, interviewed on 6 August 2008.

⁶ Evelyn Prentis, *A Nurse in Time*, (London, Hutchinson & Co., 1977), p56.

⁷ Janet Wilks, *Carbolic and Leeches*, (Ilfracombe, Hyperion Books, 1991), p25.

health insurance or contributory scheme provided through their employer or subscribed to independently.⁸ The National Health Insurance (NHI) scheme introduced in 1911 provided limited benefits for employees earning a low annual income. In 1938 the upper limit was £250 per annum, raised to £420 in 1942.⁹ As a consequence of the recession of the 1920s and early 1930s, contributions to the NHI scheme were not always maintained, and in 1934 some '4 million policies were in arrears'.¹⁰ Those earning below the upper limit were entitled to general practitioner care through the Panel system, and to hospital care for tuberculosis. Crucially, dependants were excluded from NHI.¹¹ Rice found only 34 women out of 1,250 women in her study of working class women in the 1930s were in paid work, of these 34 only thirteen were insured under the NHI scheme and would be able to see a panel doctor or be referred to hospital.¹² Friendly Societies provided contribution based schemes to support hospital care.¹³ Fifty five percent of women in Rice's study contributed to the Hospitals Savings Association or other hospital insurance schemes, and fifty percent of those living in the country and seven percent in towns contributed to nursing associations, whilst sixty percent had needed to consult a doctor privately when ill.¹⁴ The effect of the funding arrangements for hospital care was that for those with low income hospital admission was often a last resort. *Carol Clark* reported that people looked after their families at home.¹⁵ The District Nurse might go in for certain items and then, if the patient was not responding to treatment, the nurse might say of the type 'Well I'm afraid you'll have to go to hospital'.¹⁶ *Thelma Taylor* made a similar comment, mentioning that 'a lot of nursing was done at home'.¹⁷ Admission was only considered when home care was not feasible or too demanding. *Taylor* added that society of the

⁸ Virginia Berridge, Mark Harrison and Paul Weindling, 'The impact of war and depression, 1918 to 1948', Chapter 5 in Charles Webster, (ed.), *Caring for Health: History and Diversity*, (Ballmoor, The Open University Press, 1993), p90.

⁹ Berridge, Harrison and Weindling, 'The impact of war and depression', p100.

¹⁰ Berridge, Harrison and Weindling, 'The impact of war and depression', p90.

¹¹ Berridge, Harrison and Weindling, 'The impact of war and depression', p94.

¹² Margery Spring Rice, *Working Class Wives*, 2nd edition, (London, Virago, 1981), p38.

¹³ Berridge, Harrison and Weindling, 'The impact of war and depression', p90.

¹⁴ Rice, *Working Class Wives*, p38.

¹⁵ Carol Clark, interviewed by David Justham on 16 July 2008 at Abergele. Began State Registered Nurse (SRN) training in Manchester in 1934.

¹⁶ Clark, interviewed on 16 July 2008.

¹⁷ Thelma Taylor, interviewed by David Justham on 24 May 2010 at Nottingham. Began SRN training in Nottingham in 1943.

time accepted illness and death a lot more easily than it is accepted in twenty first century Britain.¹⁸ She mentioned that 'cancers were generally inoperable and [patients were] not admitted' to hospital.¹⁹ Municipal or local authority hospitals, created by the Local Government Act 1929 placed previous poor law hospitals under local authority control, tended to care for the elderly and destitute,²⁰ although the Act enabled municipal hospitals to accept patients from all sectors of the community, including those who could pay.²¹ Care for hospitalised dependant elderly patients often resulted in long term admission. A participant in Graham Thurgood's study who worked in a local authority hospital noted that it was not uncommon for 'Chronics to be dumped by relatives into the hospital'.²² Admission generally required longer stays in hospital compared with present day practices. *Violet Vickers* explained 'patients weren't up. Hernias were in bed for three weeks'.²³ In 1938 the average length of stay in voluntary teaching hospitals in England was 18.5 days for London hospitals and 17.2 days for provincial hospitals with a range from 14.2 days at Bristol Royal Infirmary to 21.6 days at Liverpool Stanley Hospital, though the data is not necessarily based on a similar mix of patients.²⁴ Average length of stay in public hospitals was longer at 35.5 days.²⁵ Longer admission times increased the exposure time to potential acquired infection.

The design features of hospital wards of this period attracted some comment. Layout of the wards was generally of the Nightingale style, some with open fires. *Hilary Harris* recalled having to put the coal on the fire piece by piece at night so as not to

¹⁸ Taylor, interviewed on 24 May 2010. Here is example of the comparisons often made between the period of study and the present day.

¹⁹ Taylor, interviewed on 24 May 2010.

²⁰ Lindsay Granshaw, 'The Rise of the Modern Hospital', in Andrew Wear, (ed.), *Medicine in Society: Historical Essays*, (Cambridge, Cambridge University Press, 1992), p197-218.

²¹ W. Robertson, *An Introduction to Hygiene*, 2nd edition, (Edinburgh, E. and S. Livingstone, 1939), p111; Lindsay Granshaw, 'The Rise of the Modern Hospital', p214.

²² Graham Thurgood, *Transcript of interview HX2 recorded on 25th July 2001*, (Huddersfield, University of Huddersfield Archives), data extracted 19 July 2010.

²³ Violet Vickers, interviewed by David Justham on 24 May 2010 at Nottingham, Began SRN training in Nottingham in 1947.

²⁴ Robert Pinker, *English Hospital Statistics 1861-1938*, (London, Heinemann, 1966), p121.

²⁵ Pinker, *English Hospital Statistics*, p128.

disturb the patients.²⁶ Screens to provide privacy for personal care were normally moveable on wheels. Two screens were normally used when shielding a bed to give personal care.²⁷ In some hospitals, the ward sister had a sitting room on or adjacent to the ward.²⁸

6.3 Influence and Procedure in the Organisation of Nursing Work

The allocation of work for the day was undertaken by the ward sister, or senior staff nurse in the sister's absence. The allocation might be indicated in a day book in which sister identified all the treatments that were needed.²⁹ There may have been more than one book with others for specific care tasks, thus *Barbara Bennett* remembered 'There was a bath book so that every time you bathed a patient you signed the bath book'.³⁰

Allocated tasks needed to be delivered in the manner required by the sister. In regard to procedure, *Jane Jones* commented that 'You did what the sister on the ward told you to do'.³¹ This could mean differences in the same task on different wards 'because they had different ideas and in those days the sister in charge of the ward was queen of all she surveyed'.³² *Kate King* recalled having to 'follow what you were told. You respected the ward sister'.³³ Following what she was told might be for her own good she explained, but 'more importantly it was for the good of the patient'.³⁴ However well intentioned the task, it could mean a risk of harm for the patient. *King's* comments hint at the disciplinarian attitude that pervaded the apprenticeship system

²⁶ Hilary Harris, interviewed by David Justham on 6 August 2008 at Clitheroe. Began SRN training in Manchester in 1934.

²⁷ Susan Shaw, interviewed by David Justham on 18 May 2010 at Nottingham. Began SRN training in Nottingham in 1943.

²⁸ Joan Markham, *The Lamp was Dimmed: The Story of a Nurse's Training*, (London, Robert Hale, 1975), p38.

²⁹ Graham Thurgood, *Transcript of interview HX5 recorded on 8 August 2001*, (Huddersfield, University of Huddersfield Archives), data extracted 19 July 2010.

³⁰ Barbara Bennett, interviewed by David Justham on 15 July 2008 at Dyerth. Began SRN training in Manchester in 1938.

³¹ Jones, interviewed on 6 August 2008.

³² Jones, interviewed on 6 August 2008.

³³ Kate King, interviewed by David Justham on 7 August 2008 at Heswall. Began SRN training in Manchester in 1939.

³⁴ King, interviewed on 7 August 2008.

for probationers. *Florence Farmer* described sisters as being disciplinarians but contextualised this to the fact that they were of a generation whose parents, born in the Victorian era, were also disciplinarians.³⁵ Referring to learning skills in the Preliminary Training School, *Gloria Garner* reported that there was no written procedure book for use by staff in her hospital.³⁶ *Farmer* noted, with regard to procedure books, 'there was none, you just got on with it'.³⁷ Procedures were expected to be learnt in the PTS without the need for reference to any written guidance. *Marjorie Houghton* suggests procedure books were uncommon as her text was designed as a pocket book, which the nurse could carry, of procedures for trolley setting.³⁸ Similarly *Jessie Britten* authored a book comprising basic nursing procedures drawing on the GNC syllabus for general nursing as a guide.³⁹ Underpinning these comments is the notion of drill and practice whereby frequent repetition of a task develops skill in the performance of the task.⁴⁰

The texts on nursing practice from the 1930s and 1940s give very few details on ward organisation or daily work allocation. For example, *Pugh's* 1940 edition makes limited comment, suggesting merely that 'the division of duties between day and night nurses as regards bed-making, toilet of patients, and the giving of breakfast varies in different hospitals. The day nurse does whatever is her share of this work'.⁴¹ These comments refer to the early morning work period, and *Pugh* offers nothing beyond this. In an environment where the ward sister was in control it is probable that some differences existed between wards regarding work programmes and work procedures.

³⁵ *Florence Farmer*, interviewed by David Justham on 4 August 2008 at Preston. Began SRN training in Manchester in 1936.

³⁶ *Gloria Garner*, interviewed by David Justham on 5 August 2008 at Grange-over-Sands. Began SRN training in Manchester in 1940.

³⁷ *Farmer*, interviewed on 4 August 2008.

³⁸ *Marjorie Houghton*, *Aids to Tray and Trolley Setting*, 2nd edition, (London, Baillière, Tindall and Cox, 1944 reprint), pix.

³⁹ *Jessie D. Britten*, *Practical Notes on Nursing Procedures*, (Edinburgh, E. and S. Livingstone Ltd., 1957), pvi.

⁴⁰ A. T. Welford, 'Skill, Human' in Richard L. Gregory, Editor, *The Oxford Companion to the Mind*, (Oxford, Oxford University Press, 1987), p715-6

⁴¹ *W.T. Gordon Pugh*, *Practical Nursing including Hygiene and Dietetics*, 13th edition, (Edinburgh, William Blackwood and Sons, 1940), p98.

6.4 Personal Care Tasks

This section demonstrates that care practices were delivered through planned routines and addresses care practices which serve as exemplars of nursing. All have sanitarian overtones. The washing of patients on admission to hospital illustrates the need to ensure that the cleanliness of the hospital environment is not compromised. Managing the pressure sore risk through the routine examination of the patient sought to prevent any open wound. Open sores carried the potential to become infected, and the consequence could be life threatening septicaemia.⁴² Dealing with elimination of faeces addresses concerns about the removal of dirt. Routines for 'bed pan rounds' existed which sought to control excretion. These enabled dirt to be managed with little risk of contamination in the environment.⁴³

6.4.1 Admission Procedures

The 1930s saw admission to hospital as a last resort. The respondents often made comment about the admission of patients. Perhaps the most complete account was made by *Clark*.⁴⁴ She reported that 'You had to prepare what we called an admission bed where it was properly made and everything folded back so that your patient could be put straight in bed without any nonsense'.⁴⁵ This was expected whether the patient walked in or came in on a stretcher. However, at the earliest opportunity, patients, according to *Clark* were taken to the bathroom:

really to give them a bath but if they'd already said that they'd had a bath and were clean then you went with them "Well I'll help you to change into your nightdress you see because you've got to go to bed for the doctor to examine you". So it was all very tactfully done.⁴⁶

⁴² The Army Council, *R.A.M.C. Training Pamphlet No.3: First Aid and Nursing for Other Ranks*, (London, The War Office, 1952), p283-4.

⁴³ Jenny Littlewood, 'Care and Ambiguity: Towards a Concept of Nursing', Chapter 10 in Pat Holden and Jenny Littlewood, (eds), *Anthropology and Nursing*, (London, Routledge, 1991), p170-189.

⁴⁴ Clark, interviewed on 16 July 2008.

⁴⁵ Clark, interviewed on 16 July 2008. 'Without any nonsense' was a comment about a recent personal experience of delays during admission to hospital.

⁴⁶ Clark, interviewed on 16 July 2008.

The fundamental reason for the bathroom visit was not given to the patient but *Clark* continued:

you'd examine them for ... well if they had infectious diseases if they had any rash or any scars or blemishes or anything that ... to safeguard the hospital upto a point I suppose so there were no comebacks to say he had that while he was in hospital.⁴⁷

The hidden agenda in Clark's comment is the prevention and management of disease vectors entering the hospital, one consequence of which could be accusations about the hospital giving the patient an infection. If the patient had an unknown or undeclared infection then this could be noted and addressed. *Clark* reported that the nurse then took down all the details of what the patient's state was when they came, 'That's part of the reason why you took them to the bathroom'.⁴⁸ Taking the patient to a bathroom would isolate the patient during the 'inspection' and therefore reduce any risk of cross infection to other patients. No day clothes were allowed on the ward, 'they brought in a nightgown and a dressing gown though if they hadn't a dressing gown there were dressing gowns supplied for them and then their slippers of course and everything else went home again'.⁴⁹ The admission bath was an acknowledged aspect of the routine, and other participants made similar comments. Both *Harris* and *Jones* commented that patients would be stripped and bathed, hair examined and clothes sent home.⁵⁰ *King* recognised that it was an accepted part of the routine that hair would be washed and checked for lice.⁵¹ Head lice were a common problem, being found in thirty five percent of World War II child evacuees from inner cities.⁵² The sending of clothes home ensured that any potential infection being carried in the clothes was removed from the hospital. The clothes of patients who did not have relatives that could take the day clothes home were sent to a fumigation unit within

⁴⁷ Clark, interviewed on 16 July 2008.

⁴⁸ Clark, interviewed on 16 July 2008.

⁴⁹ Clark, interviewed on 16 July 2008.

⁵⁰ Harris, interviewed on 6 August 2008; Jones, interviewed on 6 August 2008.

⁵¹ King, interviewed on 7 August 2008.

⁵² Leonore Davidoff, 'The Family in Britain', Chapter 2 in F. M. L. Thompson, *The Cambridge Social History of Britain 1750 -1950, Volume 2, People and Their Environment*, (Cambridge, Cambridge University Press, 1990), p71-129, especially p123.

the hospital.⁵³ *Harris* commented that the process was all inclusive 'everybody, no matter who they were' was subjected to the admission bath and curry comb.⁵⁴ The bath was not always popular. *Louise Lloyd* explained that some patients had never had a bath before and were frightened of the bath because they did not have one in the house.⁵⁵ She recalled having to wrap some patients in sheets and carry them to the bathroom.⁵⁶ Such actions indicate the keenness with which nurses felt the need to avoid contamination, by dirt or smell, of the hospital environment. It was action taken with a focus on the need for hygiene, but with limited explanation given to the patient. The accounts suggest that the rigour imposed amounted to forcing patients to comply in the nurses' quest to maintain a clean environment. The routine admission procedure does not suggest an individualised approach to care. The accounts indicate that explanations given to patients did not reflect the underlying reasons for the admission bath.

The textbooks reveal that admission of patients should include taking the patient to the bathroom. Pugh required that the nurse take note of any instruction on the admission card as to bathing.⁵⁷ Pugh recognised that the bathing could be either in a bath, or could be a blanket bath, after which a 'report on the condition of the body and the presence of sores, ringworm, or pediculosis should be made to the sister'.⁵⁸ Whilst Riddell does not specifically identify an admission bath, she is clear in her advice that the nurse attends, notes and reports on 'any abnormal condition, such as swellings, scars rashes and sores'.⁵⁹ Being taken to the bathroom on admission continued into the early 1950s. Britten's 1957 admission procedure did not include the need for the

⁵³ Evelyn Pearce, *Medical and Nursing Dictionary*, 6th edition, (London, Faber and Faber Ltd., 1943), p179.

⁵⁴ Harris, interviewed on 6 August 2008.

⁵⁵ Louise Lloyd, interviewed by David Justham on 12 August 2008 at Grantham. Began SRN training in Leicester in 1940.

⁵⁶ Lloyd, interviewed on 12 August 2008.

⁵⁷ W.T.Gordon Pugh, *Practical Nursing including Hygiene and Dietetics*, 11th edition, (Edinburgh, William Blackwood and Sons, 1937), p101.

⁵⁸ Pugh, *Practical Nursing*, 11th edition, p102; 'Pediculosis' is another term for lice infestation, see Pearce, *Medical and Nursing Dictionary*, p456-7.

⁵⁹ Margaret S. Riddell, *First Year Nursing Manual*, (London, Faber & Faber Ltd., 5th edition, 1939), p21.

patient to have a bath, merely that the nurse should observe the patient for cleanliness 'of clothes, skin, hair, mouth'.⁶⁰

Additionally, admission of a patient involved a range of other observations, including pulse and temperature, the general condition and any special symptoms noted. All of this would be reported to the sister.⁶¹ The points that were remembered by the participants centred on patient hygiene, and the control of potential cross-infection. This was also found in published memoirs. For example, writing of her training in the 1930s, Prentis gave an extensive account of the challenges in bed-bathing a 'tramp' on admission. This resulted in her having to be de-loused and her uniform fumigated.⁶² Nightingale stressed the need for cleanliness of patients, writing that the nurse should 'never put off' attending to the cleanliness of the patient, adding that it provides far more than relief for the patient.⁶³ The clear implication is that ensuring cleanliness of the patient should be one of the first tasks the nurse addresses with any new admission.

6.4.2 Pressure Area Care

A bedsore as defined in the *Medical and Nursing Dictionary* of 1943 was a sore 'caused by lying in bed'.⁶⁴ It makes no comment about any association with the patient's condition or pressure. A patient acquiring a bedsore was considered to be a consequence of poor nursing care.⁶⁵ Although Ashdown does not blame the nurse for the cause of bedsores, Riddell's opinion was that prevention of bedsores was 'in the

⁶⁰ see, for example, Britten, *Practical Notes on Nursing Procedures*, p48.

⁶¹ See, for example, Pugh, *Practical Nursing*, 11th edition, p101-102.

⁶² Prentis, *A Nurse in Time*, p98-101.

⁶³ Florence Nightingale, 'Notes on Nursing: What it is and What it is not' in Lynn McDonald, (ed.), *The Nightingale School*, (Waterloo, Wilfrid Laurier University Press, 2009), p651-2.

⁶⁴ Pearce, *Medical and Nursing Dictionary*, p69-72. The term commonly used in the 1930s and 1940s was 'bed sore', also spelt – bedsore, bed-sore. Alternative terms can be found, for example – pressure sore, decubitus ulcer. The term Pressure Ulcer is the preferred term in the 21st Century.

⁶⁵ 'The Nursing Mirror Pocket Encyclopaedia and Diary 1929', (London, Faber and Gwyer Ltd., 1929), p59.

hands of the nurse and is a proof of good nursing'.⁶⁶ Britten's later text required the fact that a patient had developed a bedsore to be reported to sister immediately, although Pugh, a surgeon, required the physician or surgeon to be told 'at once'.⁶⁷ The inspection of the skin during the admission bath enabled any pre-existing bedsores to be identified.

In contrast to Ashdown but similar to Pearce and Riddell, many participants reported the view that poor nursing care caused bedsores. Thus, *Bennett* commented that it was an absolute crime to have a bedsore – any redness was reported to the ward sister, and if the skin was broken 'you didn't know how to tell anyone'.⁶⁸ The implication of this comment indicates the intense difficulty of admitting to 'poor nursing care' to the ward sister. *Newton* recalled that it was considered a disgrace if a patient was found to have developed a pressure ulcer and added that the nurse would be in trouble.⁶⁹ *Porter* remembered having to report to matron's office because a patient developed a sore.⁷⁰ In this instance, the patient was a 'huge woman (took three porters to get her into bed)' with a brain tumour who was in a lot of pain and moving about quite a lot and 'I knew she was going to develop a sore as she was a fair skinned woman and sure enough this little blister formed'. A sense of injustice emerges in *Porter's* comment as she felt that it was inevitable a sore would develop given the patient's condition coupled with being fair skinned which was considered a contributory factor. Similarly *Gloria Garner* stated that 'you were never allowed to have them' yet remembered one gastrectomy patient, 'very very fair skinned and rather plump', having to sit upright after the operation and he developed 'a bit of a red bottom but we had to be very careful and make sure it was well and truly cared for'.⁷¹ However, *Vickers*, who began her probationer nursing in 1947, commented that

⁶⁶ A. Millicent Ashdown, *A Complete System of Nursing*, (London, J. M. Dent & Sons Ltd., 1928), p16-19; Riddell, *First Year Nursing Manual*, p41.

⁶⁷ Pugh, *Practical Nursing*, 11th edition, p115; Britten, *Practical Notes on Nursing Procedures*, p57.

⁶⁸ Bennett, interviewed on 15 July 2008.

⁶⁹ Nancy Newton, interviewed by David Justham on 19 December 2008 at Sturton by Stow. Began SRN training in London in 1939.

⁷⁰ Phyllis Porter, interviewed by David Justham on 24 May 2010 at Nottingham. Began SRN training in Nottingham in 1939.

⁷¹ Garner, interviewed on 5 August 2008.

if a patient developed a bedsore it 'would not result in a trip to matron' for the responsible nurse.⁷²

Managing the bedsore risk was commonly referred to as the 'back round'.⁷³ The allocation of duties was made by the sister or shift leader in readiness for the start of the day's work. Two of the nurses were allocated to ensure that patients' positions were changed and their skin inspected on a regular basis. Through the record of allocation of the task, it was known who was responsible for ensuring pressure area care was given. A routine to the round was universal but there were variations in the frequency and the processes performed during the round. *Newton* recalled undertaking a '4 hourly back round'.⁷⁴ *Vickers* reported that a back round and inspection of the heels was undertaken morning and afternoon bed by bed.⁷⁵ *Garner* talked about the back round being automatic, occurring 'after meals'.⁷⁶ *Alice Allen* recalled changing positions regularly and if they were bad enough to be changed 'half hourly, hourly or two hourly they were on a chart and you signed the chart'.⁷⁷ Four hourly was the normal routine of the ward in *Allen's* experience. Variation in the frequency of the back round indicates that there was an individualised care regime superimposed on the routine four hourly round. *Allen* added that there was always two people doing the back round so that if a patient was found with broken skin one person would 'run and fetch a senior person to look at it so that they were very carefully monitored'.⁷⁸ *Wilks* reported the back round was undertaken twice a day but became four hourly in cases of 'prolonged rest'.⁷⁹

⁷² *Vickers*, interviewed on 24 May 2010.

⁷³ The 'back round' was a routine whereby every patient's pressure points would be inspected by an allocated team of staff, and treated as required.

⁷⁴ *Newton*, interviewed on 19 December 2008.

⁷⁵ *Vickers*, interviewed on 24 May 2010.

⁷⁶ *Garner*, interviewed on 5 August 2008.

⁷⁷ *Alice Allen*, interviewed by David Justham on 14 July 2008 at Sheffield. Began SRN training in London in 1942.

⁷⁸ *Allen*, interviewed on 14 July 2008.

⁷⁹ *Wilks*, *Carbolic and Leeches*, p23.

The prevention techniques and treatments of bedsores also generated comments about 'process'. *Porter* reported that methylated spirit was 'rubbed on quite a lot'.⁸⁰ One of the fuller descriptions of the procedure was given by *Vickers*. She reported 'You did everybody's back and heels– soap and water followed by spirit and finish with powder (if they'd got powder)'.⁸¹ In *Vickers's* experience she recalls seeing bedsores and added that 'if they got to the sloughy stage would use EUSOL, and pack them'.⁸² But *Allen* did not remember infected sores which 'I met later on in my nursing career' and her rationale for the absence of infection was being 'meticulous with the turning'.⁸³ *Harris* remembered the use of spirit and powder and regular turning. Though she did not recall seeing bedsores because of the care routine emphasising 'that's what you were there for, not sitting on your backside shuffling papers' referring to a recent experience in hospital when she observed nurses spending a lot of time at the nurses' station in the ward.⁸⁴ In *Garner's* experience all bed-bound patients had 'their bottoms rubbed and powder put on, and put on a clean part of the draw sheet'.⁸⁵ *Vickers* referred to washing pressure areas with soap and water, and this was considered by all authors consulted to be the best method in the prevention strategies.⁸⁶ The regular washing of the skin can be found in *Nightingale's* writings when she comments that a patient may die of bedsores, despite having a clean environment because the nurse 'does not know how to change and clean him'.⁸⁷ The

⁸⁰ Porter, interviewed on 24 May 2010.

⁸¹ Vickers, interviewed on 24 May 2010.

⁸² Vickers, interviewed on 24 May 2010; EUSOL is an acronym for Edinburgh University Solution of Lime. This is a solution of chlorinated soda and boric acid, Pearce, *Medical and Nursing Dictionary*, p221. It is no longer recommended for use because of its irritant and corrosive effect on granulating tissue.

⁸³ Allen, interviewed on 14 July 2008.

⁸⁴ Harris, interviewed on 6 August 2008.

⁸⁵ Garner, interviewed on 5 August 2008; the draw sheet was a long narrow sheet, covering a rubber sheet that was placed across the patient's bed above the bottom sheet and underneath the patient's buttocks. It had sufficient length to allow a clean portion to be drawn under the patient if required. Being a narrow sheet it could be replaced if necessary whilst the patient remained in bed.

⁸⁶ see, for example, Ashdown, *A Complete System of Nursing*, p16; Pearce, *Medical and Nursing Dictionary*, p70; Pugh, *Practical Nursing*, 11th edition, p114. The use of soap and water, and rubbing the 'at risk' area is no longer advocated. see, for example, Jon Pfeffer, 'The Cause of Pressure Sores', in John G. Webster, (ed.), *Prevention of Pressure Sores: Engineering and Clinical Aspects*, (Bristol, Adam Hilger, 1991), p1-18; Miriam Wood, 'Wound Management', in Jane Mallett and Christopher Bailey, (eds), *The Royal Marsden NHS Trust Manual of Clinical Nursing Procedures*, 4th edition, (Oxford, Blackwell Science, 1996) p645-52.

⁸⁷ Nightingale, 'Notes on Nursing: What it is and What it is not', p679.

nurse is 'always on the guard against bedsores'.⁸⁸ She described the output of moisture from a sick person as being 'noxious', and the nurse needs to wash him.⁸⁹ Nightingale's quest for absolute cleanliness extended to ensuring the patient's skin was clean and in particular those parts of the body in contact with the bed linen since the noxious output would be trapped between body and bedding.⁹⁰

The regular 'back round' sought to prevent tissue damage. In the accounts of participants, the emphasis was on washing and keeping the at-risk area clean, rather than on changing the patient's position to relieve pressure on the skin. This evidence points to an overriding sanitarian quest for cleanliness as a means to control the infection risk. Part of the cleaning process might involve changing the bed sheets, or at least moving the draw sheet so that the patient had a clean area to lie on. An open sore could become infected, which might be treated with topical antiseptics.⁹¹ The greatest risk was the development of a deep infection with the potential for toxæmia and septicaemia leading to death.⁹² Such a potential consequence was to be avoided by high standards of cleanliness and regular attention to the pressure risks. Any skin damage was attributed as poor nursing care by the nurse who was allocated to the 'back round' task, whether the nurse was a probationer or qualified member of staff for which an account might need to be given to matron. The sanitarian quest for cleanliness was in evidence in washing the skin to minimise the potential for 'dirt' to be introduced through a break in the skin.

⁸⁸ Nightingale, 'Notes on Nursing: What it is and What it is not', p687.

⁸⁹ Florence Nightingale, 'Nursing the Sick' in Richard Quain, *Dictionary of Medicine*, reproduced in Lynn McDonald, (ed.), *The Nightingale School*, (Waterloo, Wilfrid Laurier University Press, 2009), see p740.

⁹⁰ Nightingale, 'Notes on Nursing: What it is and What it is not', p640-641.

⁹¹ See, for example, Ashdown, *A Complete System of Nursing*, p17 for use of antiseptic powder; 'The Nursing Mirror Pocket Encyclopaedia and Diary 1929', p61 for antiseptic ointment; R. J. McNeill Love, 'Carbuncles and Bed-sores', Chapter 27 in Hamilton Bailey (ed.), *Pye's Surgical Handicraft: A manual of surgical manipulations, minor surgery, and other matters connected with the work of house surgeons and of surgical dressers*, 11th edition, (Bristol, John Wright and Sons Ltd, 1939), p176-180 for antiseptic lotions.

⁹² See, for example, Ashdown, *A Complete System of Nursing*, p18; Charles R. Box, 'Typhus Fever', in F.W. Price (ed.), *A Textbook of the Practice of Medicine*, 5th edition, (London, Oxford University Press, 1937), p253-62; Gerald E. Breen, *Essentials of Fevers*, 2nd edition, (Edinburgh, E. and S. Livingstone Ltd., 1948), p226-231.

6.4.3 'Toileting' of Patients

Emptying slops (or emptying bedpans and other utensils) was an important nursing task. Nightingale expressed a view that:

The most important practical lesson that can be given to nurses is to teach them what to observe – how to observe – what symptoms indicate improvement – what the reverse – which are of importance – which are of none – which are evidence of neglect – and of what kind of neglect.⁹³

She illustrates her comments with an example about emptying slops, bemoaning the inadequacy of reporting that can be made by an unobservant nurse who does not appreciate the potential implications of an altered frequency of bowel movement.⁹⁴

The giving and removing of bedpans is described as 'one of the routine duties of a probationer',⁹⁵ adding that the volume, frequency, colour and consistency, and presence of abnormal contents, such as undigested food, mucus, blood or pus must be checked.⁹⁶

Four participants recalled cleaning bedpans. *Bennett* described that her next task after making beds, and damp dusting, was to go to the sluice to sort out the bedpans and urinals which had been put to soak in disinfectant overnight by the night staff but 'it was up to you to take them out, dry them down, and make sure they were all clean'.⁹⁷

Vickers, who started training towards the end of the 1940s, recalled that bedpans were washed in a steamer, but then needed cleaning individually. As a junior probationer, she spent afternoons in the sluice cleaning bedpans, and then the sluice room itself, both of which would be inspected by the ward sister.⁹⁸ Likewise *Porter* described being 'eased in' as a probationer by cleaning bedpans and doing 'sluice work'.⁹⁹ *Jones* recalled bedpans were cleaned by hand in the sluice and soaked in 'dilute carbolic'.¹⁰⁰ *Riddell* describes the cleaning of bedpans.¹⁰¹ After rinsing in cold

⁹³ Nightingale, 'Notes on Nursing: What it is and What it is not, p660.

⁹⁴ Nightingale, 'Notes on Nursing: What it is and What it is not, p661.

⁹⁵ Riddell, *First Year Nursing Manual*, p82.

⁹⁶ Riddell, *First Year Nursing Manual*, p82.

⁹⁷ Bennett, interviewed on 15 July 2008

⁹⁸ Vickers, interviewed on 24 May 2010.

⁹⁹ Porter, interviewed on 24 May 2010.

¹⁰⁰ Jones, interviewed on 6 August 2008.

water they should be washed well with soap and water. Riddell advised that either daily, or if not possible then at least twice weekly, bedpans should be soaked for half an hour by placing them in a bath of strong soda. This was to be followed by washing in a soapy mixture by using a mop, 'care being taken to get the mop well under the rims of the bedpans and down the handles'.¹⁰² Cleaning bedpans and doing sluice work was considered low status work allocated to junior probationers. Prentis remembered an occasion when she was the most junior nurse on duty and was required to empty the bedpans, scour them and warm them, take them out to patients and collect them back. She needed the help of a third year nurse to help lift some patients onto the bedpans which irritated the third year. 'Bedpans', she wrote, 'were beneath their dignity ... with me too inexperienced to place a patient on a bedpan there was nothing the third-year nurse could do about it except vent her anger on me'.¹⁰³ The comment here illustrates the hierarchical nature of the apprenticeship system with the junior probationers being expected to undertake the menial tasks whilst the seniors were able to undertake the more technical tasks.¹⁰⁴ It also illustrates the need to gain experience in direct care of the patient.

Pugh advised that bedpans needed to be washed at least daily with soap and water ensuring no soda is used for cleaning aluminium bedpans since the soda will corrode the aluminium.¹⁰⁵ There was a wide variation in the design of bedpans and the materials used to make them. Pugh notes that bedpans were normally glazed earthenware or aluminium for ease of cleaning.¹⁰⁶ Riddell described bedpans being made of porcelain, enamel, stainless steel, or aluminium.¹⁰⁷ Ashdown makes no mention of aluminium pans but only porcelain or enamel pans.¹⁰⁸ Bedpans came in various shapes; those in common use were described as the 'round' bedpan, the

¹⁰¹ Riddell, *First Year Nursing Manual*, p16-17.

¹⁰² Riddell, *First Year Nursing Manual*, p16-17.

¹⁰³ Prentis, *A Nurse in Time*, p66.

¹⁰⁴ Bevington, *Nursing Life and Discipline*, p6-7.

¹⁰⁵ Pugh, *Practical Nursing*, 11th edition, p155.

¹⁰⁶ Pugh, *Practical Nursing*, 11th edition, p154.

¹⁰⁷ Riddell, *First Year Nursing Manual*, p29.

¹⁰⁸ Ashdown, *A Complete System of Nursing*, p20.

'slipper' bedpan, the 'perfection' bedpan and the 'cradle' bedpan.¹⁰⁹ Ashdown explains that the slipper is used for patients who should not be lifted more than is necessary, the 'perfection' is useful in obese patients and also for douching or bathing, or for patients susceptible to bedsores, and the 'cradle', like the 'perfection', is 'large and prevents any pressure'.¹¹⁰ The different designs of bedpan were in response to the nursing care needs of patients who were in bed for long periods of time.

Bedpans were offered to patients throughout the day. Mary Douglas's notion that dirt is matter out of place and contravenes a sense of order is a useful concept to help explain the bedpan round.¹¹¹ Bedpan rounds would take place during the morning, at midday and in the evening. This process would keep excreta under control by having an orderly approach to its collection and disposal. As nearly all patients were kept in bed they had to endure the 'bedpan round'.¹¹² *Farmer* remembered that every patient would need a bedpan first thing in a morning.¹¹³ She could only remember people asking for bedpans; none were allowed to go to the toilet.¹¹⁴ In this restriction there was a lack of individualised care that would challenge the sense of order achieved through routinisation. Wilks recalled the ward sister determined the routine for the bedpan round 'and all patients had to comply'.¹¹⁵ Nevertheless, Wilks indicated that she, and others might, 'slip a bedpan under our apron and slide it unnoticed into a bed', with a promise from the patient to keep it out of sight until the next bedpan round.¹¹⁶ The anecdote from Wilks revealed the fact that some staff would challenge the disciplined routines in favour of more individualised care.

Lloyd remembered only that it was not easy to get some patients onto a bedpan, and then 'you would have to yell out for help' so that two people would lift the patient onto

¹⁰⁹ See, for example, Ashdown, *A Complete System of Nursing*, p20 and Riddell, *First Year Nursing Manual*, p29 concerning round, slipper and perfection bedpans. Only Ashdown describes the cradle bedpan.

¹¹⁰ Ashdown, *A Complete System of Nursing*, p20.

¹¹¹ Mary Douglas, *Purity and Danger: An analysis of concepts of pollution and danger*, (London, Routledge Classics, 2002), p44-50.

¹¹² Wilks, *Carbolic and Leeches*, p18.

¹¹³ Farmer, interviewed on 4 August 2008.

¹¹⁴ Farmer, interviewed on 4 August 2008.

¹¹⁵ Wilks, *Carbolic and Leeches*, p18.

¹¹⁶ Wilks, *Carbolic and Leeches*, p18.

the bedpan.¹¹⁷ If the nurses were not careful regarding position 'you'd get a wet bed, then it needed changing – it took a lot of time'.¹¹⁸ Whilst most patients were co-operative with the routine, some patients would require a bedpan at other times. This was considered as most inconvenient and was severely frowned upon by the sister who would only allow a bedpan 'in the most desperate situations'.¹¹⁹ To protect against spillages during bedpan rounds, at *Lloyd's* hospital, aprons were worn, described as 'old fashioned rubber things'.¹²⁰

There is some evidence that, in order to get the bedpan round over quickly, staff sometimes took more than one bedpan out from the sluice at a time. Not everyone would do this, but several comments referred to carrying more bedpans than was prescribed policy. Broadley recalled that china bedpans were stackable but that 'three was all that we were allowed to carry'.¹²¹ *Farmer* recalled the bed pan round, and the bed pans were carried out to the patients, with as many as you could carry up to your chin 'the more you carried the better you thought you were, and then collect and clean them'.¹²² She reported later in the interview that the most she carried at any one time out to patients was about eight bedpans.¹²³ *Wilks* also describes carrying more than one at the time of 'dethroning', when bedpans were withdrawn and demurely draped, they were then 'piled up seven or eight right up to the chin!'.¹²⁴ Carrying a number of used bedpans is illustrative of an attempt to reduce the time spent walking to and from the sluice where the bedpans would be emptied. It suggests that nurses were not always compliant with the rules. Furthermore it also suggests the powerlessness of the nurse to procure a trolley designed for the purpose.

¹¹⁷ Lloyd, interviewed on 12 August 2008.

¹¹⁸ Lloyd, interviewed on 12 August 2008.

¹¹⁹ *Wilks, Carbollic and Leeches*, p18.

¹²⁰ Lloyd, interviewed on 12 August 2008.

¹²¹ Margaret E. Broadley, *Patients Come First: Nursing at 'The London' between the two World Wars*, (London, The London Hospital Special Trustees, 1980), p48.

¹²² *Farmer*, interviewed on 4 August 2008.

¹²³ *Farmer*, interviewed on 4 August 2008.

¹²⁴ *Wilks, Carbollic and Leeches*, p19.

Bedpans were covered to preserve dignity and minimise spillage. *Garner* remembered that bedpan covers were made of linen with a distinctive red corner.¹²⁵ *Broadley* recalled that there were well fitting china lids for the china bedpans and 'were to be used at all times as well as the modest covering of a white cloth edged with red'.¹²⁶ The marked cloth was designed to ensure that it would not be used for other purposes given the potential for contamination with urine and faeces.

Clearing the waste from bedpans was a disliked task. Several participants described the use of 'tow', a coarse part of flax or hemp that was used as an absorbent in place of toilet paper.¹²⁷ *Porter* was matter of fact about the use of tow, but *Taylor* described it as 'horrible stuff'.¹²⁸ *Prentis* recalled leaving the handle of one 'clogged up with tow' and it taking some time to clean the handle.¹²⁹ *Broadley* referred to an alternative to toilet paper that was 'a kind of soft, unbleached cotton wool, known as 'waste' [probably tow], with a reputation for blocking the sluice and needed to be removed.'¹³⁰

Working with bedpans appears to be a transition point between cleaning routines and working with patients. Cleaning bedpans was a duty allocated to junior probationers. The cleaning would take place in the sluice, and was considered by some to be low status work, alongside environmental cleaning. The probationers' work was inspected. Cleaning bedpans served three functions. Firstly, the probationer was cleaning an item that would be in close contact with the patient. It needed to be thoroughly clean, and the intricacies of design could mean that faeces and cleaning tissues could be hidden from view of the unwary. Hence the need for inspection to ensure a clean item was presented to the patient, not one that carried a potential infection risk. The second function was that it provided an opportunity for the probationer to interact with the patient. Being allowed to give out bedpans to patients and helping patients onto and off the bedpan, if necessary, would require the nurse to learn good communication

¹²⁵ *Garner*, interviewed on 5 August 2008.

¹²⁶ *Broadley*, *Patients Come First*, p49.

¹²⁷ Harold W. Jones, Norman L. Hoerr, and Arthur Osol (eds), *Blakiston's New Gould Medical Dictionary*, (London, H. K. Lewis and Co. Ltd., 1951), p1070.

¹²⁸ *Porter*, interviewed on 24 May 2010; *Taylor*, interviewed on 24 May 2010.

¹²⁹ *Prentis*, *A Nurse in Time*, p67.

¹³⁰ *Broadley*, *Patients Come First*, p49.

skills around a subject that many people would find difficult to discuss.¹³¹ The final function is that of enhancing the probationer's development over personal protection from the risk of contamination.

6.5 Managing the Patient with an Infection

Not all patients in hospital carried an infection. However, before sulphonamides and antibiotics became available it was commonplace for general hospital wards to care for patients with life threatening infections. One such infection was lobar pneumonia. All this began to change from the middle to late 1930s and 1940s with the introduction of sulphonamide drugs and subsequently antibiotics. However, these drugs were not immediately available to everyone and also had their limitations. For example, sulphonamides were rarely effective against staphylococcal infections.¹³²

6.5.1 The Patient with Pneumonia

Pneumonia was a serious and life threatening illness. *Rita Reed* reported that pneumonia was an infection that was of concern to the general public.¹³³ It could affect any age and either gender, although it was commonest in men between the ages of 15 and 40.¹³⁴ In a review of treatment that does not mention sulphonamide drugs, Young and Beaumont reported that mortality was high, being high in the first years of life, then declining but 'after the age of 60, it may show a mortality of 60-80 percent'.¹³⁵ In a later publication that suggest sulphonamide drugs were of some value, Young revised these figures downwards to 50-70 percent after age 60, adding that pneumonia was slightly more fatal in women than in men.¹³⁶

¹³¹ Littlewood, 'Care and Ambiguity', p178.

¹³² Mary E. Florey (ed.), *Antibiotic and Sulphonamide Treatment: A short guide for practitioners*, (London, Oxford University Press, 1959), p38.

¹³³ Rita Reed, interviewed by David Justham on 18 May 2010 at Nottingham. Began SRN training in Nottingham in 1943.

¹³⁴ Young and Beaumont, 'Diseases of the Respiratory System', p1227.

¹³⁵ Young and Beaumont, 'Diseases of the Respiratory System', p1235.

¹³⁶ Young, 'Pneumonia, Lobar', p727.

A number of the participants commented on nursing patients with pneumonia. In the opinion of the eminent physician, R. A. Young CBE, Consulting Physician to the Middlesex Hospital and the Brompton Hospital for Consumption and Diseases of the Chest, pneumonia was a disease which offered:

great opportunities to the doctor and nurse. Skilled nursing and carefully devised medical treatment can influence the course favourably, and determine recovery in a notable proportion of the cases.¹³⁷

Even after sulphonamide treatment had changed the management of pneumonia, Hitch included the nursing care of patients with lobar pneumonia in considerable detail, because it remained 'the classic example of the value of good nursing in acute illness'.¹³⁸ Harris gave an account about the challenge of nursing patients with pneumonia. Such patients were interesting because of the amount of nursing care they needed. Commenting on the use of poultices she reported that:

You started with expectorants and you suppressed their cough, you put antiphlogistine poultices on their chest – Oh, it was a paraphernalia – You had to make the poultices up yourself but God help you if you made them too hot. You were supposed to heat the can of antiphlogistine in boiling water and you were to scoop it out, then put it on the lint and slap it on their chest. It relieved the tension and the pain in the chest. That was one of the interesting things. You nursed them to the crisis. And then it was touch and go whether they came through the crisis or they succumbed.¹³⁹

Patients could generate a lot of sputum and expectorants were used to help expel the sputum before a restrictive and pain-relieving poultice was applied. It might be necessary to calm the patient's cough before applying the poultice. Evans also recalled the use of antiphlogistine poultices but did not give many details as to how these were prepared, although she did mention it was quite a laborious job.¹⁴⁰ The poultices were applied daily, with the antiphlogistine pasted onto lint.¹⁴¹ Young and Beaumont noted

¹³⁷ R. A. Young, 'Pneumonia, Lobar', in Humphry Rolleston, (ed.), *The British Encyclopaedia of Medical Practice*, (London, Butterworth and Co. (Publishers) Ltd., 1938), Volume 9, p713-742.

¹³⁸ Margaret Hitch, *Aids to Medicine for Nurses*, 2nd edition, (London, Baillière, Tindall and Cox, 1943), p113.

¹³⁹ Harris, interviewed on 6 August 2008. The crisis was a sudden favourable turning point in the course of the disease, see, for example, Ashdown, *A Complete System of Nursing*, p217; W.Gordon Sears, *Medicine for Nurses*, (London, Edward Arnold & Co., 1944), p242.

¹⁴⁰ Edith Evans, interviewed by David Justham on 18 July 2008 at Lymm. Began SRN training in Manchester in 1936. Antiphlogistine was a preparation of 'Denver Mud' and was used as a paste in poultices - see Pearce, *Medical and Nursing Dictionary*, p37.

¹⁴¹ Evans, interviewed on 18 July 2008.

that the preference was to use hot linseed poultices to the back and side, but 'antiphlogistine applied on lint does not require such frequent changing and disturbs the patient less'.¹⁴² There was no universal agreement on the use of poultices. This is illustrated in an anecdote reported by Brown about Alexander Fleming. As a junior doctor, in the Edwardian era, Fleming worked for a physician who treated pneumonia with ice packs placed on the chest. A patient with lobar pneumonia of the left lung was prescribed the ice-pack treatment in the belief that the cold discouraged the growth of the infecting organism. Whilst the physician was on holiday, the consultant who had temporarily taken over the case load was a firm adherent of the use of hot poultices. The patient developed pneumonia in the right lung, and the 'result was extreme discomfort for the patient who had ice packs on the left side of his chest and hot poultices on the right'.¹⁴³ The use of different types of poultices reveals a lack of agreement amongst medical staff. Poultices were used for comfort and pain relief.¹⁴⁴ Other strategies were employed also. Broadley, in her memoirs of the London Hospital where she started training in 1923, recalled making a 'Pneumonia Jacket'.¹⁴⁵ These were made from 'gamgee', a form of cotton wool covered in gauze, and used with patients who had pneumonia. The jackets had a hole for the head and covered the chest and back, and 'the older sisters liked them removed gradually, one literally tore off a bit at a time, finally replacing them with tough flannel vests'.¹⁴⁶ The jackets were used primarily for children as a means of keeping the chest warm.¹⁴⁷ Ashdown mentions only that a cotton wool jacket is usually applied to the chest, but offers no rationale for its use.¹⁴⁸ The detailed care that Margaret Hitch describes indicates there was variation in the medical management strategies for pneumonia.¹⁴⁹

¹⁴² R. A. Young and G.E. Beaumont, 'Diseases of the Lungs', in Frederick W. Price, (ed.), *A Textbook of the Practice of Medicine*, 5th edition, (London, Oxford University Press, 1937), p1164-1283, see page 1236.

¹⁴³ Kevin Brown, *Penicillin Man: Alexander Fleming and the Antibiotic Revolution*, (Phoenix Mill, Sutton Publishing Ltd., 2004), p32.

¹⁴⁴ Hitch, *Aids to Medicine for Nurses*, p117.

¹⁴⁵ Broadley, *Patients Come First*, p56.

¹⁴⁶ Broadley, *Patients Come First*, p56.

¹⁴⁷ Pugh, *Practical Nursing*, 11th edition, p234.

¹⁴⁸ Ashdown, *A Complete System of Nursing*, p218.

¹⁴⁹ Hitch, *Aids to Medicine for Nurses*, p109-122.

The course of lobar pneumonia included a period of between five and ten days of constantly high body temperature 103–105°F (39.4–40.5°C) ending with the crisis when the body returns over a short period of time (less than 12 hours) to a normal or near normal temperature. During the period of high temperature Hitch advocated sponging twice daily but added that 'a hot sponge is not only refreshing and induces sleep, but helps in the elimination of toxins by means of the skin.'¹⁵⁰ An alternative strategy was preferred by Ashdown who noted that a pyrexia 'over 104°F is treated by tepid or cold sponging', and elsewhere defines tepid sponging using water with an initial temperature of 90°F falling to no lower than 70°F, and cold sponging uses water starting at 70°F cooling to 50°F or lower.¹⁵¹ Jones remembers tepid sponging for patients with very high temperatures, the aim being to leave droplets of water over the body that could evaporate off and thus cool the patient.¹⁵² She could not recall if sponges were left in situ. Evans clearly remembered that sponges were not left in the groin or armpits.¹⁵³ Tepid sponging of a patient should take about twenty minutes to enable an unhurried process.¹⁵⁴ The temperature of the patient was taken after ten minutes to ensure the cooling was not too rapid.¹⁵⁵

Speaking in relation to patients with either pneumonia or septicaemia Evans recalled tepid sponging being required if the temperature, taken routinely four hourly, went above 105°F.¹⁵⁶ She said 'it was a very leisurely affair, and we would help the staff nurse do that ... it took a fairish time. That was the whole point – the caring – it was the time we spent with the patients'.¹⁵⁷ Here was an indication that the probationer was learning more sophisticated skills by working with the staff nurse. Other routine tasks, as in the example of the bedpan round, discussed above, had the potential to be hurried. But in this task, involving close contact with the patient, the lesson was that caring took time. Spending time with a patient carrying an infection would require

¹⁵⁰ Hitch, *Aids to Medicine for Nurses*, p114.

¹⁵¹ Ashdown, *A Complete System of Nursing*, p218.

¹⁵² Jones, interviewed on 6 August 2008.

¹⁵³ The practice of leaving wet sponges in place was to aid evaporation as a means of cooling the body, see Pearce, *Medical and Nursing Dictionary*, p567.

¹⁵⁴ Pearce, *Medical and Nursing Dictionary*, p567.

¹⁵⁵ Pearce, *Medical and Nursing Dictionary*, p567.

¹⁵⁶ Evans, interviewed on 18 July 2008.

¹⁵⁷ Evans, interviewed on 18 July 2008.

behaviours and skill that would, for example, reduce the risk of the patient coughing into the breathing zone of the nurse.

Whilst lobar pneumonia had the potential to be life threatening, Pugh advised that 'Rest, fresh air, and liquids are all that is necessary for the well-doing of many cases of pneumonia'.¹⁵⁸ Livingstone advocated an 'abundance of fresh air, a well warmed room, careful nursing with minimal disturbance of the patient'.¹⁵⁹ Young warns nurses against being inflexible in delivering the routine of the ward, adding that disturbing the patient too frequently for examination, washing, and attention to the bowels may 'lead to exhaustion and seriously jeopardise recovery'.¹⁶⁰ The guidance regarding the nursing management suggests the need for patience with less rigour than might be applied in other situations. The request to minimise disturbance could be seen as a criticism that nurses were too keen to ensure routines were implemented.

Nursing patients with pneumonia changed rapidly with the introduction of the sulphonamide group of drugs. The first sulphonamide to be used was known as Prontisil.¹⁶¹ King recalled Prontisil being used with patients with pneumonia when she started nursing reporting that:

they would have the crisis and then a drug, I think it was called Prontisil, came out and the elderly nurses would give to the patients and they stood over them waiting for a crisis and it didn't come, and it was amazing. They couldn't have anything like eggs or sulphur you know things in the diet because of this medication. But it was just amazing.¹⁶²

A feature of Prontisil was that it made the patients' urine and perspiration red.

Morrison recorded a retired nurse who recalled that:

matrons weren't happy with this because it more or less spoilt the linen, but we couldn't care less what happened to the linen as long as we got the patient

¹⁵⁸ Pugh, *Practical Nursing*, 11th edition, p340.

¹⁵⁹ James L. Livingstone, *Aids to Medicine*, (London, Baillière, Tindall and Cox, 1935, 6th reprint 1944), p28.

¹⁶⁰ Young, 'Pneumonia, Lobar', p733.

¹⁶¹ Prontisil was manufactured in Germany to begin with and tablets were coloured red, see S. G. B. Amyes, *Magic Bullets, Lost Horizons: The Rise and Fall of Antibiotics*, (London, Taylor and Francis, 2001). Sulphonamide drugs contained sulphur which could affect the oxygen carrying capacity of haemoglobin by preferentially combining with it to form sulphaemoglobin. Methaemoglobin production and bone marrow damage were other complications.

¹⁶² King, interviewed on 7 August 2008.

better... it was very useful for pneumonia and other infectious diseases for which we had no medicine or anything like that before then.¹⁶³

This memory shows a contrast between this particular matron's quest for cleanliness and order with the nurses in practice who could see the potential of Prontisil for the patient. The staff members were also ready to abandon concern for the sheets, and in this sense cleanliness was becoming less important. Prontisil was soon followed by sulphapyridine, more commonly referred to by the manufacturer's code 'M&B 693'.

Harris almost sounded disappointed when sulphapyridine appeared:

then of course all the interest went out of [nursing pneumonia patients] in 1938 with M&B 693. It made a tremendous difference. They were up and walking around very soon once they got on that.¹⁶⁴

Pearce recorded that sulphapyridine 'revolutionised the treatment of pneumonia' and 'prognosis has improved'.¹⁶⁵ She warned that complacency was not an option, 'good nursing care' was still essential.¹⁶⁶ By 1945 it was reported that sulphonamide drugs were always employed in the treatment of pneumonia, considerably modifying 'the course and symptoms of the disease'.¹⁶⁷

6.5.2 Nursing the Patient with a Life Threatening Infection

The following extract about a young boy with an infection (not pneumonia) refers to care given in the mid 1940s. *Allen* recalled a particularly significant patient for her.¹⁶⁸

The memory of her experience was vivid, and is reproduced in full as it serves to illustrate something of the nature of clinical work with a patient seriously ill due to infection.

Terry was only four and a half and, because he was so desperately ill, night sister would put a special on him and so I specialised him and what I used to do during the night was - his parents used to stay all night but they just sat there and both of them were working.¹⁶⁹ His father had been in the army and he had lost an arm

¹⁶³ Catherine Morrison, Personal Communication, 20th July 2009.

¹⁶⁴ *Harris*, interviewed on 6 August 2008.

¹⁶⁵ *Pearce*, *Medical and Nursing Dictionary*, p478.

¹⁶⁶ *Pearce*, *Medical and Nursing Dictionary*, p478.

¹⁶⁷ *Sears*, *Medicine for Nurses*, p244.

¹⁶⁸ *Allen*, interviewed on 14 July 2008.

¹⁶⁹ 'Specialling' was term used to denote a nurse being allocated to provide nursing care for only one patient. The nurse would stay with the patient.

say [unclear] - I used to do half hourly obs.¹⁷⁰ He was in a typhoid state.¹⁷¹ He was cachectic, semi-conscious plucking at the bedclothes tiny emaciated little boy.¹⁷² I used to try and give him little sips from a teaspoon of glucose and water, we used to have liquid glucose in a jar, glucose and water and then he'd run in and out of a feverish state so I used to give him wet sponge, cool sponge, you'd put the sponges under the arms and sponges in the groins and at his forehead and of course sometimes he would perspire a lot and you had to keep changing all his clothes. He wasn't continent at that stage. You just did things like that. And I think ... we used to have a 96 hour fortnight so that would be a sort of a you know one worked 12 nights or so and I just remember doing that all the time. But as I say it was very worrying so I used to nip over to the chapel when I was relieved for my break. And gradually he became conscious again but you see I do think in those days I don't remember any medicines - I think we only had sulphonamides, which was bacteriostatic, and you couldn't have given that to Terry because he had osteomyelitis - it was his left leg it was dreadfully painful so it used to help him if nurse would sit and put a hand on his leg.¹⁷³ I think more than any pharmaceutical stuff it was just loving care that healed him eventually. And we always said 'Mummy was here' and she was a hospital cleaner and she needed the money you see and we used to say come here and sit in the easy chair and Dad came too but he had a lot of pain from this amputation. So it was really down to the nurses.¹⁷⁴

The account illustrates the intensity of the care given over days and nights whilst the boy's immune system was fighting the infection. This account adds two particular dimensions to the care of seriously ill patients. These are the sense of hopelessness that the nurse could experience in the face of overwhelming infection, and the presence of visitors at the bedside. To renew her hope that Terry would recover *Allen* spend time in the hospital chapel. Visitors were allowed at the bedside at anytime in cases of extreme illness. More generally, however, visitors to patients were strictly controlled.

¹⁷⁰ 'Obs' is a colloquial term for taking physiological observations. In Allen's day these would normally be temperature, pulse and respiration rate, see Riddell, *First Year Nursing Manual*, p 46-56.

¹⁷¹ 'Typhoid state' refers to the appearance of a patient with enteric fever. It does not mean the patient necessarily has the infection 'Typhoid', but could be any of a group of infectious disease affecting the gastro-intestinal tract, see Pearce, *Medical and Nursing Dictionary*, p207.

¹⁷² 'Cachexia' is a condition of marked emaciation associated with very severe ill health, see Pearce, *Medical and Nursing Dictionary*, p97.

¹⁷³ 'Osteomyelitis' is inflammation of the medullary canal of the long bones. The normal causative organism is *Staphylococcus aureus*, against which sulphonamides were ineffective. Sulphonamides also had the potential to damage bone marrow. 'Bacteriostatic' refers to the action of the drug on the organism - the drug stops growth but does not kill the organism, Pearce, *Medical and Nursing Dictionary*, p440-1 and p116.

¹⁷⁴ Allen, interviewed on 14 July 2008.

6.6 Visitors

Control of the exposure of patients to visitors was a means of minimising the infection risk to patients. Limiting the times when visitors could attend the hospital helped nurses control the environment and keep it clean. It was commonplace to restrict the number of visitors to no more than two per patient. It was also common practice to limit the times when visiting was allowed. Thus *Harris* was adamant that visiting was:

very strict, two to a bed, no switching over, between 2pm and 4pm on a Wednesday and same on Sunday with nothing in between unless it was a matter of life and death. It was one way of keeping infection out.¹⁷⁵

In some hospitals patients were issued with two visiting cards which would be brought by the visitors, like an admission ticket. *Reed* reported that at visiting times a junior probationer would sit at the ward entrance and collect in the visiting cards.¹⁷⁶ *Lloyd* reported that when she started her training visiting was only 2 hours a few days per week, but became 2 hours each day by the time she had completed it. She suggested that restricting the number of visitors was associated with low levels of cross infection.¹⁷⁷ *Newton* reported that visiting hours were strictly controlled. She remembered the time allowance as being half to one hour every evening as well as Wednesday and Sunday afternoons. However, only one person per bed was allowed at the bedside at a time. Visitors would swap over with others who would be waiting outside of the ward. She also commented that if sister was not on duty there was more leniency and two visitors might be allowed.¹⁷⁸ *Lloyd* also commented that no children were allowed to visit.¹⁷⁹ Both *Farmer* and *Porter* specifically mentioned that visitors were not allowed to sit on the bed.¹⁸⁰

Similar comments can be found in published memoirs. Thus, *Prentis*, wrote of a sister standing guard at the door monitoring visitors as they entered the ward.¹⁸¹ This had

¹⁷⁵ *Harris*, interviewed on 6 August 2008.

¹⁷⁶ *Reed*, interviewed on 18 May 2010.

¹⁷⁷ *Lloyd*, interviewed on 12 August 2008.

¹⁷⁸ *Newton*, interviewed on 19 December 2008.

¹⁷⁹ *Lloyd*, interviewed on 12 August 2008.

¹⁸⁰ *Farmer*, interviewed on 4 August 2008; *Porter*, interviewed on 24 May 2010; see also *Prentis, A Nurse in Time*, p62.

¹⁸¹ *Prentis, A Nurse in Time*, p61.

the added 'advantage' of reducing the amount of time visitors stayed in the ward. The hospital allowed a two hour visiting period, but the particular sister, considered this too much so vetted each visitor on entry by checking the visitors' cards, and in doing so delayed the visitor's access to the patient.¹⁸² Broadley recalled a sister who considered 'all visitors were dirty', and therefore each chair 'had to be polished after every visitor' had left the ward.¹⁸³

The evidence suggests that visitors had restrictions placed upon them. Even in the Victorian era Nightingale advised caution regarding visitors, especially limiting the length of a visit, sitting down and not resting or leaning on the patient's bed.¹⁸⁴ But importantly, for this thesis, is the sense that visitors were an unnecessary burden in trying to keep the clinical environment clean. Visitors carried the potential to bring dirt into the environment. Visitors could attend for longer where patients were close to death, but generally visiting hours were restricted, close contact with patients was restricted (no sitting on beds), and even the chairs used by visitors would be cleaned after use.

6.7 Discussion and Summary

Although nursing may have evolved in part from domestic service and inherited a legacy to do with environmental cleaning, there is also a dimension which is concerned with cleaning the body. Lawler was particularly concerned with nursing's relationship to the basic care of the body, but argues that much of the nursing literature about the body dealt with technological aspects of care.¹⁸⁵ Such literature emerges from the introduction and use of new equipment, procedures or advances in knowledge of physiology and biochemistry. Lawler considered there was insufficient literature about evidence that reflects the routine daily practices of the nurse. Acknowledging

¹⁸² Prentis, *A Nurse in Time*, p61.

¹⁸³ Broadley, *Patients Come First*, p 58.

¹⁸⁴ Nightingale, 'Notes on Nursing: What it is and What it is not', p620-621.

¹⁸⁵ Jocelyn Lawler, *Behind the Screens: Nursing, Somology, and the Problem of the Body*, (Melbourne, Churchill Livingstone, 1991), p38; Chapter 7 examines wound care as an exemplar of technical care.

Douglas's and Kubie's ideas about dirt,¹⁸⁶ Lawler links her view of 'basic nursing' to 'dirty work'.¹⁸⁷ She also argues for the special nature of nursing's dirty work by reference to Zane Robinson Wolf's studies of the sacred and profane.¹⁸⁸ Though Lawler focuses on the body rather than on nursing actions she suggests that nurses' reactions to the body emerge from social norms.¹⁸⁹ Using Kubie's original paper and her subsequent research based on his ideas, Lawler concluded that the evidence suggested 'a consistent and highly reproducible pattern of responses to body products'.¹⁹⁰ Developing her thesis she notes that nurses learn to manage 'the cultural and status-bound aspects of social relations when they touch patients'.¹⁹¹ This is supported by Bashford, who argues that the discipline inherent in developing self-sacrificial nurses enabled nurses 'to undertake distasteful bodily nursing work without necessarily risking moral pollution'.¹⁹² The sanitarian concepts, originally based on miasma as cause of disease, remained evident in the accounts of the participants.

The discipline inherent in learning the environmental cleaning routines enabled nurses to progress to direct contact with bodily dirt. The general nursing care of the patient as reported by former nurses illustrates an approach to care that was based on a routine throughout the day. Routines were in place for dealing with admitted patients. Irrespective of how clean or unclean they were, the routine was followed to ensure that no matter was out of place. Routines for reducing the risk of bed sore development involved an opportunity to wash 'at risk areas' to remove the potential contamination arising from sweat as a waste product. 'Toileting' was routinised, and this helped to depersonalise the management of faecal and urinary waste. The level of detail that was recalled by participants was varied, but the routinisation theme was universal.

¹⁸⁶ Lawrence S. Kubie, 'The Fantasy of Dirt' *Psychoanalytic Quarterly* (1937) 6, p388-425; and Mary Douglas, *Purity and Danger: An analysis of concepts of pollution and danger*, (London, Routledge Classics, 2002), p44.

¹⁸⁷ Lawler, *Behind the Screens*, p38 makes a link to Douglas, *Purity and Danger*.

¹⁸⁸ Zane R. Wolf, *Nurses' Work: The Sacred and The Profane* (Philadelphia, University of Pennsylvania Press, 1988).

¹⁸⁹ Lawler, *Behind the Screens*, p72.

¹⁹⁰ Lawler, *Behind the Screens*, p82.

¹⁹¹ Lawler, *Behind the Screens*, p110.

¹⁹² Alison Bashford, *Purity and Pollution: Gender, Embodiment and Victorian Medicine*, (Houndmills, Macmillan Press Ltd., 1998) p41-61.

Irrespective of where the respondent worked the working day was characterised by a series of tasks undertaken following allocation by the ward sister or staff nurse. The order in which tasks were performed, however, was not likely to be universal since several respondents made it clear that the ward sister was the decision maker. It was probable that the routine, and the procedures enacted to fulfil the routine, might differ between wards within the same hospital. Routines based on task allocation were reported by all respondents across the study period.

The routine nature of the care was directed towards preventing the admission and transmission of infection into the hospital. The admission routine was aimed at minimising the risk of infections such as lice being brought into the clinical area. Another feature of the admission routine was the inspection of the skin to assess the nature and extent of any skin damage which may be either infected or had the potential to become infected. Other routines were used to eliminate potential causes of disease affecting the patient by seeking to keep the patient clean. The emphasis on pressure area care was not primarily to prevent skin breakdown, but to prevent the potential consequences of skin breakdown – the infected ulcer. The texts of the day illustrate that the aetiology of pressure ulcers was quite well established.¹⁹³ The consequence of acquired infection leading to potentially fatal septicaemia was understood. In the absence of effective treatments it was crucial to avoid exposure to dirt, which in this conception could be the residual dirt brought in from outside of the hospital at admission, or bodily waste, for example, sweat.

Did the routines change with the introduction of sulphonamides and penicillin? There is little evidence pointing towards any substantial change in routinisation of care giving at ward level. Whilst it is not possible to determine any causal relationship from the collected data, the evidence points to reduction in the amount of nursing care given for certain clinical conditions. Sulphonamides and antibiotics were not universal

¹⁹³ See, for example, Ashdown, *A Complete System of Nursing*, p16–18; Pugh, *Practical Nursing*, 11th edition, p113–116.

treatments. However, the treatment for pneumonia was revolutionised by sulphapyridine. No longer did patients need prolonged nursing care. No longer did patients with pneumonia reach a 'crisis'. Sulphonamides could not address all infections. It was rational for ward sisters to maintain a system of providing nursing care that had been effective in protecting patients from acquiring infections whilst in hospital.

The majority of nursing care discussed in this chapter was generally not given by the most junior of probationers, but was associated with participants' recollections of being a second year probationer. Junior probationers, as seen in Chapter 5, were more directed towards indirect care tasks, through which they started to learn basic skills required to maintain a clean environment. As probationers became more experienced they got closer to the patient, and found in doing so, that a major part of the work was to ensure that cleanliness was maintained. One of the tasks which junior probationers did get involved with was the bedpan round and the associated work of keeping bedpans clean. Learning to work with patients would involve working with more senior colleagues, a third year probationer or staff nurse for example. Undertaking more technical tasks is the subject of the next chapter.

TECHNICAL ASPECTS OF CARE - WOUND CARE

7.1. Introduction

The more technical aspects of nursing work were undertaken by the more senior staff – senior probationers and staff nurses. Whilst a range of technical duties might be performed, one of the commonest was the redressing of wounds, which forms the focus of this chapter.¹ It is the contention of this thesis that nursing in the UK during the 1930s and 1940s was governed by a series of highly routinised practices aimed at keeping the environment and the patient clean and free from exposure to dirt. Although increasingly driven by germ theory's pursuit of asepsis and use of antiseptics, the wound care practices of nurses which persisted into the 1940s retained traces of the nineteenth century sanitarian movement's quest for cleanliness.² Some of the practices appeared so archaic that it seemed as though they had been in place since a time before germ theory, when the predominant theory of disease causation was miasma.³ During the period when germ theories were evolving, nurses adapted their understanding of disease yet maintained a strong emphasis on environmental cleanliness.⁴ Time delays appear to have existed between evolution of theory and its practical application.⁵ Thus, Bashford found evidence that nursing textbooks continued well into the twentieth century to expound sanitary concepts that had emerged

¹ A range of other technical procedures existed, for example tube feeding of patients, catheter care, giving enemas, and assisting medical staff undertaking ward procedures.

² Harold W. Jones, Norman L. Hoerr, and Arthur Osol, (eds), *Blakiston's New Gould Medical Dictionary*, (London, H. K. Lewis and Co. Ltd., 1951), define asepsis as the 'exclusion of micro-organisms producing decay', p100, and antiseptics as 'prevention of sepsis or poisoning by the destruction or exclusion of micro-organisms from the body tissues and fluids, or by preventing or checking their growth and multiplication', p79.

³ Margaret Pelling, 'The Meaning of Contagion: Reproduction, medicine and metaphor', in Alison Bashford and Claire Hooker (eds), *Contagion: Historical and Cultural Studies*, (London, Routledge, 2001), p15-38; Graham A. J. Ayliffe and Mary P. English, *Hospital Infection: From Miasmas to MRSA*, (Cambridge, Cambridge University Press, 2003).

⁴ Pelling, 'The Meaning of Contagion', p16; and Michael Worboys, *Spreading Germs: Disease Theories and Medical Practice in Britain, 1865-1900*, (Cambridge, Cambridge University Press, 2006).

⁵ David Wootton, *Bad Medicine: Doctors Doing Harm Since Hippocrates*, (Oxford, Oxford University Press, 2007), p17.

decades earlier.⁶ Sanitarianism influenced aspects of the nurses' approaches to the management of the wound dressing round. Aseptic principles and antiseptic lotions were in use but, at times, nurses failed to capitalise on them as seen in the organisation of the wound redressing round (see section 7.3 below). Additionally, maggot-infested wounds, which were sometimes found in repatriated wartime casualties, raised anxiety and created difficulty in terms of defining what was unclean (see section 7.6 below).

This chapter outlines the memories of nurses in relation to wound care in general hospitals during the 1930s and 1940s. Participants commented on the re-dressing of both surgical and traumatic wounds, although details of specific wounds were not recalled during the interviews. It was likely that World War II (WWII) would influence participants' memories of this period, as many general hospitals received battlefield casualties, who had already received treatment in field hospitals before repatriation to Britain, and civilian casualties from air raids over Britain. Some participants remembered aspects of wound management during surgical procedures in the operating theatre. None of the respondents commented on the presence or work of 'dressers' although this role was still in use into the 1950s.⁷

The analysis of the interview data is organised under a series of themes which address wartime challenges: the dressing round, the preparation of equipment and materials for wound dressing, and the management of wound infection. These themes serve to illustrate the routinisation of nursing work within a sanitarian perspective.

⁶ Alison Bashford, *Purity and Pollution: Gender, Embodiment and Victorian Medicine*, (Houndmills, Macmillan Press Ltd., 1998), p132-3.

⁷ Jones, Hoerr, and Osol, (eds), *Blakiston's New Gould Medical Dictionary*, p313. The "dresser" was a junior doctor or medical student responsible for dressing surgical wounds; Peter Toghill, *Four Pieces of Luck: A Physician's Journey*, (Grantham, Barny Books, 2006), p42.

7.2 Wartime Challenges

Nursing in Britain which was grounded in routinised care practices learnt via an apprenticeship system.⁸ Obedience to superiors was paramount. The system was slow to adapt, and was associated with recruitment and retention difficulties explored in reports of the 1930s and early 1940s.⁹ The challenges of exploring the history of the clinical work of civilian hospital ward based nurses are compounded by the influences of wartime. There are many accounts of the wartime experiences of nurses, with several collected accounts of the experiences of British military nurses during WWII.¹⁰ These accounts generally contain a minimum of clinical details. The memories of wartime nurses focus on the journeys to the battlefields, troop movements, and the horrific nature of many battle injuries. There may be some superficial reporting of the challenges of setting up and working within casualty clearing stations and field hospitals. There are some descriptions of the multiple trauma and gross disfiguration that can follow bomb blast injuries, shrapnel wounds or close combat. The ways in which nurses delivered care in civilian hospitals have been largely overlooked.¹¹

British civilian nursing services experienced recruitment difficulties during the war.

Difficulties pre-dated the war, but wartime compounded these. Qualified nurses

⁸ Ann Bradshaw, *The Nurse Apprentice, 1860–1977*, (Aldershot, Ashgate, 2001), provides a review of the apprenticeship system from its inception with Florence Nightingale's reforms of nursing through to the late 1970s.

⁹ *The Lancet Commission on Nursing: Final Report*, (London, The Lancet, 1932); Ministry of Health and Board of Education, *Interim Report of the Inter-departmental Committee on Nursing Services*, the Right Hon. The Earl of Athlone, Chairman, (London, HMSO, 1939). Hereafter referred to as the Athlone Committee, *Interim Report*. Christopher Hart, *Behind the Mask: Nurses, Their Unions and Nursing Policy*, (London, Baillière Tindall, 1994) and Susan McGann, Anne Crowther, and Rona Dougall, *A History of the Royal College of Nursing 1916–1990: A voice for Nurses*, (Manchester, Manchester University Press, 2009) provide discussions of these and also the Rushcliffe Committee and Horder Committee.

¹⁰ See, for example, Eric Taylor, *Front-Line Nurse: British Nurses in World War II*, (London, Robert Hale, 1997); Eric Taylor, *Combat Nurse*, (London, Robert Hale, 1999); Eric Taylor, *Wartime Nurse: 100 years from the Crimea to Korea 1854–1954*, (London, Robert Hale, 2001); and Nicola Tyrer, *Sisters in Arms: British Army Nurses Tell Their Story*, (London, Weidenfield and Nicolson, 2008).

¹¹ See, for example, Joan Markham, *The Lamp was Dimmed: The Story of a Nurse's Training*, (London, Robert Hale, 1975); Brenda McBryde, *A Nurse's War*, (London, Chatto and Windus, 1979); Brenda McBryde, *Quiet Heroines: Nurses of the Second World War*, (Saffron Walden, Cakebread Publications, 1989); Janet Wilks, *Carbolic and Leeches*, (Ilfracombe, Hyperion Books, 1991); and Elizabeth Merson, 'Nursing in Wartime', *International History of Nursing Journal*, (1998) 3, (4), p43-6.

volunteered for service with the military nursing services thus draining civilian hospitals of a substantial proportion of their qualified and skilled workforce.¹² Starns refers to a Control of Engagement Order being extended in 1943 to restrict the recruitment of nurses into the armed forces.¹³ Although a number of branches of nursing work were restricted, for example, paediatrics, and mental health nursing, so that nurses in these branches would not be recruited into the military nursing services, the restriction did not apply to the State Registered Nurse working in the general adult field. It was during this period that many hospitals relaxed their employment practices and allowed former nurses who had married to both return to work and live at home rather than in the Nurses' Home.¹⁴ Thus *Carol Clark* returned to hospital work during the war because of staffing shortages.¹⁵

Wartime was a time of shortage of materials. One participant, *Alice Allen* recalled that 'all the wounds were sutured with black thread because there weren't any sutures as they were all gone to the troops'.¹⁶ Both *Edith Evans* and *Jane Jones* reported that tagged gamgee swabs, used to mop the operating field during surgery, were recycled.¹⁷ They were counted in at the end of an operation to make sure none were left in the patient, washed and re-sterilised in readiness for re-use. These were the only comments to suggest that shortages had caused a change from usual practice, or that they had otherwise altered wartime wound care practices.

Other changes to normal practice were mentioned. The requirement to use blackout curtains or screens at night was recalled by *Phyllis Porter* who remembered a patient with a high temperature causing him to hallucinate. One night the patient 'opened the

¹² Penny Starns, *March of the Matrons: Military Influence on the Civilian Nursing profession, 1939-1969*, (Peterborough, DSM, 2000), p28.

¹³ Starns, *March of the Matrons*, p36.

¹⁴ See, for example, Brian Abel-Smith, *A History of the Nursing Profession*, (London, Heinemann Educational, 1960), p188; Christopher Hart, *Behind the Mask: Nurses, Their Unions and Nursing Policy*, (London, Baillière Tindall, 1994), p64.

¹⁵ Carol Clark, interviewed by David Justham on 16 July 2008 at Abergele. Began State Registered Nurse (SRN) training in Manchester in 1934.

¹⁶ Alice Allen, interviewed by David Justham on 14 July 2008 at Sheffield. Began SRN training in London in 1942.

¹⁷ Edith Evans, interviewed by David Justham on 18 July 2008 at Lymm. Began SRN training in Manchester in 1936; and Jane Jones, interviewed by David Justham on 6 August 2008 at Preston. Began SRN training in Manchester in 1944.

blackout with lights full on – soon brought somebody down to the ward to see what was happening'.¹⁸ Many civilian hospitals received wounded personnel from the battlefronts, whether allied troops or Prisoners of War (POWs). British WWII battlefield casualties would be treated in casualty clearing stations and/or field hospitals before evacuation back to Britain. Wartime casualties, 'some with horrific injuries', arrived at *Porter's* hospital at night, about 1.00am by train.¹⁹ Day staff was required to get up to help receive casualties and then could go back to bed to be up again a few hours later for the day shift. Receiving casualties 'en bloc' at night would minimise disruption to daytime routines.

7.3 The Dressing Round

Cleaning duties were always timed to take place before wound care. As reported in Chapter 5, all participants in this study reported rigorous daily environmental cleaning routines. Meticulous cleaning regimes were essential to minimise infection risks.²⁰ The Medical Research Council (MRC) recommended that ward dressing rounds were 'preceded by a quiet interval of at least one hour' when no dust raising activity took place.²¹ It assumed a ward routine that required that environmental cleaning took place as one of the first tasks of the morning. The Lincoln County Hospital was one hospital that adopted the recommendations of the MRC. The Hospital's Board of Management minutes record its approval that 'the technique for the dressing of wounds recommended by the Medical Research Council be adopted in the wards'.²²

The MRC guidance did not suggest that wounds should be redressed during the morning period. However the link to the cleaning routine is illustrated in *Allen's*

¹⁸ Phyllis Porter, interviewed by David Justham on 24 May 2010 at Nottingham. Began SRN training in Nottingham in 1939.

¹⁹ Porter, interviewed on 24 May 2010 at Nottingham.

²⁰ Wilks, *Carbolic and Leeches*, p27.

²¹ Medical Research Council War Wounds Committee and Committee of London Sector Pathologists, *The Prevention of "Hospital Infection" of Wounds*, MRC War Memorandum No. 6, (London, His Majesty's Stationery Office, 1941), p15.

²² Board of Management of Lincoln County Hospital, *Minute Book of the Board of Management July 1939 – July 1947* (Lincoln, Lincolnshire Archives, HOSP/LINCOLN 20), Meeting held on the 28th June 1943, p260.

recollection, as a junior staff nurse, of an incident when the ward maid did not arrive on duty and 'you couldn't start the dressings 'til one and a half hours after the damp dusting was finished'.²³ So, to enable the dressing round to take place, she undertook the damp dusting. This very clear memory illustrates that cleaning to remove dust by using a damp duster and then allowing any airborne dust to settle was considered important. Dust was considered a potential wound contaminant.²⁴ Several other participants also recalled that wounds were re-dressed in the morning.²⁵

Participants made a link between the environmental cleaning and hospital acquired infections (HAIs). HAIs associated with wounds were considered rare events, and would be reported to the highest level in the hospital. For example the Board of Management of Lincoln County Hospital received a report from its Medical Subcommittee of an investigation into two cases of tetanus contracted during surgery.²⁶ The rarity of HAIs was a common observation reported by all participants. The rationale given centred on the hygiene precautions used in the wards, which emphasised a sanitarian based strategy for cleanliness rather than the germ theory approach of reducing the presence of pathogenic organisms.²⁷ *Evans* recalled that 'dirty dressings were removed they were never left' on any patient.²⁸ This was considered necessary in the management of the infection risk. A soiled dressing was dirty and could be a source of infection to the patient.

The organisation of the dressing round was the responsibility of either the sister or staff nurse. Thus *Clark* reported that, as far as was possible, the dressing round would be undertaken by the same person each time so that changes in the conditions of

²³ Allen, interviewed on 14 July 2008.

²⁴ Margaret S. Riddell, *First Year Nursing Manual*, (London, Faber & Faber Ltd., 5th edn, 1939), p14.

²⁵ Susan Shaw, interviewed by David Justham on 18 May 2010 at Nottingham. Began SRN training in Nottingham in 1943; Violet Vickers, interviewed by David Justham on 24 May 2010 at Nottingham. Began SRN training in Nottingham in 1947; Wendy Woods, interviewed by David Justham on 1 June 2010 at Nottingham. Began SRN training in Nottingham in 1950.

²⁶ Board of Management of Lincoln County Hospital, *Minute Book of the Board of Management of Lincoln County Hospital, January 1920–June 1939*, (Lincoln, Lincolnshire Archives, HOSP/LINCOLN 19), p691-694.

²⁷ See the arguments developed in Chapters 5 and 6.

²⁸ Evans, interviewed on 18 July 2008.

wounds were noticed.²⁹ This would be possible at a time when work patterns were based on task allocation, and working hours meant a presence by the staff for at least six days in each week. *Evans* recalled that the ward sister always went to theatre so she knew what had happened and could redress the wounds or direct others.³⁰ This was perhaps a luxury not afforded at other hospitals. *Evans'* account identified that the sister took responsibility in theatre for the swabs rather than the scrub nurse who was solely responsible for the instruments. In this interpretation, sister had a clear vision of the surgical field and would therefore know what had happened to the patient's wound during the surgery. She remembered that the sister together with a probationer redressed clean wounds. A staff nurse was allocated to redress the dirty wounds, and would use a different dressing trolley for the task. Here is evidence of germ theory being applied in which microbiologically clean and dirty wounds were treated separately.

Both sanitarianism and germ theory approaches would suggest that clean wounds were redressed before dirty wounds. This was evident in both *Allen's* and *Wendy Woods'* accounts both of whom reported that a list of dressings was prepared by sister or staff nurse with the cleanest at the top and dirtiest at the bottom.³¹ The implication of the list being prepared with this order was that the person undertaking the redressing of wounds would progress from clean to dirty wounds.³² Similarly *Allen* remembered that clean stitched wounds were redressed first: 'Then you went on - you didn't strip your trolley down between each dressing'.³³ *Violet Vickers* remembered that wounds were redressed by the staff nurse with a probationer to serve as an assistant.³⁴ *Hilary Harris* added that there might be a role reversal with the staff nurse allowing the probationer to undertake the re-dressing of the wound.³⁵ Such role

²⁹ Clark, interviewed on 16 July 2008.

³⁰ Evans, interviewed on 18 July 2008.

³¹ Allen, interviewed on 14 July 2008, and Woods, interviewed on 1 June 2010.

³² Dirty wounds were generally understood to be those contaminated with foreign material, and may or may not have been infected. Clean wounds contained no foreign material and were not infected.

³³ Allen, interviewed on 14 July 2008.

³⁴ Vickers, interviewed on 24 May 2010.

³⁵ Hilary Harris, interviewed by David Justham on 6 August 2008 at Clitheroe. Began SRN training in Manchester in 1934.

reversal would allow the staff nurse the opportunity to supervise and teach the probationer in the technical skills required for wound dressing.

Redressing clean wounds before dirty ones did not always happen. *Nancy Newton* reported that the dressing trolley was taken from bedside to bedside down one side of ward, and only taken back to the clinical room to get extra materials if one ran out of items.³⁶ *Porter's* account was similar.³⁷ Trained in Nottingham, *Porter* reported that the person undertaking the dressing round would go from one patient to another around the ward irrespective of whether the wound was clean or dirty. She continued 'I can remember going round and thinking it shouldn't be this way'.³⁸ She reluctantly accepted this process, however, and could not challenge her superiors. *Porter's* comment illustrates both the subservience of juniors to seniors, and that nursing staff were beginning to question the accepted way of working.

Participants were generally vague about the precise detail in setting a wound dressing trolley, which would be prepared with dressing materials in the clinical room before being wheeled to the bedside. The MRC made recommendations as to the layout of items on a dressing trolley.³⁹ The MRC guidance recommended the use of pre-packed wound dressings. However, these were not generally available during the 1930s and 1940s. Guidance on preparing and setting up trolleys with instruments and dressing materials can be found in nursing texts of the period.⁴⁰ Although some minor variations existed, the principles that were followed meant that the top shelf of the trolley was used for sterilised materials and clean instruments, and the lower shelf for bandages and used instruments and discarded dressings. The remembered detail suggests compliance with these principles. The top shelf might be covered with a

³⁶ Nancy Newton, interviewed by David Justham on 19 December 2008 at Sturton by Stow. Began SRN training in London in 1939.

³⁷ Porter, interviewed on 24 May 2010.

³⁸ Porter, interviewed on 24 May 2010.

³⁹ Medical Research Council, *The Prevention of "Hospital Infection" of Wounds*, p17-19.

⁴⁰ See, for example, A. Millicent Ashdown, *A Complete System of Nursing*, (London, J. M. Dent & Sons Ltd., 1928), p377; Riddell, *First Year Nursing Manual*; Marjorie Houghton, *Aids to Tray and Trolley Setting*, (London, Baillière Tindall and Cox, 2nd edition, 1942), p138-142.

sterile towel. Sterilised equipment was placed on the trolley using Cheatle's forceps.⁴¹ The trolley could carry three drums, one with cotton wool balls, one for gauze swabs, and one for dressing towels. Some trolleys had attachments on the side on which to hang the drums.⁴² Another feature of the MRC suggested trolley layout was provision of space for a sulphonamide insufflator or castor.⁴³ Sulphonamide in powder form was sometimes blown into a wound to prevent infection developing or to help treat localised infection. *Woods* recalled cleaning the trolley with spirit before putting the items on the trolley.⁴⁴ *Rita Reed* recalled that most wound re-dressings were undertaken at the bedside and not the treatment room.⁴⁵ *Vickers* explained dressings were done at the bedside because 'patients weren't up. Hernias were in bed for three weeks'.⁴⁶

Preparation of the dressing trolley was reported to require the equipment and dressing materials for several patients. *Allen* reported that 'You had on the trolley a pile of dissecting forceps and a pile of sinus forceps and a pile of probes and then all the drums of dressings and things but you kept them covered with the linen towel and took out what you needed.'⁴⁷ Sufficient materials on the trolley meant not having to return to the clinical room for extra resources. *Clark's* memory was that the clean items on the top shelf of the trolley were not replaced between patients. However, the dirty dressings and forceps, which had been placed in receivers on the lower shelf, 'were removed before you went onto the next bed ... you'd a lot of walking about when I think about it'.⁴⁸ In contrast to *Newton's* memory above, *Thelma Taylor's* memory was of the necessity to return back to the clinical room between dressings for the trolley to be stripped down, cleaned and restocked. She added that for 'minor wounds

⁴¹ Houghton, *Aids to Tray and Trolley Setting*, p138-43; Graham Thurgood, *Transcript of interview HX2 recorded on 25th July 2001* (Huddersfield, University of Huddersfield Archives), data extracted 19 July 2010.

⁴² From a comment by *Woods*, interviewed on 1 June 2010, and could refer to a later innovation.

⁴³ Medical Research Council, *The Prevention of "Hospital Infection" of Wounds*, p17.

⁴⁴ *Woods*, interviewed on 1 June 2010.

⁴⁵ *Rita Reed*, interviewed by David Justham on 18 May 2010 at Nottingham. Began SRN training in Nottingham in 1943.

⁴⁶ *Vickers*, interviewed on 24 May 2010.

⁴⁷ *Allen*, interviewed on 14 July 2008.

⁴⁸ *Clark*, interviewed on 16 July 2008.

you might go from bed to bed'.⁴⁹ Likewise *Woods* recalled that the person undertaking the dressings would 'Go from bed to bed – no setting up of trolley each time'.⁵⁰ *Woods* added that another staff member, referred to as a 'runner' and usually a probationer, would replace used instruments as necessary. The MRC guidance allowed for the dressing trolley to be taken from bedside to bedside provided that separate instruments, dressing packs and gallipots for wound cleaning solutions were available for each patient.⁵¹ The MRC recommendation for sterilised pre-prepared wound dressing packs was a luxury which one respondent, *Florence Farmer*, experienced. A new pack was opened for each patient.⁵² This would minimise the risk of cross infection, whereas the drum system retains the risk of contamination of remaining dressings within the drum once it has been opened.⁵³

7.4 Preparation of Equipment, Dressings and Bandages

The preparation of instruments and gallipots was universally reported as being by sterilisation on the ward by placing in boiling water. Two of the respondents reported the length of time for sterilising instruments. *Jones* reported that all instruments were boiled on the ward for at least five minutes and in some cases up to twenty minutes.⁵⁴ *Woods* mentioned instruments were boiled for 'three minutes or so'.⁵⁵ Whilst this participant started her training after the end of WWII, it is of interest to note that the time she reported is quite short. Nursing textbooks from the period show a reducing amount of time recommended for boiling instruments. The earlier textbooks of both *Ashdown* and *Pearce* recommended twenty minutes.⁵⁶ When *Riddell* published her account it was fifteen minutes, although she did advocate the subsequent placing in

⁴⁹ Thelma Taylor, interviewed by David Justham on 24 May 2010 at Nottingham. Began SRN training in Nottingham in 1943.

⁵⁰ *Woods*, interviewed on 1 June 2010.

⁵¹ Medical Research Council, *The Prevention of "Hospital Infection" of Wounds*, p17.

⁵² *Florence Farmer*, interviewed by David Justham on 4 August 2008 at Preston. Began SRN training in Manchester in 1936.

⁵³ For a description of the drum system see, for example, *Riddell, First Year Nursing Manual*, p119; and W.T. Gordon Pugh, *Practical Nursing including Hygiene and Dietetics*, 13th edition, (Edinburgh, William Blackwood and Sons, 1940) p175.

⁵⁴ *Jones*, interviewed on 6 August 2008.

⁵⁵ *Woods*, interviewed on 1 June 2010.

⁵⁶ *Ashdown, A Complete System of Nursing*, 41; and *Evelyn Pearce, Medical and Nursing Dictionary*, 6th edition, (London, Faber & Faber Ltd., 1943), p574.

Lysol for twenty minutes before use.⁵⁷ Boiling times had further reduced within Houghton's text to ten minutes.⁵⁸ The Medical Research Council (MRC) suggested that two minutes was sufficient time for boiling instruments.⁵⁹ It is reasonable to suggest that the MRC boiling time guidance followed advice from its expert committee of bacteriologists in the light of improved understanding of the survival characteristics of micro-organisms. The longer boiling times in nursing texts however suggest a cautionary approach to germ theory by nurses.

Instruments were cleaned and sterilised on the ward and sometimes placed in Lysol after use. Nursing texts put the cleaning process before sterilising.⁶⁰ Jones remembered soaking sharp instruments, (scalpels etc.), in pure Lysol followed by rinsing in sterile water before use.⁶¹ The use of disinfection by soaking rather than sterilisation by boiling was due to the belief that the boiling process blunted sharp instruments.⁶² Ashdown advised that sharp instruments should be boiled for five minutes then immersed in alcohol until required or alternatively 'may be sterilised without boiling by placing in pure carbolic for one minute'.⁶³ The MRC noted that wherever possible instruments should not be disinfected by immersion because of the subsequent need to rinse with sterile water and then dry the instrument.⁶⁴ Whilst the sanitarian quest for cleanliness pre-dated the concept of asepsis, both approaches pursued absolute cleanliness, albeit sanitarians wanted to remove dirt, germ theorists wanted to disinfect.⁶⁵ The evidence reported here shows that there was some variation in the sterilisation processes for instruments, both in terms of reducing the amount of time that instruments were boiled, and that, in some hospitals, instruments would be cleaned and disinfected in Lysol rather than sterilised by boiling.

⁵⁷ Riddell, *First Year Nursing Manual*, p119.

⁵⁸ Houghton, *Aids to Tray and Trolley Setting*, p3.

⁵⁹ Medical Research Council, *The Prevention of "Hospital Infection" of Wounds*, p10.

⁶⁰ Ashdown, *A Complete System of Nursing*, p41; Houghton, *Aids to Tray and Trolley Setting*, p3.

⁶¹ Jones, interviewed on 6 August 2008.

⁶² Pugh, *Practical Nursing*, 13th edition, p170.

⁶³ Ashdown, *A Complete System of Nursing*, p42.

⁶⁴ Medical Research Council, *The Prevention of "Hospital Infection" of Wounds*, 10.

⁶⁵ Lynn McDonald, (ed.), *Florence Nightingale: The Nightingale School*, (Waterloo, Wilfrid Laurier University Press, 2009), p13-21.

All participants, except *Farmer*, reported that nursing staff prepared dressings for sterilising. *Clark* reported that dressings would be cut to the size required,⁶⁶ and *Jones* recalled that nurses were required to cut up swabs and make the cotton wool balls before packing into drums.⁶⁷ *Barbara Bennett* mentioned that drums were packed 'each evening to go down to the sterilising department', although there was no more precise information as to whether this activity was undertaken in the early part of the evening or later.⁶⁸ *Allen* was more specific, recalling that drums were packed during visiting hours.⁶⁹ Both *Susan Shaw* and *Woods* reported that drums or tins were packed on night duty with cotton wool balls for swabbing and pieces of gauze for dressings.⁷⁰ The accounts generally indicate that the preparation of the drums for sterilisation was undertaken in the evening or at night. *Woods* added that these drums were put outside the ward entrance daily for collection by the porter for sterilising. Sterilised dressings were available to the ward in the morning prior to the dressing round. Consistent accounts of sterilising practice can be found in *Thurgood's* sources.⁷¹ One such account mentioned that patients could be involved in preparing dressings.⁷² However well intentioned, the occupational therapy benefit to patients of the nurse providing patients with a useful task to be done may have jeopardised the quest for hygienic preparation of dressings, and seems surprising given the emphasis on high standards of hygiene. *Riddell* describes the preparation of dressings and swabs but cautions that the nurse needs to prepare them as hygienically as possible.⁷³ *Scott* noted that white small mesh plain gauze was obtainable in i) six-yard lengths, or ii) ready cut into six inch by four inch pieces, each having several layers, partially

⁶⁶ *Clark*, interviewed on 16 July 2008.

⁶⁷ *Jones*, interviewed on 6 August 2008.

⁶⁸ *Barbara Bennett*, interviewed by David Justham on 15 July 2008 at Dyserth. Began SRN training in Manchester in 1938.

⁶⁹ *Allen*, interviewed on 14 July 2008.

⁷⁰ *Shaw*, interviewed on 18 May 2010 and *Woods*, interviewed on 1 June 2010.

⁷¹ *Thurgood*, *Transcript of interview HX2 recorded on 25th July 2001*; and *Thurgood*, *Transcript of interview HX5 recorded on 8 August 2001*, (Huddersfield, University of Huddersfield Archives), data extracted 19 July 2010.

⁷² *Thurgood*, *Transcript of interview HX5 recorded on 8 August 2001*.

⁷³ *Riddell*, *First Year Nursing Manual*, 123.

sterilised and packed in sealed paper, or iii) pieces in sealed tins and completely sterilised.⁷⁴

Woods suggested that the packing of the drum was done in reverse order to the anticipated requirements for the dressing round the following day.⁷⁵ This resulted in the dressings required for the first patient to have their wound dressed being at the top of the drum, with the last patient to be included in the dressing round having their dressings placed at the bottom of the drum. This account demonstrated that the dressing round was a well organised event, and prior thought was given as to the dressing requirements. It suggests a high level of technical knowledge in the planning of the dressing round. It would require the nurse to have a good knowledge of the wounds to be redressed. It was also a means to minimise waste as might happen with standardised dressing packs. It is unknown how unanticipated demands for additional dressing materials were dealt with. No other respondent suggested this level of sophistication in the packing of dressings into the drums.

The accounts suggested there was little change to preparing dressings throughout the study period. Dry wound dressings and swabs were usually prepared by staff. The materials were then placed in a drum which was normally sent away from the ward for sterilising during the night. The drums of sterilised dressings and swabs were returned to the ward in readiness for the dressing round. The evidence suggests that preparing dressings was normally a task to be completed by staff working at night, although in some instances this would happen during visiting times. In addition to wound dressings, staff would prepare cotton wool balls, used for cleaning wounds, from large rolls of cotton wool. *Kate King's* memory was of the need to be careful with the amount of cotton wool used because of it being in short supply.⁷⁶ The MRC provided guidance on the technique for packing the sterilising drums, emphasising the need not

⁷⁴ Douglas H. Scott, *The New People's Physician: a compendium of practical information on persona health and domestic hygiene*, (London, Waverley Book Company, undated circa 1940), Volume 2, p650.

⁷⁵ Woods, interviewed on 1 June 2010.

⁷⁶ Kate King, interviewed by David Justham on 7 August 2008 at Heswall. Began SRN training in Manchester in 1939.

to pack materials tightly into the drums. It was important that the superheated steam used in the autoclave could penetrate and circulate through the dressing materials for at least 20 minutes. In addition there would be time needed to allow initial operation and final cooling of the contents before removal from the autoclave.⁷⁷

Bandages were used to secure dressings and splints. Three kinds of bandages were described, being roller, triangular and tailed bandages,⁷⁸ though *Farmer* recalls using a roller towel to secure a wound dressing on the back of an obese man.⁷⁹ *Porter* described having to wash and iron bandages on night duty. She described straightening bandages by passing the bandage between her belt and dress when rolling them up.⁸⁰ *Porter's* account clearly indicated that bandages would be recycled.⁸¹ Her account also illustrates the inventiveness of the nurse when she used her belt to provide the tension required.⁸² Yet, it demonstrates a failure to recognise germ theory, and the potential for contamination of the apparently clean bandage by being in close proximity to a uniform which could be contaminated. *Thurgood* found an incident where there was a shortage of bandages on a surgical ward and the surgeon was asked to intervene with the hospital administrator in order to obtain the necessary supplies, and thus avoid the need for recycling.⁸³

Bandages were rolled by hand or machine. Use of a machine enabled a more even tension to be imparted along the length of the bandage. *Scott* gives detailed guidance on rolling by hand.⁸⁴ Tautness was expected. Tension was maintained when rolling the bandage using fingers of the left hand to act as a brake on the bandage as in

⁷⁷ Medical Research Council, *The Prevention of "Hospital Infection" of Wounds*, p22-3.

⁷⁸ Ashdown, *A Complete System of Nursing*, p102.

⁷⁹ *Farmer*, interviewed on 4 August 2008.

⁸⁰ Belts are now not worn as part of nurses' uniforms because of the potential risk of cross infection. See for example, Shropshire Community Health NHS Trust, *Uniform Policy and Dress Code*, (Shrewsbury, Shropshire Community Health NHS Trust, 2013) available at <http://www.shropscommunityhealth.nhs.uk/content/doclib/10628.pdf> (date of latest access 2nd March 2014).

⁸¹ *Porter*, interviewed on 24 May 2010.

⁸² *Porter*, interviewed on 24 May 2010.

⁸³ *Graham Thurgood, Transcript of interview HX6 recorded on 17 August 2001*, (Huddersfield, University of Huddersfield Archives), data extracted 19 July 2010.

⁸⁴ *Scott, The New People's Physician*, Volume 2.

passed across the palm of the left hand. The rolling force was delivered by the right hand. Ashdown simply requests that bandages are rolled 'evenly and tightly'.⁸⁵

7.5 Procedure for Redressing Wounds

Only a few of the participants could recall any detail of the procedure for redressing wounds. *Evans* made an important point that 'You followed procedure' as taught and 'couldn't do otherwise'.⁸⁶ The discipline instilled during training was such that the procedure became automatic so as to become one of unconscious competence.⁸⁷ The discipline imposed on probationers was quite severe and to step outside of expected procedure was a disciplinary matter.⁸⁸ This does not seem unreasonable in those situations where a senior probationer, rather than a qualified member of staff, was involved in wound re-dressings without direct supervision from a qualified member of staff.

A 'non-touch' technique for cleaning wounds and handling dressing materials, using forceps to hold and manipulate swabs and dressings, was the method of choice. Many respondents reported this method. Both *King* and *Reed* described the use of a non touch technique in which forceps were used to manipulate cleaning swabs and dressings.⁸⁹ *Woods* described the removal of dirty dressing with forceps.⁹⁰ These forceps were then placed into a bottom shelf container. As *Newton* recalled 'Sterilised instruments were in tray on top shelf of trolley, and once used were placed in kidney dish on lower shelf of trolley'.⁹¹ Dirty instruments were disposed into containers on the bottom shelf. Waste materials, such as used swabs and dirty dressings were disposed

⁸⁵ Ashdown, *A Complete System of Nursing*, p102.

⁸⁶ Evans, interviewed on 18 July 2008.

⁸⁷ See, for example, Patricia Benner, *Novice to Expert: Excellence and Power in Clinical Nursing Practice*, (Menlo Park, CA, Addison-Wesley, 1984); Sarah A. Smith, 'Nurse Competence: A Concept Analysis', *International Journal of Nursing Knowledge*, (2012) 23, (3), p172-82.

⁸⁸ See, for example, Ashdown, *A Complete System of Nursing*, p1; Riddell, *First Year Nursing Manual*, 10; and Jessie D. Britten, *Practical Notes on Nursing Procedures*, (Edinburgh: E. & S. Livingstone Ltd., 1957), p9-10.

⁸⁹ King, interviewed on 7 August 2008, and Reed, interviewed on 18 May 2010.

⁹⁰ Woods, interviewed on 1 June 2010.

⁹¹ Newton, interviewed on 19 December 2008.

into a receptacle for this purpose. In some texts the receiving bin was placed on the floor at the side of the dressing trolley whereas others had it attached to the trolley or placed on the lower shelf.⁹²

Masks were worn by some staff undertaking wound dressings, although this was not a frequent recollection. *King's* memory was that these cotton masks were not disposable, and needed to be laundered after use.⁹³ Sometimes rubber gloves were worn to handle dressings, but these were not disposable, and needed to be washed, mended if necessary, using patches made from irreparable gloves, powdered and placed in pairs in drums for sterilising between dressing rounds.⁹⁴

Hand hygiene was also important within the wound dressing process. *Porter* recalled that Lysol was used to wash hands.⁹⁵ Lysol was a preparation made from cresol, itself a derivative from coal tar, and was used as an antiseptic and disinfectant.⁹⁶ For use as a hand-wash it was as a one or two percent strength in water.⁹⁷ A stronger solution was used for disinfecting instruments.⁹⁸ Carbolic Acid was often referred to, colloquially as 'carbolic' was also used as an antiseptic, in a one percent solution, on wounds.⁹⁹ *Taylor* remembered that Lysol and carbolic were used a lot,¹⁰⁰ and *Vickers* reported Lysol 'used to be around an awful lot'.¹⁰¹

Participants could not recall instances of HAIs. The general opinion was that patients entered hospitals with infections and did not acquire them in the hospital setting.

Bennett expressed a belief that there were not as many infections prior to penicillin

⁹² See, for example, Medical Research Council, *The Prevention of "Hospital Infection" of Wounds*, 18; Houghton *Aids to Tray and Trolley Setting*, p138-42.

⁹³ King, interviewed on 7 August 2008.

⁹⁴ Louise Lloyd, interviewed by David Justham on 12 August 2008 at Grantham. Began SRN training in Leicester in 1940; and Shaw, interviewed on 18 May 2010.

⁹⁵ Porter, interviewed on 24 May 2010.

⁹⁶ Jones, Hoerr, and Osol, (eds), *Blakiston's New Gould Medical Dictionary*, p253 and p583.

⁹⁷ Pearce, *Medical and Nursing Dictionary*, p379.

⁹⁸ Pearce, *Medical and Nursing Dictionary*, p379.

⁹⁹ Porter, interviewed on 24 May 2010.

¹⁰⁰ Taylor, interviewed on 24 May 2010.

¹⁰¹ Vickers, interviewed on 24 May 2010.

since people developed strong immune systems.¹⁰² There is evidence that HAIs were infrequent and when they occurred they were reported to the highest level of management in the hospital.¹⁰³ The attention to detail regarding environmental cleaning and hand hygiene would help minimise cross infections.

7.6 Wound Infections and their Treatment

One of the commonest localised infections seen in the pre-penicillin era was the carbuncle. Described as a 'severely painful infective swelling with gangrene of the subcutaneous tissues' it was associated with either streptococcal or staphylococcal infection.¹⁰⁴ The recommended treatment varied across the decades of the 1930s and 1940s. Thus Ashdown reported that surgical excision was the first action with attention to the patient's general health as secondary measures.¹⁰⁵ At the end of the 1930s, treatment as described by McNeill Love, preferred 'conservative measures' rather than the previously popular excision.¹⁰⁶ Surgical excision was indicated if tissue became necrotic. Frequent redressing of the wound was required. Carbuncles were mentioned by *King*, and she identified that they were 'exceedingly painful for men'.¹⁰⁷ *King* ascribed the common occurrence of carbuncles on the necks of men as being associated with workmen who wore dirty and rough shirts and collars.¹⁰⁸ The roughness would abrade the neck and allow dirt to enter the abrasion thus giving rise to the infection. A similar comment was made by *Gloria Garner* when she reported that carbuncles were common on men's necks.¹⁰⁹ She added that nursing staff would

¹⁰² Bennett, interviewed on 15 July 2008.

¹⁰³ See, for example, Board of Management of Lincoln County Hospital, *Minute Book of the Board of Management of Lincoln County Hospital, January 1920 – June 1939*, (Lincoln, Lincolnshire Archives, HOSP/LINCOLN 19), p691-694 records an index case of a patient admitted with tetanus followed by three patients developing tetanus who were operated on in the same theatre.

¹⁰⁴ Pearce, *Medical and Nursing Dictionary*, p101-102.

¹⁰⁵ Ashdown, *A Complete System of Nursing*, p355.

¹⁰⁶ McNeill Love, 'Carbuncles and Bedsores', Chapter 27 in Hamilton Bailey (ed.), *Pye's Surgical Handicraft: A manual of surgical manipulations, minor surgery, and other matters connected with the work of house surgeons and of surgical dressers*, 11th edition, (Bristol, John Wright and Sons Ltd, 1939), p176-180.

¹⁰⁷ King, interviewed on 7 August 2008.

¹⁰⁸ King, interviewed on 7 August 2008.

¹⁰⁹ Gloria Garner, interviewed by David Justham on 5 August 2008 at Grange-over-Sands. Began SRN training in Manchester in 1940.

advise men to wash collars to reduce the probability of acquiring a carbuncle.¹¹⁰ *King* recalled that Magnesium Sulphate paste continued to be used until core of the carbuncle was able to be removed.¹¹¹ She did not mention excision of the necrotic tissue, but that healing was assisted with acriflavin emulsion.¹¹² Use of magnesium sulphate paste to draw out infection was also mentioned by *Harris*.¹¹³ Other treatments were reported for carbuncles. *Bennett* remembered that saline was a 'big thing for irrigation',¹¹⁴ and *King* reported that abscesses or carbuncles were lanced, but that 'you had to be careful when dressings were removed and disposed' because of subsequent possible leakage of pus.¹¹⁵

WWII saw great change in the medical management of wound infections. During the late 1930s the impact of sulphonamide drugs heralded a change in the management of infectious disease. However, the sulphonamides were not effective against staphylococci, the bacterial species most commonly implicated in wound infections.¹¹⁶ Significant improvements were not seen in the reduction of the incidence of wound infections until the introduction of penicillin in the latter stages of the war.¹¹⁷ Prior to this, and in an attempt to minimise acquired wound infections, the MRC made recommendations in 1941 concerning the management of wound dressings in ward environments.¹¹⁸ This memorandum sought to standardise wound dressing procedures across the country. The authors of the memorandum reported that an increasing incidence of wound infection was due to 'defects of aseptic technique' within hospital

¹¹⁰ Garner, interviewed on 5 August 2008.

¹¹¹ King, interviewed on 7 August 2008; Love, 'Carbuncles and Bedsores', p176, recommends a paste of glycerine and magnesium sulphate.

¹¹² King, interviewed on 7 August 2008; Pearce, *Medical and Nursing Dictionary*, p237, describes acriflavine as an antiseptic that stains tissue yellow.

¹¹³ Harris, interviewed on 6 August 2008.

¹¹⁴ Bennett, interviewed on 15 July 2008.

¹¹⁵ King, interviewed on 7 August 2008.

¹¹⁶ See, for example, John A. Ryle and S.D. Elliott, 'Septicaemia and Bacteriaemia', in Humphry Rolleston (ed.), *The British Encyclopaedia of Medical Practice*, (London, Butterworth and Co., 1939), Volume 11, p76–89; Pugh, *Practical Nursing*, 13th edition; W. Gordon Sears, *Medicine for Nurses*, 4th edition, (London, Edward Arnold, 1940), p426–427.

¹¹⁷ Peter Neushul, *Fighting Research: Army Participation in the Clinical Testing and Mass Production of Penicillin During the Second World War*, Chapter 11 in Roger Cooter, Mark Harrison and Steve Sturdy, (eds), *War, Medicine and Modernity*, (Stroud, Sutton Publishing 1999), p204.

¹¹⁸ Medical Research Council, *The Prevention of "Hospital Infection" of Wounds*.

wards.¹¹⁹ There was no nurse representation on the Committee responsible for the memorandum, although nurses were acknowledged for supplying evidence and advice.¹²⁰ The all male, medically dominated committee included fourteen Fellows of the Royal College of Surgeons and four Fellows of the Royal College of Physicians. Included amongst the membership was Professor Howard Florey FRS, responsible as the driving force behind the development of penicillin as a commercial product and two others who were Fellows of the Royal Society. Professor Alexander Fleming was cited as a member of a sub-committee of London based pathologists.¹²¹

The feared complication of wound infection was septicaemia which could be fatal in upwards of 50 percent of cases.¹²² It was generally accepted that battlefield wounds had a greater incidence of wound infection.¹²³ For example, wounds could be contaminated by bullets, debris from bomb blasts, or exposure to soil. Between twelve and fifteen percent of those who died from wounds during World War I died from infections.¹²⁴ Whilst not all wounds would become infected, some did and of these some would progress to an infection of the blood known as septicaemia. The patient who acquired septicaemia became severely ill, and needed to be cared for by a nurse with prior experience of such cases.¹²⁵ Sulphonamides were reported to have some success in helping to manage septicaemia.¹²⁶

It was a common observation, and welcomed fact, that wounds with maggots in them had a good prognosis.¹²⁷ *Allen*, working in London, recalled that infected wounds from the battlefield might be 'all maggoty but the wounds were clean ... those maggots did

¹¹⁹ Medical Research Council, *The Prevention of "Hospital Infection" of Wounds*, p4.

¹²⁰ Medical Research Council, *The Prevention of "Hospital Infection" of Wounds*, p29.

¹²¹ Medical Research Council, *The Prevention of "Hospital Infection" of Wounds*, p2.

¹²² Ryle and Elliott, 'Septicaemia and Bacteriaemia', p85.

¹²³ Medical Research Council, *The Prevention of "Hospital Infection" of Wounds*, p4.

¹²⁴ Neushul, 'Fighting Research', p204.

¹²⁵ Horder, and A. E. Gow, 'Bacterial Diseases', in Frederick W. Price (ed.), *A Textbook of the Practice of Medicine*, 5th edition, (London, Oxford University Press, 1937), p30.

¹²⁶ See, for example, Horder, and Gow, 'Bacterial Diseases', p30; Ryle and Elliott, 'Septicaemia and Bacteriaemia', p85 and p87; Pugh, *Practical Nursing*, 13th edition, p507.

¹²⁷ Norman M. Matheson, 'Accidental and Surgical Wounds', Chapter 10 in Hamilton Bailey (ed.), *Pye's Surgical Handicraft: A manual of surgical manipulations, minor surgery, and other matters connected with the work of house surgeons and of surgical dressers*, 11th edition, (Bristol, John Wright and Sons Ltd, 1939), p67.

a wonderful job'.¹²⁸ Porter considered maggots were accidental but beneficial, and remembered a civilian TB patient being nursed outside in the open air whose undressed skin wound had become infected.¹²⁹ Maggots developed in the wound and cleaned it completely.¹³⁰ Taylor remembered one soldier with an infected compound fracture. When the Plaster of Paris cast, applied in the field hospital, was removed it was found that maggots had 'eaten the pus away'.¹³¹ The flies had laid their eggs in the wound and subsequently developed into maggots. The maggots fed on dead tissue and the infected material within the wound. Yet larval therapy was not a positive wound management strategy within UK civilian hospitals. Norman Matheson expressed the view that maggots were thought repulsive in Britain despite their undoubted value in clearing wound infection.¹³² The repulsion arose from the association of maggots with dirt and putrefaction. Dirt, being unwanted matter, was the target of sanitarians.¹³³ Environmental dirt in the ward was removed through daily and rigorous cleaning routines by nurses.¹³⁴ Dirt, which encompassed foreign material in wounds, was removed by mechanical means or irrigation.¹³⁵ Before the availability of the sulphonamides and antibiotics, clinical texts referred to various methods of irrigation, application of antiseptic lotions, fomentations, and poultices would be used to help clean infected wounds.¹³⁶ Leaving maggots in wounds was thought to be incredible by some nurses, although participants reported favourably on the presence of them.¹³⁷ Irrespective of the obvious benefit of maggots keeping wounds clean, they were generally removed if discovered within a wound. The need to keep wounds clean was challenged by maggots which were seen as dirty. When the sulphonamide drugs

¹²⁸ Allen, interviewed on 14 July 2008.

¹²⁹ Porter, interviewed on 24 May 2010.

¹³⁰ Porter, interviewed on 24 May 2010.

¹³¹ Taylor, interviewed on 24 May 2010.

¹³² Matheson, 'Accidental and Surgical Wounds', p67; Barbara Mortimer, *Sisters: Memories from the Courageous Nurses of World War Two*, (London, Hutchinson), p88.

¹³³ Mary Douglas, *Purity and Danger: An analysis of concepts of pollution and taboo*, (London, Routledge Classics, 2002), p44.

¹³⁴ See Chapter 5 above.

¹³⁵ Matheson, 'Accidental and Surgical Wounds', p65.

¹³⁶ See, for example, Ashdown, *A Complete System of Nursing*; Horder, and Gow, 'Bacterial Diseases', p25-38; Matheson, 'Accidental and Surgical Wounds', p65-66; Pugh, *Practical Nursing*, 13th edition, p516-517.

¹³⁷ See, for example, Barbara Mortimer, *Sisters: Memories from the Courageous Nurses of World War Two*, (London, Hutchinson), p88-9.

became available it was found they had some effect on wound infection but were not always successful at preventing an infection, primarily because staphylococcal infections were not susceptible to sulphonamides whereas streptococcal infections were generally sensitive.¹³⁸ The treatment of streptococcus pyogenes septicaemia, which could arise from an infected wound, was revolutionised by sulphanilamide.¹³⁹ When penicillin arrived it saved nurses the dilemma of dealing with 'dirty' maggots.

The sulphonamides and antibiotics had a considerable impact on the management of patients with infected wounds. The sulphonamide family of drugs had been available for some years prior to the outbreak of WWII.¹⁴⁰ They were primarily used in the management of infectious disease, particularly pneumonia. The sulphonamides could be taken orally or by injection. The use of sulphonamide as a cream spread onto lint for use on wounds was a method adopted at the Queen Elizabeth Hospital in Birmingham.¹⁴¹ However, the sulphonamide drugs were not without their side effects which could be quite debilitating, and they were not suitable for everyone.¹⁴² *Bennett's* account indicated that the sulphonamides continued in regular use after the introduction of penicillin.¹⁴³ When she was in the armed forces in 1943 she developed a carbuncle on her right cheek and was told 'We won't give you penicillin. It's too painful and you've got to have all these injections. You'd better have some sulphonamides'.¹⁴⁴ She was prescribed sulphonamide tablets. She found these to be 'horrible. They were big things which you had a job to swallow first and foremost ... awful stuff'.¹⁴⁵ Overall, the evidence suggests that these drugs were welcomed by nursing staff and that they had some impact on managing the infection risk.

¹³⁸ Horder, and Gow, 'Bacterial Diseases', p30.

¹³⁹ Ryle and Elliott, 'Septicaemia and Bacteraemia', p87.

¹⁴⁰ For further information, see for example, Margaret Hitch, *Aids to Medicine for Nurses*, 2nd edition, (London, Baillière, Tindall and Cox, 1943) p362-3; and Sears, *Medicine for Nurses*, p426-31.

¹⁴¹ Collette Clifford, (ed.), *QE Nurse 1938-1957: A history of nursing at the Queen Elizabeth Hospital, Birmingham*, (Studley, Brewin Books, 1997), p77.

¹⁴² See, for example, Mary E. Florey (ed.), *Antibiotic and Sulphonamide Treatment: A short guide for practitioners*, (London, Oxford University Press, 1959) p38-45; Wesley W. Spink, *Infectious Diseases: Prevention and Treatment in the Nineteenth and Twentieth Centuries*, (Folkstone, Wm Dawson, 1978), p86.

¹⁴³ Bennett, interviewed on 15 July 2008.

¹⁴⁴ Bennett, interviewed on 15 July 2008.

¹⁴⁵ Bennett, interviewed on 15 July 2008.

The introduction of penicillin was more dramatic. WWII was the last war conducted without the widespread availability of antibiotics, supply chains and financial considerations notwithstanding. Penicillin was produced in sufficient quantities towards the latter part of the war when it was made widely available to troops and prisoners of war (POWs). Penicillin was not available to civilians until after the war. With injured troops and some POWs being cared for in civilian hospitals, there existed the knowledge amongst care staff that POWs were receiving more advanced treatment than that available to the civilian population. This created a moral dilemma for *Allen* who reported on penicillin that 'There was none for the civilians ... the POWs didn't want it because they thought we were killing them ... And, I am ashamed to say ... you would leave a little tiny bit' in the bottom of the vial.¹⁴⁶ Staff would collect all the small amounts together to get a dose which was then given to a desperately ill civilian.¹⁴⁷ *Allen* continued that 'it seemed wrong somehow that they shouldn't have any at all'.¹⁴⁸ *Louise Lloyd* recalled that penicillin made an incredible difference. As she said 'There didn't seem to be side effects'.¹⁴⁹ Even though other reports were that it could be a painful injection it is easy to imagine that the incredible difference seen in the management of infection would outweigh the recollection that some patients may have had of painful injections.¹⁵⁰ A similar, and perhaps more powerful, comment was that penicillin 'revolutionised everything' in nursing.¹⁵¹ With specific regard to the management of wounds, *Shaw* mentioned that penicillin was something to be thankful for 'as it made treating infected wounds so much easier'.¹⁵² Published accounts reflect this sense of amazement at a drug which changed the management of infected wounds. *Brenda McBryde* expressed the sentiment that miracles were occurring every day in surgical wards: 'This yellow powder with the musty smell revolutionised the

¹⁴⁶ *Allen*, interviewed on 14 July 2008.

¹⁴⁷ *Allen*, interviewed on 14 July 2008.

¹⁴⁸ *Allen*, interviewed on 14 July 2008.

¹⁴⁹ *Lloyd*, interviewed on 12 August 2008.

¹⁵⁰ See, for example, *Mortimer, Sisters*, p195, where she extracts data from an interview with *Christine Chapman* who recalled men would 'cry when they saw you coming with the syringes because it was so painful'.

¹⁵¹ *Thurgood, Transcript of interview HX5 recorded on 8 August 2001*.

¹⁵² *Shaw*, interviewed on 18 May 2010.

treatment of wounds',¹⁵³ and Prentis recalled that arrival of antibiotics 'shifted the balance of power from nursing as we knew it to a quick jab with a needle and it was all over'.¹⁵⁴ The dramatic impact of penicillin caused Starns to question 'How were nurses able to justify their professional status when one drug could undermine most of their traditional nursing techniques?'.¹⁵⁵ Penicillin was effective against most staphylococcal and streptococcal infections.¹⁵⁶ Spink reported a fall in mortality rate for staphylococcal bacteraemia from 80 percent to 35 percent following penicillin's introduction.¹⁵⁷ Overall, the evidence points to penicillin having a major impact on the management of wounds. Wounds which were infected no longer needed a programme of regular irrigation and redressings, but overcame the infection more quickly through the admission of the antibiotic. Nurses, it seemed, would not have the same amount of work to do in managing infected wounds.

Despite the euphoria, penicillin was not easy to work with. *Allen* remembered needing always to be very careful with the penicillin, 'We always swabbed the tops [of vials] very carefully, and mixed it'.¹⁵⁸ *Vickers* remembered that penicillin was just coming in during her training. 'I can see myself going round with a little trolley with ward sister and I used to have to draw it up because she couldn't see very well' she recalled, adding that the syringes she used needed to be boiled between each use.¹⁵⁹ Although *Porter* never had to mix penicillin, she remembered its use in the early days being 'often milky (not clear), given with a large needle'.¹⁶⁰ *Taylor* explained a reason for large needles: 'Penicillin by injection was painful, that beeswax stuff was hellish ... almost solid, had to warm it to soften it, not too hot by the time you got it to the patient, but you were ages getting it in.'¹⁶¹ It was usual for trained staff to give penicillin injections. *Jones's* memories were that penicillin was given as an 'intramuscular injection of 10 cc, large needles, three hourly. It was very painful if you

¹⁵³ McBryde, *Quiet Heroines: Nurses of the Second World War*, p135.

¹⁵⁴ Evelyn Prentis, *A Nurse in Time*, (London, Hutchinson & Co., 1977), p179.

¹⁵⁵ Starns, *Nurses at War*, p73.

¹⁵⁶ Florey, (ed.), *Antibiotic and Sulphonamide Treatment*, p6.

¹⁵⁷ Spink, *Infectious Diseases*, p283.

¹⁵⁸ Allen, interviewed on 14 July 2008.

¹⁵⁹ Vickers, interviewed on 24 May 2010.

¹⁶⁰ Porter, interviewed on 24 May 2010.

¹⁶¹ Taylor, interviewed on 24 May 2010.

weren't very careful, and only qualified staff could give it'.¹⁶² Elsewhere, a three hourly regime of 5 cc intra-muscular penicillin injections was used because the penicillin was short lasting and a 'rather' dilute drug.¹⁶³ The frequency resulted in dread and hate by patients despite its beneficial effects. *Taylor* recalled two deaths from penicillin intravenous infusions 'they became oedematous and red. Not sure of the reasons for it'.¹⁶⁴ However, early formulations did contain impurities, and these could cause problems, for example pain or allergy.¹⁶⁵ The problems associated with giving penicillin, still a new drug, and the technique of giving an intramuscular injection suggest the need for a skilled nurse.¹⁶⁶ It is also suggested that, prior to penicillin, a high level of skill in giving injections had been required to minimise the risk of an abscess in the muscle if there had been failings in the cleaning, sterilising and preparing a syringe. A high level of skill in managing patients was also called for since the penicillin injections could be painful. There were only a few appropriate body sites that could be used for intramuscular injection.

7.7 Summary

What can be learnt from the memories of former nurses? Those interviewed report that the preparation of dressings, instruments and wound dressing trolleys was more or less as described by the published texts. There was routinisation of care practices, driven by senior nurses who valued traditional care practices, and the obedience of a compliant workforce. The wound redressing round would follow some time after the morning cleaning routines had been completed. Minor variations existed in relation to sterilisation of instruments on the wards. Some variations were evident in the organisation of dressing rounds. Most respondents reported a non-touch technique for the process of wound dressing. Hand hygiene was rigorously practised. The greatest

¹⁶² Jones, interviewed on 6 August 2008.

¹⁶³ Clifford (ed.), *QE Nurse 1938-1957*, p77.

¹⁶⁴ Taylor, interviewed on 24 May 2010.

¹⁶⁵ Greenwood, David. *Antimicrobial Drugs: A Chronicle of a Twentieth Century Medical Triumph*, (Oxford, Oxford University Press, 2008).

¹⁶⁶ See for example, Pearce, *Medical and Nursing Dictionary*, p340-1; Winifred Hector, *Modern Nursing*, 3rd edition, (London, William Heinemann Medical Books Ltd, 1965), p96 and p101-104.

variation was in the organisation of the dressing round with some evidence suggesting that clean wounds were not always redressed before infected (or dirty) wounds. Such practices would increase the risk of cross infection. Nevertheless, there was universal denial of the existence of many hospital acquired wound infections and no recollection of cross infection. Prior to the availability of penicillin, in particular, septicaemia as a complication of wound infection required skilled nursing care. The accounts reported a relationship between environmental cleaning and wound redressing, the rationale for which is grounded in sanitarian concepts alongside aseptic and antiseptic techniques. This does not mean nurses in this period were ignorant of germ theory, but that the sanitarian approach to a clean environment which had been in place for many decades worked well and continued. Yet dirty wounds infected with maggots became clean. Despite doing a 'wonderful job', the maggots were cleaned out of the wound, rather than left in place. Practical nurses did not have a powerful enough voice to enable them to argue for innovation, and did not have formal membership in a significant MRC memorandum that directly impinged on their work in wound management.¹⁶⁷

The evidence also suggests that wound redressing was a technical skill usually undertaken by staff nurses or senior probationers. *Harris* recalled that the staff nurse might allow the probationer to undertake the dressing under her supervision. Wounds which were infected could directly expose the nurse to infected material. In a sanitarian approach prior to antibiotics high levels of skill would be needed to be able to handle infected material. The probationer developed a good understanding of the need for strict hygiene and demonstrated these skills satisfactorily to qualified staff through the hierarchy of tasks learnt through first and second year probationary work.

The arrival of sulphonamides and antibiotics enabled revolutionary changes in nursing practices. Penicillin was effective against staphylococcal infections, a common infecting agent in wounds. It brought rapid relief from wound infection. Nurses no longer had to give personal care to the patient with a wound infection, which carried a risk of

¹⁶⁷ Medical Research Council, *The Prevention of "Hospital Infection" of Wounds.*

extending to septicaemia, for long periods of time. Nursing workloads changed, and the principles of sanitarian nursing were threatened.

Chapter 8

DISCUSSION

8.1 Introduction

This thesis offers an original and alternative interpretation to the assignment of care giving tasks in the pre-antibiotic era that explains the need for task allocation, routine approaches to care giving, and a hierarchical organisation. The present study examines the clinical work of nurses working in voluntary hospitals and local authority hospitals during the 1930s and 1940s. The oral history data demonstrates that nursing in this period was organised through task allocation, was highly routinised, and hierarchical. Tasks included duties that some considered menial. The generally accepted interpretation for the organisation of nursing in this way links menial work to the need to develop discipline and obedience from subordinates to superiors. In this way probationer nurses were inducted into the culture of nursing. In the interpretation offered by this thesis, routines and task allocation were necessary to develop the skills needed to control the risks of acquired infection, not only in respect of the patient but of the nurse also. The explanation emerges out of nursing's sanitarian origins, and it has the potential to explain changes in the work of nurses that began with the introduction of the sulphonamide drugs and antibiotics. The use of task allocation and the routines of care giving provided a structured and safe way to develop the necessary skills in probationers that would enable them to work in environments in which exposure to potentially life threatening infection was present. The introduction of the sulphonamide family of drugs and subsequently the use of antibiotics brought about major changes in the management of bacterial infections to such an extent that nursing in the general hospital setting no longer needed to concentrate on managing the infection risk.

Analyses of the clinical work of nurses have been largely absent from the history of nursing in Britain to date. Historians of nursing have generally neglected the impacts

of major developments in medicine and surgery on nursing practice when exploring concerns about registration, education, recruitment, retention, skill mix, and status.¹ A gap in understanding the clinical work of nurses was identified by the Australian, Jocalyn Lawler.² Since her landmark publication in 1990 more studies have given prominence to the clinical work of nurses. For example, the study by Julie Fairman and Joan Lynaugh examined the development of critical care nursing in America.³ Graham Thurgood investigated the experiences of nurses using a range of technologies in nursing practice in Britain from the 1940s.⁴ Some aspects of the clinical work of fever nurses were addressed in Margaret Currie's examination of fever hospitals and Registered Fever Nurses.⁵ Christine Hallett examined the work of World War I nurses through their diaries, letters and other documents.⁶

Histories of nursing have studied the discipline from a range of perspectives yet with minimal examination of the content of clinical practice. Thus Susan McGann examined the role of influential leaders in nursing regarding the battles over registration and education of nurses.⁷ The political aspects of the quest to address the educational and training needs of nurses have been examined by Anne-Marie Rafferty.⁸ Gerard Fealy and Anne Bradshaw have examined apprenticeship training systems in Ireland and Britain respectively, although both discussed the evolving educational debates more

¹ See, for example, Martha Vicinus, *Independent Women: Work and Community for Single Women 1850 – 1920*, (London, Virago Press Ltd., 1985); Robert Dingwall, Anne Marie Rafferty, and Charles Webster, *An Introduction to the Social History of Nursing*, (London, Routledge, 1988); Jenny Littlewood, 'Care and Ambiguity: Towards a Concept of Nursing', Chapter 10 in Pat Holden and Jenny Littlewood, (eds), *Anthropology and Nursing*, (London, Routledge, 1991), p170-189.

² Jocalyn Lawler, *Behind the Screens: Nursing, Somology, and the Problem of the Body*, (Melbourne, Churchill Livingstone, 1991).

³ Julie A. Fairman and Joan. E. Lynaugh, *Critical Care Nursing: A History*, (Philadelphia, University of Philadelphia Press, 1998).

⁴ Graham Thurgood, 'Defining Moments in Medical History – Nurses' Narratives of their Everyday Experiences of a Key 20th Century Historical Event – the First Use of Antibiotics', Chapter 24 in Nancy Kelly, Christine Horrocks, Kate Milnes, Brian Roberts, and David Robinson, *Narrative, Memory and Everyday Life*, (Huddersfield, University of Huddersfield, 2005), p231-242.

⁵ Margaret R. Currie, *Fever Hospitals and Fever Nurses: A British Social History of Fever Nursing: A National Service*, (London, Routledge, 2005).

⁶ Christine E. Hallett, *Containing Trauma: Nursing Work in the First World War*, (Manchester, Manchester University Press, 2009).

⁷ Susan McGann, *The Battle of the Nurses*, (London, Scutari Press, 1992).

⁸ Anne Marie Rafferty, *The Politics of Nursing Knowledge*, (London, Routledge, 1996).

than the practical content of training.⁹ The sociological environment of nursing has been explored by several authors.¹⁰ Other histories have explored the role of the professional organisations and trades unions in supporting nursing.¹¹ Aspects of the work of the General Nursing Council for England and Wales from its creation to its demise have attracted attention.¹² Management styles were the focus of Penny Starns's work.¹³ Whilst there may be fleeting glimpses of clinical practice in these histories, the 'challenges' they addressed did not emanate directly from an analysis of the clinical work of nurses. By this is meant that there was little exploration of the practices undertaken by nurses. There appears to be an accepted interpretation that the problems facing general nursing in Britain stemmed from disputes between leaders of the profession, particularly regarding registration and education, supported in part by general comments concerning the culture of nursing and the discipline exerted on probationers. Reference to clinical work tended to focus on the use of routines of work as a means to develop obedience in probationers to their superiors. The activities that formed the content of the routines of working lack detailed analysis. Thus historical accounts typically do not openly address the detail of the clinical work but rather offer generalisations about menial duties, culture and discipline. Comments on fundamental care processes such as addressing hygiene and elimination needs, technical care processes like wound management, or indirect care tasks, for example environmental cleaning or preparing equipment for use, do not feature strongly in these accounts. And yet responding to the clinical care needs of patients is the *raison d'être* for the existence of nurses.

⁹ Gerard M. Fealy, *A History of Apprenticeship Nurse Training in Ireland*, London, Routledge, 2006); Ann Bradshaw, *The Nurse Apprentice, 1860–1977*, (Aldershot, Ashgate, 2001).

¹⁰ Dingwall, Rafferty, and Webster, *An Introduction to the Social History of Nursing*; Pat Holden and Jenny Littlewood, (eds), *Anthropology and Nursing*, (London, Routledge, 1991); Monica Baly, (ed.), *Nursing and Social Change*, 3rd edition, (London, Routledge, 1995).

¹¹ Christopher Hart, *Behind the Mask: Nurses, Their Unions and Nursing Policy*, (London, Baillière Tindall, 1994); Susan McGann, Anne Crowther, and Rona Dougall, *A History of the Royal College of Nursing 1916–1990: A voice for Nurses*, (Manchester, Manchester University Press, 2009).

¹² Eve R. D. Bendall and Elizabeth Raybould, *A History of the General Nursing Council for England and Wales 1919–1969*, (London, H. K. Lewis & Co. Ltd., 1969); Reginald H. Pyne, *Professional Discipline in Nursing: Theory and Practice*, (Oxford, Blackwell Scientific, 1981).

¹³ Penny Starns, *March of the Matrons*, (Peterborough, DSM, 2000).

Another feature which emerges from within previous histories of nursing, particularly those addressing the first half of the twentieth century in Britain, is that, despite analysis of various debates, reports and recommendations about changes that would address 'problems' in nursing, there is an apparent failure for substantial change in the delivery of nursing care practices to occur, by which is normally meant improvement. The 'problems' experienced by nurses are reported to have persisted throughout the early twentieth century with little evidence of substantial change. One 'problem' was the apprenticeship style of training with its preference for learning to be gained in the clinical setting. This style of training persisted throughout this period despite evidence found in investigations and reports calling for change to menial duties, culture and discipline.¹⁴ One of the foci of this thesis has been to explore and to examine the clinical work of nurses to identify if there were factors within their work that might account for the apparent lack of change before the introduction of antibiotics. The accounts by participants in this study point to many care practices that were designed to control and minimise the infection risk, and to manage the consequences of infection to patients, other patients and nurses themselves. The care practices remembered were significant to the participants and highlight some important changes in care giving following the introduction of sulphonamides and antibiotics. Change was not instantaneous or universal across all hospitals following the watershed caused by sulphonamide drugs and antibiotics, although practices did begin to change after their introduction. Before their introduction, accounts of practice often show many similarities with the early conceptions of modern nursing as advocated by the still influential ideas of Florence Nightingale.

There are several factors encountered in understanding the clinical milieu of the 1930s and 1940s. One is the hiddenness of the clinical work of nurses within the histories of

¹⁴ See for example, *The Lancet Commission on Nursing: Final Report*, (London, The Lancet, 1932); Ministry of Health and Board of Education, *Interim Report of the Inter-departmental Committee on Nursing Services*, the Right Hon. The Earl of Athlone, Chairman, (London, HMSO, 1939). Hereafter referred to as the Athlone Committee, *Interim Report*; Sheila M. Bevington, *Nursing Life and Discipline: A study based on over five hundred interviews*, (London, H. K. Lewis and Co. Ltd., 1943).

nursing. A second relates to knowledge transfer of new discoveries, particularly in microbiology, into clinical practice. A third factor centres on the histories of medicine which tend to emphasise the achievements of medical personnel in the development of new drugs and techniques, and the benefits to patients, but ignore the role of nurses. Additional factors affecting health care that occurred at this time were the developments in health service provision arising from the move towards a National Health Service, and the constraints imposed on practice by a wartime economy. Taken together these various factors serve in part to confound attempts to correlate changes in nursing practices in the 1930s and 1940s with the introduction of sulphonamides and antibiotics.¹⁵

The hiddenness of nursing practice has been recognised in a number of places, and was discussed in Chapter 3. Hiddenness may arise from male domination, the nature of history, or the nature of nursing work.¹⁶ Lawler was one of the first to highlight the difficulties of examining the clinical aspects of nursing work.¹⁷ The hiddenness may also be due to a lack of documentary evidence as to any intent to suppress documentary evidence. Barbara Mortimer suggests that one reason for the lack of documentary evidence is that nursing skills were learnt in the practice setting.¹⁸ Zane Wolf reported that nurses pass on skills and knowledge 'by word of mouth and by demonstration'.¹⁹ The consequence is that there is little evidence to be found in the

¹⁵ The definition of 'confound' used here is 'to mix up, to confuse' see Arthur L. Hayward and John J. Sparkes, *Cassell's English Dictionary*, (London, Cassell, 1968) p236.

¹⁶ Joan Kelly, *Women, History and Theory: The essays of Joan Kelly*, (Chicago, The University of Chicago Press, 1984); Anne Oakley, 'What price professionalism? The importance of being a nurse' *Nursing Times*, (1984) 80, (50), p24-27; Jenny Littlewood, 'Care and Ambiguity: Towards a Concept of Nursing', Chapter 10 in Pat Holden and Jenny Littlewood, (eds), *Anthropology and Nursing*, (London, Routledge, 1991), p170-189.

¹⁷ Jocalyn Lawler, *Behind the Screens: Nursing, Somology, and the Problem of the Body*, (Melbourne, Churchill Livingstone, 1991).

¹⁸ Barbara Mortimer, 'Introduction: the history of nursing: yesterday, today and tomorrow', Chapter 1 in Barbara Mortimer and Susan McGann, (eds), *New Directions in the History of Nursing: International Perspectives*, (Abingdon, Routledge, 2005), p1-21.

¹⁹ Zane R. Wolf, *Nurses' Work: The Sacred and The Profane* (Philadelphia, University of Pennsylvania Press, 1988), px.

written record about practice.²⁰ Oral testimonies from former nurses were therefore fitting to the task, the aim of which was to uncover the hiddenness of nursing work.

It is unclear to what extent clinicians, whether medical, nursing, or others allied to medicine, understood microbiological concepts or how these concepts influenced changes in medical and nursing practice. Alongside these issues are ones about the ongoing developments in germ theory and their impact in managing the clinical environment and clinical practices. The final decades of the nineteenth century and early decades of the twentieth century were years of rapid development in the microbiological field. The popular book by Paul de Kruif, *Microbe Hunters*, with at least 69 print runs between its first publication in February 1926 and December 1945, demonstrates the intense interest in society in the new science of microbiology.²¹ Despite such evident interest, medical texts discussed in Chapter 2 above, demonstrate the limits in the understanding of microbiology in the 1930s and 1940s. These texts, written by leading clinicians of the day, reflected the latest knowledge at the time of publication but do not reflect whether this knowledge was universally held by practitioners in the clinical environment. How had these practitioners been updated, if at all? Was it through continuing medical education meetings, conferences, their own reading, or other means? In particular, what was available for nurses to keep themselves up to date with these developments? A presumed 'theory-practice gap' exists in nursing which refers variously to the diffusion of research into practice, and the discrepancy between classroom based and practice based teaching.²² Caplan refers to delays of introducing new evidence into practice arising from several factors including, attitudes, ethical issues, organisational constraints, and social considerations exerting priority over the inherent value of the research.²³ Such views

²⁰ Mortimer 'Introduction: the history of nursing', p12.

²¹ Paul de Kruif, *Microbe Hunters*, (New York, Pocket Books Inc., 1940), 22nd print run by this publisher in December 1945.

²² See, for example, Anne-Marie Rafferty, Nick Allcock, and Judith Lathlean, 'The theory/practice 'gap': taking issue with the issue', *Journal of Advanced Nursing*, (1996) 23, (4), p685-691; Alistair Hewison and Stuart Wildman, 'The theory-practice gap: a new dimension', *Journal of Advanced Nursing*, (1996) 24, (4), p754-761.

²³ N Caplan, 'Social Research and Public Policy at the National Level', in D.B.P. Kallen, G. B. Kosse, H.C. Wagenaar, J.J.J. Kloprogge, and M. Vorbeck, (eds), *Social Science Research and Public-Policy Making: A Reappraisal*, (Windsor, NFER, 1982), p32-54.

are echoed by David Wootton when he comments on the reluctance of doctors to adopt new knowledge, new techniques or new medications that may speed the patient's recovery and in consequence reduce the doctor's income in a fee-for-service based health care system.²⁴ This problem of knowledge transfer adds a degree of uncertainty to the level of knowledge about microbiological concepts and the influence of these on nursing practices during the 1930s and 1940s. It is probable that some nurses would be more aware of germ theory and microbiological concepts than others.

Histories of drug developments tend to focus on the pharmaceutical and medical achievements. In this regard, sulphonamides and antibiotics caused such a revolution in the management of bacterial infections that those who led their development became the central characters in their histories. Thus Gerhard Domagk was offered the Nobel Prize in Physiology and Medicine in 1939 for the discovery of Prontosil in 1936, and Alexander Fleming, Howard Florey and Ernest Chain received the Nobel Prize in Physiology and Medicine in 1945 for penicillin, whose mass production was only commenced in 1943. The short timescale between use in clinical practice and the award of the prize turned the spotlight onto the medical and pharmaceutical achievements rather than the consequences for nursing practice which remains largely hidden.²⁵ Robert Bud in his history of penicillin offers only two comments, both negative, one relating to the 1950s about nurses, more than any other health care professional, being at particular risk of harbouring and transmitting penicillin resistant strains of micro-organisms, and the other from 1967 in which nursing practices were considered inadequate to prevent an outbreak of gastro-enteritis.²⁶

A number of themes emerge from an analysis of the activities remembered by the participants in this study. Firstly there is the routinisation of tasks and care practices, whether it was environmental cleaning, responding to fundamental personal care

²⁴ David Wootton, *Bad Medicine: Doctors Doing Harm Since Hippocrates*, (Oxford, Oxford University Press, 2007), p33.

²⁵ See for example Sebastian G. B. Amyes, *Magic Bullets, Lost Horizons: The Rise and Fall of Antibiotics*, (London, Taylor and Francis, 2001); Robert Bud, *Penicillin: Triumph and Tragedy*, (Oxford, Oxford University Press, 2007).

²⁶ Bud, *Penicillin: Triumph and Tragedy*, p119 and p179.

needs, or addressing technical tasks. A second theme is the strong emphasis in nursing work on cleaning and hygiene, where hygiene refers to bodily cleaning tasks. A third theme is the presence of a hierarchy of nursing tasks and the perception of an increasing sophistication of the skills required to perform the tasks expected. A fourth overriding theme is that of infection control. The latter was an all embracing theme in the period before the introduction of sulphonamides and antibiotics, and explains some of the reluctance for change in working practices in this era. An important finding of this study is the evidence reported by the participants that suggests some changes occurred to care giving requirements following the introduction of sulphonamide drugs and antibiotics. This last point opens up a debate that has the potential, on the one hand, to explain changes in nursing that occurred in the decades after the introduction of antibiotics, on the other to demand that histories of nursing need to examine in closer detail the impact of new technologies in changing work routines associated with sanitarian nursing. The following sections address each of these themes in turn, drawing on concepts and debates around purity, vocation and status.

8.2 Routinisation of Care Practices to meet Cleaning and Hygiene Needs

One of the features of care giving by nurses in the 1930s and 1940s was that practice was organised through routines. The delivery of care via routine systems of working is well known, and sometimes referred to as 'task allocation'. Tasks were delivered according to specified procedures. Procedures were normally learnt in practice by working alongside someone more experienced in the procedure. In some instances procedures were learnt in the Preliminary Training School but these did not necessarily correspond directly with the performance expected in the clinical area. Bevington recognised that 'classroom methods were slow but thorough, ward methods were faster but less efficient'.²⁷ In 'task allocation' staff members were allocated to undertake a specified care task for all patients within the ward. The routines related not only to the task in hand but also to the sequencing between tasks. Chapters 5, 6

²⁷ Bevington, *Nursing Life and Discipline*, p33.

and 7 of this thesis explore the detail of the most frequently remembered routines. Thus it was a common feature that environmental cleaning routines were undertaken as a first task in the morning work schedule, and that the more technical tasks, like wound redressing, would be undertaken sometime after cleaning activities had finished. Fundamental care routines also occurred at regularised times throughout the day. Even the nurses' home life had its routines. As all participants lived in a nurses' home during training, there were expectations that rooms would be clean and tidy, that social life was controlled with night time curfews imposed.

A closer examination of the routines described by the participants show that they were primarily put in place to address cleaning and hygiene needs. The work of Mary Douglas concerning dirt is important to an understanding of this feature of the routines.²⁸ As previously noted, Douglas stated that 'dirt was matter out of place',²⁹ and that 'dirt is essentially disorder'.³⁰ Routines were needed to manage dirt. Cleaning the ward environment was necessary to eliminate dirt from the environment. Addressing patient hygiene was necessary to ensure dirt, whether in the form of sweat, urine, sputum, faeces, or other exudate, was contained and did not contaminate the environment. Even wound care was primarily concerned with ensuring that the wound remained clean or, if infected, that pus or other infected material did not get into the environment.

The focus on cleaning and hygiene can be traced back to the earliest days of modern nursing. Florence Nightingale emphasised the need for cleaning and hygiene when she wrote that 'the greater part of nursing consists in preserving cleanliness'.³¹ As noted in Chapter 2, the foundation of sanitarian nursing was grounded in actions designed to rid the sick room of miasma, which was considered a source of disease and which was thought to arise from foul air or filth in the environment. The foul air

²⁸ Mary Douglas, *Purity and Danger: An analysis of concepts of pollution and danger*, (London, Routledge Classics, 2002).

²⁹ Douglas, *Purity and Danger*, p44.

³⁰ Douglas, *Purity and Danger*, p2.

³¹ Florence Nightingale, 'Notes on Nursing: What it is and What it is not' in Lynn McDonald, (ed.), *The Nightingale School*, (Waterloo, Wilfrid Laurier University Press, 2009), p646.

could arise from stagnation of air within a room due to lack of ventilation, or from foul air being allowed to enter a room. Bodily products could contribute to the stagnation of air, for example, exhalations from the lungs, or perspiration. Filth could arise from dirt brought into a room carried on footwear, dust settling out of the atmosphere, or arise from individual waste. Hence frequent cleaning was considered important to exclude the potential for miasma to arise. Sanitarian nursing maintained similar strategies beyond the initial formulations of germ theory. This was recognised by Vicinus when she wrote:

By giving hygiene a vital role in the patient's return to health, Nightingale carved out an area of expertise for her new nurses...the defence of cleanliness and hygiene was largely based on an obsolete scientific model...³²

Cleaning is seen to pervade the range of tasks undertaken by the nurse. Participants described being involved in a range of cleaning and hygiene activities. Involvement in environmental cleaning was an obvious activity. Direct patient care activities involved cleaning of the patient. Thus the admission routine required the patient to be bathed, and to be examined to ensure that the hair was clean and free from pediculosis. The bed pan round addressed the elimination needs of the patient but also ensured order in the environment by controlling potential pollution into it. Probationers were also involved in cleaning the bed pans. The back round, ostensibly to manage the pressure sore risk, involved washing and cleaning the patient's skin to ensure that residual sweat was not a potential source of harm.³³ Even the control of visitors can be seen as a means of keeping the environment of the patient clean, and preventing their contact with potentially damaging external dirt. Analysis of wound redressing procedures demonstrated, in the preparation of dressings and equipment, the need to ensure clean materials for use in the procedure. The methods described for wound redressing sought to ensure that wounds were clean, and that foreign material, even when beneficial as in the case of maggots, was removed from the wound.

³² Vicinus, *Independent Women*, p92.

³³ Florence Nightingale, 'Nursing the Sick' in Richard Quain, *Dictionary of Medicine*, reproduced in Lynn McDonald, (ed.), *The Nightingale School*, (Waterloo, Wilfrid Laurier University Press, 2009), see p740-741. She described the output of moisture from a sick person as being 'noxious', and the nurse needs to wash him. Nightingale's quest for absolute cleanliness extended to ensuring the patient's skin was clean, and in particular those parts of the body in contact with the bed linen since the noxious output would be trapped between body and bedding.

The sanitarians sought sanitary reform which aimed its arguments against the presence of dirt and overcrowding.³⁴ Nightingale, as a leading sanitarian, encouraged sanitarian principles to be the underpinning driver for nursing, and hence nurses became focussed on cleaning potential sources of miasma from the patient's environment. As Michael Worboys notes in his history surrounding the introduction of germ theories, 'the meanings of miasmas were refined' as germ theory developed.³⁵ In essence such adaptations enabled sanitarians to continue with their quest to ensure cleanliness. The consequence for nursing, which continued to be influenced by sanitarian ideas, is that it continued to focus its attention on cleaning and hygiene. In addition, as the concept of asepsis within germ theory began to be accepted there was no practical conflict with sanitarians who sought to keep everything clean.³⁶ It could therefore be argued that it was entirely reasonable for sanitarian nursing to continue without outward change. Use of antiseptics by Lister was initially unproven as a way to kill disease germs.³⁷ The practice of using antiseptics was based on theory that had not been substantiated by scientific studies of their destructive effect on micro-organisms.³⁸ Not everyone with an open wound would develop an infection with or without the use of antiseptics. Wounds could become septic even after antiseptics had been applied. Sanitarians maintained their stance that cleaning prevented disease claiming that antiseptic practices were derived solely from theory and remained unproven.³⁹ Germ theory, although gaining ground had little by way of general and widespread success in eliminating bacterial infections until the advent of sulphonamides and antibiotics. Sanitarian nursing practices continued to be used. Inclusion of environmental cleaning as a nursing routine was important in minimising the risk of potential infection arising in the clinical area.

³⁴ Michael Worboys, *Spreading Germs: Disease Theories and Medical Practice in Britain, 1865-1900*, (Cambridge, Cambridge University Press, 2006), p37.

³⁵ Worboys, *Spreading Germs*, p38.

³⁶ Asepsis is defined as 'the methods of achieving a germ free condition', see William T. McLeod (Ed), *The New Collins Concise Dictionary of the English Language*, (London, Guild Publishing, 1987), p59.

³⁷ Worboys, *Spreading Germs*, p150-1.

³⁸ Worboys, *Spreading Germs*, p156-60.

³⁹ Worboys, *Spreading Germs*, p164-70.

Not all participants in the study were entirely happy with the amount of cleaning they were expected to undertake. Environmental cleaning was considered by some participants to be domestic work, and sometimes was referred to as menial duties.⁴⁰ It appears that the original rationale for cleaning in the minds of many had been forgotten. However, Janet Wilks, for example, in her memoirs of nurse training that commenced in November 1935, reported a ward sister who explained the importance of environmental cleaning to infection control and why it was an important duty for nurses to undertake.⁴¹ None of the participants complained in the same way about cleaning activities arising from or associated with patient care, some of which could be quite intense. The cleaning of bedpans was perhaps the least favoured of these tasks.

It was shown in Chapter 6 that patients with life threatening infections, (pneumonia was one that was cited by participants which carried a high mortality rate), would require considerable attention to their hygiene needs.⁴² As Margaret Hitch noted, a patient 'should be sponged all over whilst the fever is high'.⁴³ The sponging followed from the need to clean the skin of the residues of sweat as much as to give comfort. The accounts of the baths imposed on patients on admission reveal a desire to prevent infection being brought into hospital, as well as to identify potential skin problems which could present as a portal of entry for infection. The routine of the 'back round' was more to do with maintaining a clean skin than relieving pressure in the prevention of bed sores. An unclean skin could be a potential source of infection which needed to be kept away from any potential site for a bed sore. Likewise wound management practices were focussed on using clean materials and cleaning the wound. Overall, the principal theme in the evidence from the participants was that of ensuring cleanliness throughout all aspects of nursing. This extended even to living accommodation in the Nurses' Home being inspected to ensure it was being kept clean.

⁴⁰ Thelma Taylor, interviewed by David Justham on 24 May 2010 at Nottingham. Began SRN training in Nottingham in 1943: Jane Jones, interviewed by David Justham on 6 August 2008 at Preston. Began SRN training in Manchester in 1944.

⁴¹ Janet Wilks, *Carbolic and Leeches*, (Ilfracombe, Hyperion Books, 1991), p25.

⁴² See for example R. A. Young, 'Pneumonia, Lobar', in Humphry Rolleston, (ed.), *The British Encyclopaedia of Medical Practice*, (London, Butterworth and Co. (Publishers) Ltd., 1938), Volume 9, p713-742; Margaret Hitch, *Aids to Medicine for Nurses*, 2nd edition, (London, Baillière, Tindall and Cox, 1943), p113.

⁴³ Hitch, *Aids to Medicine for Nurses*, p114.

Nursing in Britain did not begin to explore alternatives to routine care giving through task allocation until the 1960s, when the notion of individualised care being 'developed' in the USA was being debated. Wards which continued to use routinised care delivery subsequently were not approved as suitable areas for the purpose of nurse training by the General Nursing Council for England and Wales in 1977.⁴⁴ According to Melosh, the attempts to use individualised care systems in US hospitals was a response by former private duty nurses who sought a hospital environment which enabled them to continue to give one-to-one care rather than undertaking tasks allocated according to qualification.⁴⁵ In the 1930s and 1940s nursing care in Britain was routinised, but there was a hierarchy of routines, with some routines requiring nurses to have more sophisticated skills.

8.3 The Hierarchy of Tasks and Care Practices

In approximate terms, the accounts of the participants suggest that their probationary training progressed from an emphasis on environmental cleaning and other indirect care tasks in their first year, through an increasing amount of work involving direct contact with patients in the second and third years. This direct contact emphasised fundamental care needs such as bodily hygiene, comfort, elimination and nutritional needs in their second year of training, progressing into more technical care giving tasks like wound dressing or drug administration in year three. It is clear from this approximation that many probationers were in the clinical environment for some considerable time before ever being involved in substantial amounts of direct care giving. This was recognised by Bevington who noted that up to a year or more could be spent in the clinical environment by new probationers before doing any 'real nursing'.⁴⁶ Some probationers disliked this, especially the amount of domestic style

⁴⁴ General Nursing Council for England and Wales, *Educational Policy: Syllabus and Practical Experiences required for Admission to the General Part of the Register, Revising Council's Circular 69/4/3, 77/19/B*, (London, General Nursing Council, 1977).

⁴⁵ Barbara Melosh, *The Physician's Hand: Work Culture and Conflict in American Nursing*, (Philadelphia, Temple University Press, 1982), p203-205.

⁴⁶ Bevington, *Nursing Life and Discipline*, p6.

duties they were expected to undertake. The existence of a hierarchy was clearly reported by *Jane Jones* who recalled that there was a definite difference between being a first year probationer and being a second year.⁴⁷ As a first year she was a general dogsbody, doing a lot of 'fetching and carrying' whereas as a second year she was given more responsibilities for patient care.⁴⁸ *Phyllis Porter* recalled her first year in Nottingham as 'being eased in gently' giving a clear indication that there was a structure and purpose to the duties she was required to undertake.⁴⁹

There is an explanation for the relevance of the hierarchy of tasks and its related skill requirements that has its roots in the sanitarian ideals of the early Victorians and the need to protect individuals from exposure to potentially life threatening infections. To the sanitarian, maintaining a clean environment was important for health. Nursing was grounded in sanitarian approaches, and therefore placed environmental cleaning as an essential task for nurses. The hierarchy also helps to explain the analyses of Douglas, Vicinus, and Bashford, all of whom emphasise the need for purity as a means for dealing with pollution. Neither Vicinus nor Bashford offer a means whereby purity was achieved through clinical practice.⁵⁰ Although much of their analyses refer to purity symbolically, they nevertheless stress that to remove the pollution caused by infective material required nurses with the utmost purity. Purity of action would require nurses to have both the highest level of skills in managing the infection risk, and an understanding of the potential sources of the infection risk. The necessity for nurses to be pure required a period of probationary experience to develop the necessary practical skills. Margaret Riddell noted that the first year of training was the most important to master 'the rudiments of nursing'.⁵¹ Development took place through a hierarchical series of experiences which brought the probationer ever closer to dealing directly with infective material. The first step in this journey was exposure to the clinical environment. The second involved working directly with patients, and the final

⁴⁷ Jones, interviewed on 6 August 2008.

⁴⁸ Jones, interviewed on 6 August 2008.

⁴⁹ Porter, interviewed on 24 May 2010.

⁵⁰ Vicinus, *Independent Women*, p77; Bashford, *Purity and Pollution*: p37; Douglas, *Purity and Danger*, p169-70.

⁵¹ Margaret S. Riddell, *First Year Nursing Manual*, (London, Faber & Faber Ltd., 5th edition, 1939), p1.

step was exposure to tasks which risked close working with infective material. The graduated progression not only enabled the nurse to develop skill by first learning basic techniques on lower risk work, it also helped to protect the inexperienced probationer against being a risk to herself and others. Riddell considered the development of skill was more important to the recovery of the patient than theoretical knowledge.⁵²

A range of evidence points towards the low status of presumed domestic tasks being problematic as a nursing duty. A few of the participants expressed concern that some of the tasks they were expected to undertake were domestic and not nursing tasks.⁵³ Status issues had existed from the early days of modern nursing, as discussed in Chapter 3. Nightingale wrote, in notes of her meetings with probationers, that lady probationers could be relieved of some housemaid work.⁵⁴ Such a comment by Nightingale would perpetuate social class differences within nursing. In the 1930s and 1940s status remained a major issue for nurses, especially those working with the armed forces.⁵⁵ Status issues were partly addressed by the hierarchy of allocated tasks, in that the more senior a nurse became the more her work was concerned with tasks demanding experience and well developed skills.

Status debates alone do not justify first year probationers having a major role in cleaning. There were advantages in having a hierarchy of tasks in a pre-antibiotic era where acquired infections could be life threatening. For example, an infection of the finger, paronychia, which could arise from any minor damage to the hands, could become life threatening.⁵⁶ Undertaking environmental cleaning tasks offered the opportunity for the unskilled recruit to enter the clinical environment in a safe and protected manner for a number of reasons. Firstly, probationers needed to learn about

⁵² Riddell, *First Year Nursing Manual*, p2.

⁵³ See, for example, King, interviewed on 7 August 2008 who described her work in Shropshire as more like a domestic than a nurse.

⁵⁴ Florence Nightingale, 'Notes of meetings with probationers, 1 February 1873', in Lynn McDonald, (ed.), *The Nightingale School*, (Waterloo, Wilfrid Laurier University Press, 2009), p241.

⁵⁵ Starns, *March of the Matrons*, p32.

⁵⁶ W. T. Gordon Pugh, *Practical Nursing including Hygiene and Dietetics*, 13th edition, (Edinburgh, William Blackwood and Sons, 1940), p31 and p39.

cleanliness and how to clean. The cleanliness they needed to achieve would not be a superficial or socially acceptable level of cleanliness that they perhaps had experienced at home but it would be a scrupulous level of cleanliness. They needed to learn rigorous hand hygiene techniques which would reduce the risk of transmission of dirt. In a sanitarian conception of the inherent unhealthiness of dirt, rigour was needed in its removal. First year probationers needed to develop their skills in cleaning the ward environment, to ensure that potential reservoirs of dirt, for example collections of fluff around bed wheels, were removed. By attempting to remove every vestige of dirt, the probationer would be learning the importance of rigorous cleanliness in the clinical environment. The advantage of learning the importance of cleanliness in a way that offered minimal patient contact was that it minimised the risk of the unskilful probationer becoming a source of cross infection. The first year probationer might be consigned to working in the sluice, and this would enhance cleaning skills further. Cleaning bedpans, sluicing soiled sheets prior to being sent for laundering, and washing out sputum mugs would be examples whereby handling exposure to potentially harmful material could be learnt away from the patient. In these tasks particularly, probationers would learn the importance of and become skilful in both good hand hygiene practices and protecting themselves from spillages or direct contact with waste body products.

Secondly, skill required to work with patients needed to be developed. Not all probationers would enter with the necessary social skills to work with ill patients. In a society which was class conscious, it was reasonable to expect well developed manners and social skills when interacting with patients and senior colleagues.⁵⁷ Undertaking cleaning tasks with limited patient contact would enable the new probationer not only to learn how to fulfil the cleaning duties, but would provide an opportunity to observe something of senior colleagues at work. The probationer would have some limited opportunities to interact with patients as, for example, would be the case when moving beds for cleaning, and damp dusting around patients beds. Once competence had been achieved in these duties, greater exposure to patients

⁵⁷ Riddell, *First Year Nursing Manual*, p10-11.

could be given. There would be interaction during the bed pan round. Jenny Littlewood explores the learning that arises out of this task.⁵⁸ Helping with the admission baths, and the back round provided more opportunities to learn how to interact with patients during hygiene activities.

Following the development of skills in cleaning the environment and removing dirt from unclean equipment and linen, the next stage in the development of the purity needed to deal with life threatening infection was learning to clean patients through a series of tasks, normally described as attending to patient hygiene. The probationer would begin to develop fundamental care skills particularly learning skills in patient hygiene. Loosely aligned to the second probationary year, this exposure required patient contact in a more intimate manner than previously. Having developed skills in cleaning the environment, these skills could be developed as the probationer learnt to clean the patient through such tasks as the admission bath, the back round, and the bedpan round. The admission bath would teach the probationer the importance of inspecting the patient for signs of infestation with lice or scabies, and for evidence of skin lesions which could be or might become infected. Measures to treat the patient or to prevent the risk of cross infection to other patients could be put in place. The 'back round' normally involved inspecting and cleaning the skin. Historically this was done to remove the residues of sweat which Nightingale considered 'noxious'.⁵⁹ The probationer would learn the importance of keeping the patient clean beyond an initial admission routine. Thus in working with patients, probationers would hone their skills in preparation for the more technical tasks that might involve direct exposure to sources of infection. *Edith Evans* recalled helping a staff nurse to tepid sponge a patient 'it was a very leisurely affair ... it took a fairish time ... that was the whole point – the caring – it was the time we spent with the patients'.⁶⁰ Here was an indication

⁵⁸ Littlewood, 'Care and Ambiguity', p170-89.

⁵⁹ Florence Nightingale, 'Nursing the Sick' in Richard Quain, *Dictionary of Medicine*, reproduced in Lynn McDonald, (ed.), *The Nightingale School*, (Waterloo, Wilfrid Laurier University Press, 2009), see p740-741. 'Noxious' was a term associated with material that could give rise to miasma, and noxious material was therefore considered potentially harmful.

⁶⁰ Edith Evans, interviewed by David Justham on 18 July 2008 at Lymm. Began SRN training in Manchester in 1936

that the probationer was learning more sophisticated skills by working with the staff nurse.

Technical tasks were those tasks normally undertaken by qualified staff or senior probationers. Wound redressing was one such task. The development of skills through the first two probationary years gave the probationer the ability to ensure a clean environment, a clean patient, and a clean self. She demonstrated by her dedication to the profession, in the way she ensured an ordered and clean environment for her patients, and the manner in which she dealt with her patients, that she had the 'purity' to be able to enter the most dangerous aspects of her work. An infected wound could shed pathogenic bacteria into the environment. To deal with such a wound in the absence of treatments that could kill the bacteria would require sophisticated skills. Even a clean wound would require careful handling so that infection would not be introduced to it, and thus an awareness of potential sources of contamination from the environment, the patient, or the nurse herself was needed. *Hilary Harris* pointed out that a staff nurse might allow the probationer to undertake the re-dressing of the wound.⁶¹ Such role reversal would allow the staff nurse the opportunity to supervise and teach the probationer in the technical skills required for wound dressing. One particular skill would be the use of forceps to manipulate sterilised dressings to avoid any risk of contamination.

The presence of a hierarchy of tasks is a reasonable expectation in the clinical environment prior to the availability of drugs that could deal with the most common types of infecting organisms. Whilst germ theory was still developing, there remained uncertainties about the nature of infectivity, about the nature of different types of micro-organisms, and about the best ways to treat infections.⁶² Having a hierarchy of

⁶¹ Hilary Harris, interviewed by David Justham on 6 August 2008 at Clitheroe. Began SRN training in Manchester in 1934.

⁶² See, for example, Joseph W. Bigger, *Handbook of Bacteriology*, 3rd edition, (London, Baillière, Tindall, and Cox, 1933); W. T. Gordon Pugh, *Practical Nursing including Hygiene and Dietetics*, 11th edition, (Edinburgh, William Blackwood and Sons, 1937), p416-429.

tasks enabled probationers to develop skills to deal with the infection risk progressively.

8.4 Vocation and Infection Control

Nursing was considered a vocation through to the 1930s.⁶³ The Lancet Commission's report of 1932 into nursing shortages concluded that vocation was still an important element in nursing, and that the difficulties in recruitment were due to a growth in hospital bed provision increasing demand for nurses.⁶⁴ But by 1939 the Athlone Committee noted that the vocational concept was weakening as a result of changing attitudes in society.⁶⁵

The vocational concept originated with Victorian sisterhoods, whether religious or lay.⁶⁶ Sisterhoods had the benefit of removing the 'stigma of paid labour for many middle-class women'.⁶⁷ The routinisation of the work was a feature of the discipline of Sisterhoods to engender commitment to self-sacrifice in the welfare of others.⁶⁸ Drawing on the sisterhood concept made the daily routine a natural feature of the work of nursing.⁶⁹ The routinisation of the work, coupled with the wearing of uniforms, typical of sisterhoods, enabled the depersonalisation of the individual nurse. One nurse became like another and therefore not seen as an individual in their own right. As noted by Alison Bashford, depersonalisation made it possible for middle-class women to have 'intimate contact with working-class men'.⁷⁰ Vocation enabled the idea of self-sacrifice in the service of others to be an important feature of the culture of nursing.

⁶³ A. Millicent Ashdown, *A Complete System of Nursing*, (London, J. M. Dent and Sons Ltd., 1928), p1; Riddell, *First Year Nursing Manual*, p1.

⁶⁴ *The Lancet Commission on Nursing: Final Report*.

⁶⁵ Athlone Committee, *Interim Report*, p8.

⁶⁶ Alison Bashford, *Purity and Pollution: Gender, Embodiment and Victorian Medicine*, (London, Macmillan Press Ltd., 1998), p49.

⁶⁷ Vicinus, *Independent Women*, p37.

⁶⁸ Vicinus, *Independent Women*, p64.

⁶⁹ Bashford, *Purity and Pollution*, p22–25.

⁷⁰ Bashford, *Purity and Pollution*, p55.

The notion of self sacrifice carried at least three dimensions. The first was that of total commitment to the care of the patients, which would require long hours of work with little time 'off-duty' each day. Secondly, self-sacrifice required the nurse to live away from family, and remain single with no responsibility for others away from work. The third dimension was that self-sacrifice meant that there should be no thought for self-protection when exposed to risk of harm. In this respect hospital nurses worked closely with patients with life threatening infections. Evidence reported in Chapter 4 reveals that a number of participants knew of colleagues or family members who had died as a result of contracting an infection through nursing. Advances in microbiology had yet to find solutions to effectively treat the infection risks from streptococci, staphylococci, tuberculosis, and many other infections. The self-sacrificial nature of nursing arising out of the vocational concept needs to be understood alongside the other feature of vocation which is the notion of 'purity'. Nurses were expected to look after themselves, and to seek bodily and moral cleanliness.⁷¹ This thesis argues that the attainment of highly developed skills that maintained the nurse as 'infection free' and as a barrier to transmission of infection was the goal.

Away from the ward environment nurses were involved in preventing the risk of infection spreading. Living in the controlled environment of the Nurses Home with limited free time and limited opportunities for a social life minimised the exposure they would have to infection risks in the community at large. The rule that uniform was not to be worn in public was another means of avoiding contamination.

Infection control using sanitarian ideology which involved removing dirt seemed to have worked, and therefore there was no reason to change it. This study suggested that working closely with patients would require nurses with good levels of skill in infection control. The discipline and skills developed through cleaning activities would serve to prevent the risk of dirt or unclean materials being brought into the patient's proximity. The nurse could concentrate on ensuring the patient's cleanliness, thus

⁷¹ Pugh, *Practical Nursing*, 11th edition, p31-6; Pyne, *Professional Discipline in Nursing*, p22; Bashford, *Purity and Pollution*, p37.

further protecting the patient from their own dirt. By having developed skills in cleaning during her initial probationary training in environmental cleaning, the nurse would be better able to protect both herself and others. In the days before effective treatments were available to control infection, the nurse had to provide care that supported the patient through the course of the infection to eventual recovery or death. Care was delivered through routines that were used to bring about regularity and order. Routines meant that participants saw few, if any, pressure sores or any type of hospital acquired infection.

Beginning with the Edwardian era, and subsequently through the First World War and its aftermath, many more employment opportunities were available for women. These opportunities offered terms and conditions of employment that allowed women to go out to work from home, to avoid perceived low status work, and did not require the discipline of working in ways that minimised exposure to potentially life threatening infections. Whilst vocation was still considered a necessary attribute in nursing, by the start of the 1930s it was beginning to be questioned. The calls for nursing to change appeared to go unheeded, certainly by the Lancet Commission which found that vocation had helped maintain the quality of nursing.⁷²

8.5 The Beginning of the End of Sanitarian Nursing

The medically dominated Lancet Commission did not bring about changes to the clinical work of nurses. Nurses themselves did not have the power to change. The conformity wrought by vocational working, coupled with institutional working, limited a nurse's ability to question practice.⁷³ For example, when it came to wound care *Porter* reported that the person undertaking the dressing round would go from one patient to another around the ward irrespective of whether the wound was clean or

⁷² *The Lancet Commission on Nursing: Final Report*, p166.

⁷³ See, Erving Goffman, *Asylums: Essays on the social situation of mental patients and other inmates*, (Harmondsworth, Penguin Books, 1968), p107 for his analysis of institutionalised behaviour amongst staff.

dirty.⁷⁴ She lacked the power to change the practice routine. Another example relates to the use of maggots in wound care which had been observed to have kept wounds free of infection, or at least not as seriously infected as might be anticipated. Yet to the nurse, steeped in routinised practice, focussed on sanitarian nursing, the maggots were seen as unclean and they would be removed. Maggots highlighted the powerless in nurses to capitalise on the observation and bring about a change in practice. It is suggested that the lack of a scientific approach to nursing, and the lack of a depth of education as recognised in a range of reports, was the cause of this powerlessness.⁷⁵ But even the medical profession did not advocate the use of maggots despite their recognised value.⁷⁶

It was the pharmaceutical companies that caused change to begin when they introduced sulphonamide drugs and antibiotics. Firstly, the sulphonamide family of drugs, which had reasonable bacteriostatic effect against streptococcal infections, were introduced from 1936 with Prontisil, followed in 1937 by M&B 693. The development of Penicillin, the first available bactericidal antibiotic with particular effectiveness against staphylococcal infections during the early 1940s, with commercial availability in Britain from 1946, revolutionised care practices.⁷⁷

The first sulphonamide to be used was known as Prontisil. It prevented patients with pneumonia reaching 'the crisis'.⁷⁸ Patients with pneumonia would run a high fever until the 'crisis' occurred at about ten days into the infection. During this time nurses were involved in a regular need to sponge the patient to remove sweat and keep the

⁷⁴ Porter, interviewed on 24 May 2010.

⁷⁵ Athlone Committee, *Interim Report*; Christopher Hart, *Behind the Mask: Nurses, Their Unions and Nursing Policy*, (London, Baillière Tindall, 1994) and Susan McGann, Anne Crowther, and Rona Dougall, *A History of the Royal College of Nursing 1916–1990: A voice for Nurses*, (Manchester, Manchester University Press, 2009).

⁷⁶ Norman M. Matheson, 'Accidental and Surgical Wounds', Chapter 10 in Hamilton Bailey (ed.), *Pye's Surgical Handicraft: A manual of surgical manipulations, minor surgery, and other matters connected with the work of house surgeons and of surgical dressers*, 11th edition, (Bristol, John Wright and Sons Ltd, 1939), p67.

⁷⁷ See Chapter 6 for accounts which illustrate that nursing was revolutionised by these drugs.

⁷⁸ Prontisil was manufactured in Germany to begin with and tablets were coloured red, see S. G. B. Amyes, *Magic Bullets, Lost Horizons: The Rise and Fall of Antibiotics*, (London, Taylor and Francis, 2001).

patient's temperature under control. This was satisfying and rewarding work despite being challenging work. M&B 693 controlled the infection early in its course, and prevented the patient reaching the crisis with all its associated work. In this regard, nurses lost an important part of their role. Nursing patients with pneumonia had been a worthwhile challenge but for *Hilary Harris* all the interest disappeared when M&B 693 took away the challenge.⁷⁹ *Carol Clark* remembered seven patients with pneumonia being given M&B 693, six of whom got better, although one did not.⁸⁰ Despite one patient dying this was a much reduced mortality rate.⁸¹ The result of the sulphonamides was a nursing workforce that had skills in the care of the patient with pneumonia that would become redundant.

In the timeline of events, the Athlone Committee report on nursing appeared in 1939 some three years after sulphonamide drugs had been available in clinical practice. The success of sulphonamides against some infections was adding to confirmation of the claim by proponents of germ theory that infections were specific and could be treated with specific remedies. The Athlone Committee no longer placed emphasis on the vocational ideal as a prerequisite for nursing.⁸² The Athlone Committee report proposed increasing the numbers of ancillary staff to 'relieve nurses of non-nursing duties', and it is suggested that this indicates that it was no longer essential for nurses to undertake environmental cleaning when managing the infection risk.⁸³

In 1941 the Medical Research Council produced guidance which sought to standardise wound dressing techniques nationally.⁸⁴ It had been recognised that there was a variety of routines in use across the country. One of the motivations was to update clinical staff in current best practices, including recommending the use of pre-packed

⁷⁹ Harris, interviewed on 6 August 2008.

⁸⁰ Carol Clark, interviewed by David Justham on 16 July 2008 at Abergele. Began State Registered Nurse (SRN) training in Manchester in 1934.

⁸¹ Robert. A. Young and G. E. Beaumont, 'Diseases of the Lungs', in Frederick W. Price, (ed.), *A Textbook of the Practice of Medicine*, 5th edition, (London, Oxford University Press, 1937), p1164-1283, see page 1235.

⁸² Athlone Committee, *Interim Report*, p8.

⁸³ Baly, *Nursing and Social Change*, p166.

⁸⁴ Medical Research Council War Wounds Committee and Committee of London Sector Pathologists, *The Prevention of "Hospital Infection" of Wounds*, MRC War Memorandum No. 6, (London, His Majesty's Stationery Office, 1941).

dressings. There is evidence that these recommendations were adopted in provincial hospitals.⁸⁵ The recommendations would lead to less reliance on nurses preparing wound dressing materials.

During the 1940s penicillin became available with remarkable results in the management of staphylococcal infections. *Louise Lloyd* recalled that penicillin made an incredible difference. As she said 'There didn't seem to be side effects'.⁸⁶ *Susan Shaw* mentioned that penicillin was something to be thankful for 'as it made treating infected wounds so much easier'.⁸⁷ As *Evelyn Prentis* recalled the impact of antibiotics 'shifted the balance of power from nursing as we knew it to a quick jab with a needle and it was all over'.⁸⁸ *Gladys Hardy* wrote in her 1951 book aimed at attracting recruits to nursing that:

With their penicillin syringes and their sulpha drugs, and powerful narcotics, the work is much lighter, though the drama is less. Gone are the four-hourly linseed poultices for an inflamed chest; gone are the medical and surgical fomentations. The arts of splinting and bandaging are almost dead, and many of the clinical treatments are never seen.⁸⁹

The dramatic impact of penicillin caused *Starns* to question 'How were nurses able to justify their professional status when one drug could undermine most of their traditional nursing techniques?'.⁹⁰ The fact that the number of beds in fever hospitals in England and Wales fell from 39,451 in 1938 to just 13,512 in 1949 indicated a major reduction in the demand for such beds following the introduction of sulphonamides and antibiotics.⁹¹

⁸⁵ See, for example, Board of Management of Lincoln County Hospital, *Minute Book of the Board of Management July 1939–July 1947*, (Lincoln, Lincolnshire Archives, HOSP/LINCOLN 20), minutes for 28th June 1943, p260 which records 'That the technique for the dressing of wounds recommended by the Medical Research Council be adopted in the wards and that the necessary appliances be purchased at a cost of £30.'

⁸⁶ *Louise Lloyd*, interviewed by David Justham on 12 August 2008 at Grantham. Began SRN training in Leicester in 1940.

⁸⁷ *Susan Shaw*, interviewed by David Justham on 18 May 2010 at Nottingham. Began SRN training in Nottingham in 1943.

⁸⁸ *Evelyn Prentis*, *A Nurse in Time*, (London, Hutchinson & Co., 1977), p179.

⁸⁹ *Gladys Hardy*, *Yes, Matron*, (London, Edward O. Beck Ltd., 1951), p45.

⁹⁰ *Starns*, *Nurses at War*, p73.

⁹¹ *Margaret R Currie*, *Fever Hospitals and Fever Nurses: A British social history of fever nursing: a national service*, (London, Routledge, 2005), p26.

Mary Douglas suggested that dirt was a 'relative idea', there was no absolute definition, and thus the concept of dirt will change over time and with changes in society.⁹² The concept of dirt within sanitarianism demanded rigorous and comprehensive methods for its removal. With the advent of sulphonamide drugs and antibiotics, dirt became less of a problem and did not require the same extent and intensity of cleaning regimes. The 'miracle' drug that was penicillin took away some of fear of infection from society, and the nature of dirt changed in society's imagination. No longer would dirt be something to be feared. The implications of the change would have consequences for nursing in the period beyond the scope of this study. The impact saw a loss of role leading to an identity crisis, which in turn saw nurses in the 1950s and 1960s attempting to define the nature of nursing.⁹³ In the UK pre-registration nursing courses in the University sector began to appear, and nurses began to be initiators in research activity as part of attempts to capture a new image for nursing.⁹⁴

8.6 Conclusion

The work of nurses in general hospitals before the introduction of the sulphonamide drugs and antibiotics was concerned with managing the risk of infection, whether it was linked to environmental dirt, bodily excretions, or already present in the patient on admission to hospital. Arising from a time when the causes of infection were inadequately understood, Nightingale had stated that the main task of nursing was cleaning.⁹⁵ This was a feature of the sanitarian movement which achieved success in reducing disease by attention to environmental and personal hygiene. The legacy of nursing's focus on hygiene persisted through to the 1930s and 1940s. The analysis of the duties reported by participants in this study identified that the care was highly

⁹² Douglas, *Purity and Danger*, p43–44.

⁹³ See, for example, Virginia Henderson, *The Nature of Nursing*, (New York, Macmillan, 1966).

⁹⁴ Jean K. McFarlane, *The Proper Study of the Nurse: An account of the first two years of a research project 'The Study of Nursing Care' including a study of the relevant background literature*, (London, Royal College of Nursing and the National Council of Nurses for the United Kingdom, 1970).

⁹⁵ Nightingale, 'Notes on Nursing: What it is and What it is not', p646.

routinised, and that there was a hierarchy of tasks. The hierarchy of tasks revealed an understated approach to the development of skills in infection control. The environment of hospital nursing was one in which nurses were exposed to potential life threatening infection. It was important that nurses knew how to work in this environment as safely as possible. The routinisation of care giving, using task allocation, enabled sophisticated skills to be developed through repetition. The purity of the skills achieved by the expert nurse enabled her to work safely with the infected patient.

The analysis of the evidence from participants reveals a theme that was the management and control of the infection risk that links the different tasks and routines in nursing work before the introduction of sulphonamides and antibiotics. This would change following their introduction. In one sense, the change was immediate in that the management of acute infections like pneumonia or infected wounds reduced the nursing workload substantially. Change was not instantaneous for all aspects of nursing. But there was an impact on the expectation that nursing should be a vocation in order to create the conditions for self-sacrificing nurses to confront the infection risks in the care environment. Evidence points to vocation being questioned and, when antibiotics allowed healthcare staff to believe that the problem of infection had been solved, so the need for vocation was removed, and recruitment and retention issues could be addressed by the creation and employment of enrolled nurses and greater use of nursing auxiliaries and domestic staff. Environmental cleaning was no longer an essential task for nurses and this would be lost from their role. The success of sulphonamides and antibiotics took away hours of 'mopping the fevered brow'. The modernising of wound re-dressing systems would remove the need to prepare dressing materials and, ultimately, sterilise equipment at ward level. The consequence for the qualified nurse was potentially devastating. In essence, sulphonamides and antibiotics meant that nursing needed to reinvent itself. These drugs had taken away the power that nurses had in managing their patients.

Chapter 9

CONCLUSIONS

9.1 General Comments

There are two primary conclusions from this study of general hospital nursing. Firstly, the 1930s and 1940s saw the beginning of the end of what I refer to as 'sanitarian nursing'. Secondly, nursing had change thrust upon it by the introduction of both sulphonamides and antibiotics. Before and ever since Florence Nightingale's creation of modern nursing, some of the primary functions of the nurse were to be clean, to keep the patient clean and to ensure a clean environment.¹ This conception of nursing was created at a time when disease causation was thought to be due to miasma. Alison Bashford's analysis of nursing in the late nineteenth century Victorian Britain still held validity through to the beginning of the 1930s. However, Bashford's analysis did not address the process whereby a probationer achieved the 'purity in clinical practice' that was expected. 'Purity of spirit' was sought in spirituality that was grounded in Christian religion. 'Purity of obedience' was sought in learning obedience to one's superiors, and to medical staff. But the achievement of purity of practice was not addressed by Bashford. In an environment where the infection risk was high, Nightingale required the nurse to be clean.² Competence in cleanliness would require a high level of practice in handling potential contamination. Probationer training as practiced would achieve this by a progression of more sophisticated tasks, from cleaning the environment, to cleaning the exterior of the patient to ultimately cleaning the interior, for example a wound represents a break in the skin, the outer defence of the body. If the novice nurse became contaminated by inexpert skills in cleaning the environment then this was preferable to the likelihood of becoming contaminated through working with an infected patient. It would also be safer for the patient.

¹ Florence Nightingale, 'Notes on Nursing: What it is and What it is not' in Lynn McDonald, (ed.), *The Nightingale School*, (Waterloo, Wilfrid Laurier University Press, 2009), p646.

² Nightingale, 'Notes on Nursing: What it is and What it is not', p646.

As the various threads are drawn together, the evidence suggests that nursing in the immediate years before the introduction of the antibiotics based its practice on sanitarianism with a primary focus on cleanliness. The introduction of the sulphonamide drugs and antibiotics brought about immense changes in the management of infections to the extent that nursing no longer needed to sustain its primary focus on cleanliness. Whilst other histories point to the concerns over recruitment and retention, the need to reform the education of probationers, and the development of nursing as a profession, they do not address the underlying clinical work of nursing which may be a root cause or factor in giving rise to the concerns. The whole of the hospital sector was under enormous pressures from increasing demand arising from technological developments and population and cultural changes. There was lack of funding which other histories examine and which ultimately led to the creation of a nationalised health service.

To explain nursing prior to sulphonamides as grounded in sanitarian principles contributes towards understanding a lack of substantial change in nursing practice from a time before the development of germ theory up to the 1930s and 1940s . The sanitarian principle of providing a clean environment achieved the same practical result as germ theorists who sought removal of micro-organisms via asepsis or antisepsis. Sanitarians adapted their understanding of miasmas as germ theory developed.³ Sanitarianism, through the public health movement, achieved great success in improving living environments.⁴ It spawned legislation to control infection in the community.⁵ Sanitarianism continued into the first half of the twentieth century, claiming success in the decline in the incidence of infectious diseases.⁶ It was

³ Michael Worboys, *Spreading Germs: Disease Theories and Medical Practice in Britain, 1865-1900*, (Cambridge, Cambridge University Press, 2006), p38.

⁴ Harry Wain, *A History of Preventive Medicine*, (Springfield, Charles C. Thomas, 1970).

⁵ See, for example, William Robertson, *An Introduction to Hygiene*, 2nd edition, (Edinburgh, E. and S. Livingstone, 1939).

⁶ Thomas McKeown, *The Role of Medicine: Dream, Mirage, or Nemesis*, (Oxford, Basil Blackwell Ltd., 1979), particularly p45-65, but also p91-113.

therefore reasonable for nursing to continue to deliver care in the general hospital sector in a manner which had been successful.

9.2 Limitations of the Study

There are a number of limitations to this study. The techniques of source criticism were used when establishing the authority of sources such as identifying authorship, locating the date of creation, determining the original form and detection of spurious documents.⁷ When examining textbooks from the period, efforts were made to track changes in new editions or reprints. In making links between the oral testimonies and the published texts, there is a possibility that geographical variations in practice existed which have not been accounted for. Most of the authors of published texts practiced in London, whereas all participants, bar one, trained in provincial hospitals.

Oral history was the method of choice in this study for the main data collection on the basis that the method is able to explore the memories of the disenfranchised and/ or otherwise unheard accounts of ordinary working lives of the past.⁸ The participants for the study were volunteers responding to open invitations to take part. These participants had a story to tell, which they wanted to tell. This presents a limitation as it is unknown to what extent their experience is reproduced in the stories of those who felt their experiences were of no value for whatever reason. Likewise the recruitment sought to attract former registered nurses. It should have included attempts to recruit those who left during probationer training. About one third of recruits left during probationer training, either of their own volition or because they were dismissed.⁹ There would be value in hearing their stories, and the reasons which caused them to leave. Having more participants would have been useful. The aim had been to recruit between 36 to 41 participants based on estimates of reaching about 2% of former

⁷ Homer C. Hockett, *The Critical Method in Historical Research and Writing*, (New York, Macmillan, 1955).

⁸ Alistair Thomson, 'Fifty Years On: An International Perspective on Oral History', *The Journal of American History*, (1998) 85, (2), p581-595.

⁹ Brian Abel-Smith, *A History of the Nursing Profession*, (London, Heinemann Educational, 1960), p151; Christopher Hart, *Behind the Mask: Nurses, Their Unions and Nursing Policy*, (London, Baillière Tindall, 1994), p55.

nurses who had commenced training during or before 1949. In the end 19 interviews were undertaken. However, the accounts of participants showed similarities in the themes identified suggestive that data saturation was highly probable and extra participants may not add to the uncovered themes.¹⁰

All participants were women and no male nurse voices were heard. Though the vast majority of registered nurses in general nursing were women, a few men were employed. This was the case particularly following WWII when many male orderlies in the armed forces sought nurse training when demobilised, but the interview sample did not include any men. The archive materials and published memoirs are devoid of evidence from men. More effort into recruitment activities for the study might have been able to rectify this.

A number of autobiographies and collections of memories were read.¹¹ Archived material from Graham Thurgood's study of nurses experiences of new technologies between 1930 and 1950 extended access to a further 21 transcripts.¹² A number of sound recordings were listened to at the RCN Archives in Edinburgh. The limitation of using the work of other authors who have published collections of memories of former

¹⁰ See, for example, Helen J. Streubert, 'The Conduct of Qualitative Research: Common Essential Elements', Chapter 2 in Helen J. Streubert, and Dona R. Carpenter, (Editors), *Qualitative Research in Nursing: Advancing the Humanistic Imperative*, 2nd edition, (Philadelphia, Lippincott, 1999), p22-23.

¹¹ see, for example, Pamela Bright, *Life in Our Hands*, (London, MacGibbon and Kee, 1955); Joan Markham, *The Lamp was Dimmed: The Story of a Nurse's Training*, (London, Robert Hale, 1975); Evelyn Prentis, *A Nurse in Time*, (London, Hutchinson & Co., 1977); Brenda McBryde, *A Nurse's War*, (London, Chatto and Windus, 1979); Margaret E. Broadley, *Patients Come First: Nursing at 'The London' between the two World Wars*, (London, The London Hospital Special Trustees, 1980); Janet Wilks, *Carbolic and Leeches*, (Ilfracombe, Hyperion Books, 1991); Jennifer Craig, *Yes Sister, No Sister: A Leeds Nurse in the 1950s*, (Derby, Breedon Books Publishing Ltd., 2006); and for collected accounts see, Brenda McBryde, *Quiet Heroines: Nurses of the Second World War*, (Saffron Walden, Cakebread Publications, 1989); Eric Taylor, *Front-Line Nurse: British Nurses in World War II*, (London, Robert Hale, 1997); Eric Taylor, *Combat Nurse*, (London, Robert Hale, 1999); Eric Taylor, *Wartime Nurse: 100 years from the Crimea to Korea 1854-1954*, (London, Robert Hale, 2001); Margaret R. Currie, *Fever Hospitals and Fever Nurses: A British Social History of Fever Nursing: A National Service*, (London, Routledge, 2005); Nicola Tyrer, *Sisters in Arms: British Army Nurses Tell Their Story*, (London, Weidenfield and Nicolson, 2008); and Barbara Mortimer, *Sisters: Memories from the Courageous Nurses of World War Two*, (London, Hutchinson, 2012).

¹² The archive of Graham Thurgood's PhD interviews, including transcript is held within the Women in Nursing collection of the Archives of the University of Huddersfield.

nurses is that they inevitably reflect the authors' interests. Not having the whole transcript available also meant that some valuable material for this thesis could have been inaccessible.

Another limitation derives from the infirmity of some of the participants. This presented challenges, including failing memory for words, and in particular the recollection of specific names, and was sometimes overcome by interviews taking place in the presence of a relative. On five occasions, relatives were present during the interviews, one niece, one son, one daughter and two husbands. Interviews generally took place in the participants' own home, although two took place in dually registered residential/ nursing homes. On occasions the interviewer had to suggest words. Such prompts could be considered 'leading', for example, reminding participants of sulphonamide drugs like M&B 693. Participants dealt with the difficulty of memory losses in several different ways. One strategy, and the most common, was to confess to not being able to remember the names of specific items of equipment or names of drugs. Another strategy was to reflect a question back to the interviewer in the expectation that the interviewer would provide an appropriate prompt. The problem of memory deficiencies was overcome in a number of interviews by the presence of relatives who, because of having heard the memories of the participants on previous occasions, could provide prompts for the participant. Thus *Edith Evan's* niece, *Michelle Moore's* daughter and *Hilary Harris's* son all reminded the participant to tell the author about a particular anecdote they had heard before, though in both *Harris's* and *Moore's* cases it was about a hospital visit which had prompted comparisons of cleaning in the 2000s with the 1930s and 1940s respectively.¹³ *Nancy Newton's* husband contributed an anecdote about a curfew at the Nurses' Home.¹⁴ Both *Gloria Garner* and *Louise Lloyd* made use of memorabilia to help recount their

¹³ Edith Evans, interviewed by David Justham on 18 July 2008 at Lymm. Began SRN training in Manchester in 1936; Hilary Harris, interviewed by David Justham on 6 August 2008 at Clitheroe. Began SRN training in Manchester in 1934; Michelle Moore, interviewed by David Justham on 3 September 2008 at London. Began SRN training in Birmingham in 1940.

¹⁴ Nancy Newton, interviewed by David Justham on 19 December 2008 at Sturton by Stow. Began SRN training in London in 1939.

memories.¹⁵ The issue of repeated retelling of stories raises the possibility that these become anecdotes which have been refined and honed over time rather than being raw memories was discussed in Chapter 1.

The ordinariness of the activities undertaken presented challenges to exploring the work of nurses in this period. Often the level of detail that the interviewer sought was not remembered. For example, the setting up of a dressing trolley with the necessary items placed on either the top or lower shelves to undertake a wound re-dressing at the bedside could not be recalled with any confidence. Nevertheless, it is considered that there was sufficient repetition of accounts from respondents independent of prompts from the interviewer to provide accounts of nursing practices in the study period. When participants' ward based career involved post qualification experiences, it was often not easy to be sure, from their accounts, if the experiences reported occurred within the study period of the 1930s and 1940s or occurred some time after.

The study deliberately set out to explore nursing in the general hospital setting. Such hospitals were either voluntary hospitals or managed through local authorities. This study did not seek to explore the work of fever nurses in fever hospitals. Margaret Currie had already produced a history of these in the United Kingdom.¹⁶ Nor did this study explore the work of nurses caring for patients with tuberculosis in sanatoria. Exploring nursing in sanatoria is important to a fuller understanding of nursing patients with TB, a difficult to treat infection. Stephanie Kirkby took the lead in this work.¹⁷ Whilst some patients with TB were treated in general hospitals, there is more to be done in exploring the nurses work with this group of patients.

¹⁵ Gloria Garner, interviewed by David Justham on 5 August 2008 at Grange-over-Sands. Began SRN training in Manchester in 1940; Louise Lloyd, interviewed by David Justham on 12 August 2008 at Grantham. Began SRN training in Leicester in 1940.

¹⁶ Margaret R. Currie, 'Fever Nurses' Perceptions of Their Fever Nurse Training', *International History of Nursing Journal*, (1997) 3, (2), p5-9; Margaret R. Currie, *Fever Hospitals and Fever Nurses: A British Social History of Fever Nursing: A National Service*, (London, Routledge, 2005).

¹⁷ Stephanie Kirkby, 'Marketing the municipal model: the London County Council Nursing Service recruitment strategies 1930-45', *International History of Nursing Journal*, 4 (1) (1988), pp. 17-23; Stephanie Kirby and Wendy Masden, 'Institutionalised isolation: tuberculosis nursing at Westwood Sanatorium, Queensland, Australia 1919-55', *Nursing Inquiry*, (2009) 16, (2), 122-132; Stephanie Kirby,

A final limitation rests with my own experiences of the apprenticeship style training in the early 1970s, especially regarding the practical element of the training. These experiences enabled me to identify with the participants, and to share a common language about the work. I was also interested in the management of infection and infection control aspects of the participants' experiences. These interests and knowledge gave me expertise that could be considered a strength in so far as it helped prompt and guide the interview. However the level of prior knowledge has the potential to be a serious limitation as I might have taken received accounts for granted and not prompted participants for further explanation of particular points. Failure to respond to some clues for further exploration on other aspects of nursing work could lead to a different history being written.

9.3 Further Research Questions arising from the Study

A number of questions arise from this study and can be grouped into before, during or after the 1930s and 1940s. The answers to these would help to support or challenge conclusions reached in this thesis.

9.3.1 The 1920s and Before

Work within a medical history context exploring sanitarian ideas in the early twentieth century needs to be extended to the field of nursing history. For example, extending the analysis provided by David Wootton in *Bad Medicine* to early twentieth century medicine and nursing might help to explain the probable persistence of sanitarian ideas, deriving from miasma, to well into the 1920s and beyond.¹⁸

'Sputum and the Scent of Wallflowers: Nursing in Tuberculosis Sanatoria 1920-1970', *Social History of Medicine*, (2010) 23, (3), p602-620.

¹⁸ David Wootton, *Bad Medicine: Doctors Doing Harm Since Hippocrates*, (Oxford, Oxford University Press, 2007).

The emergence of germ theory and some of the developments arising from it, for example, significant advances in bacteriology have been examined.¹⁹ But the transfer rate of research knowledge into clinical practice, and the impact of this knowledge on pre 1930s nursing would be of interest to help provide some continuity with the present study.

This study has drawn on the influence of sisterhoods in the organisation of Victorian nursing. A study to explore the advantages and disadvantage of nurses' homes in the 1920s to the development of discipline and obedience amongst probationers, and its maintenance amongst qualified practitioners would be of interest.

This study has found that cleaning was important in nursing in the 1930s and 1940s. A study that explores the relationship between nurses and ward maids in the 1920s would help in understanding the impact of the development of domestic science.

9.3.2 During the 1930s and 1940s

The fact that participants in this study reported major changes in nursing care as a consequence of the introduction of sulphonamides and antibiotics needs further exploration. Is there evidence to be found in hospital records, be it reports of matrons or others, that sulphonamides and or antibiotics were part of a legitimate argument to adjust the skill mix of the nursing establishment? Did the numbers of trained staff or staff in training change because of the saving on skilled nurses' time arising from the impact of these drugs? Such arguments could arise in the hiatus between the availability of these drugs and the development of new medical technologies that demanded more skilled nursing. For example, Intensive Care Units first appeared in the United States of America in 1953 in part as a consequence of alterations in the cause of mortality and morbidity from infectious disease to cardiovascular problems.²⁰

¹⁹ Worboys, *Spreading Germs*.

²⁰ Julie Fairman and Joan E. Lynaugh, *Critical Care Nursing: A History*, (Philadelphia, University of Philadelphia Press, 1998), p5.

The development of domestic science as a discipline could be explored in the 1930s and 1940s with regard to the sustainability of matrons retaining control over domestic staff. In addition, the inter-relationship of domestic science with standards of cleanliness within healthcare systems would be of interest. Discussions would possibly be centralised around or contained with papers at national or regional level concerning the organisational structure of the new National Health Service. The elucidation would help inform the demise of environmental cleaning as a nursing duty, and whether or not the driver for the final demise was the introduction of antibiotics, a quest for status from domestic scientists, or neither of these.

9.3.3 The 1950s and Beyond

This study raises questions concerning the suggestions found in the literature about reductions in standards of practice following the introduction of penicillin, the demise of cleaning as a nursing duty, and reductions in mortality, and morbidity from infections need to be followed through in general hospital settings to establish the extent to which nurses lost or maintained skill in managing the infected patient. Did hand hygiene practices, for example, change significantly during the 1950s and 1960s? As nursing changed in the second half of the twentieth century, to what extent can these changes be traced to the impact of sulphamide drugs and antibiotics?

9.4 Final Conclusions

The study explored nursing work and its novelty regarding the topic and period under study places this within the emerging field of the history of nursing practice. The hiddenness of nursing practices from the historical records largely mirrors that of the work of women in general which has found expression in the field of women's history. Uncovering the experience of nurses at work, their routines and organisation, and residential requirements will contribute to this field. The indication that the introduction of sulphamides and antibiotics brought about profound changes in nursing practices may have relevance for the field of medical history, though to date

the work of nurses has been largely absent from this area. The debates about status, skill mix, training regimes and the performance of menial duties raise issues of interest to both occupational historians and those interested in the history of institutions. However, much of nursing history has been subsumed within the broader field of social history, and this study has relevance to the exploration of the social impact of antibiotics. Therefore there is a breadth to this study such that it makes contribution to a number of fields of historical enquiry.

The starting point for this study was a desire to understand the work of nursing in the general hospital prior to the introduction of antibiotics. The intention was to examine nurses' clinical work including those practices which sought to control the risk of infection and to manage the patient with an acquired infection. The primary source of data collection was obtained through oral histories from former nurses. The project did not aim to undertake a comparison between nursing in the 1930s and 1940s with nursing in the 2000s. In seeking to understand the clinical work of nurses in the 1930s and 1940s it was useful to explore the level of knowledge that nurses might be expected to know about the causes and management of infection. The themes reviewed in Chapter 2 included the fear of infection prior to the advent of the sulphonamide family of drugs initially and subsequently antibiotics, exemplified by penicillin, and evidence for the ongoing presence of sanitarian concepts being used within clinical practice. Chapter 3, drawing substantially on secondary literature, provided a review of issues relevant to nursing in the hospital setting. Primary literature written at the time and secondary historical analysis was used to contextualise the environment in which these nurses worked. Nursing histories about the 1930s and 1940s focus on the politics of nursing surrounding registration, education and organisation and raise debates about discipline within the culture of nursing, recruitment and retention of nurses, and conditions of employment. There was a lack of histories about the clinical work of nurses before the availability of penicillin in the literature. The day-to-day work of nurses is hidden from the history of nursing in this period. This lack of detail was acknowledged in a number of secondary sources. Studies of nursing work contained very little, and at best only superficial,

analysis of the clinical work of hospital nurses during this period.²¹ The later job analysis work led by Goddard and based on data collected at the end of the 1940s gave insights regarding nursing in the early NHS and would have followed the availability of penicillin.²²

Nurses in the twenty first century in the western world have no experience of nursing without the availability of antibiotics to help in the management of infection. Prior to the introduction of sulphonamides and antibiotics it was the general experience of the population that an acquired infection would run its course, the end point being recovery or death. Some patients with infections were managed in general hospitals. Some patients in hospital might acquire an infection whilst in hospital. In this period public health activity focussed on managing communicable, contagious disease in the community, and ensuring compliance with public health legislation. Acts of Parliament required the notification of certain specified diseases, isolation in hospital if adequate isolation facilities could not be guaranteed in the home environment, and control and disposal of corpses. Death rates from infection remained high despite major advances in reducing these rates through improvements in housing and nutrition. Slum housing was still a major problem in many parts of the country. Slum clearance programmes were not completed until the 1960s.²³ Smoke control legislation was not introduced until the 1956.²⁴ Understanding of the causes of infection was rudimentary by comparison with the 21st century understanding. Causative organisms were known for some infectious diseases, but for other diseases the cause remained speculative at best. Techniques for isolation and visualisation of viruses were rudimentary.²⁵ Indeed,

²¹ See, for example, Sheila M. Bevington, *Nursing Life and Discipline: A study based on over five hundred interviews*, (London, H. K. Lewis and Co. Ltd., 1943).

²² Nuffield Provincial Hospitals Trust, *The Work of Nurses in Hospital Wards*, (London, Nuffield Provincial Hospitals Trust, 1953), (H. A. Goddard, Director).

²³ Charles More, *Britain in the Twentieth Century*, (Harlow, Pearson Education Ltd, 2007), p155.

²⁴ Donald Hunter, *The Diseases of Occupations*, 5th edition, (London, Hodder and Stoughton Educational, 1975), p149.

²⁵ Gerard J. Tortora, Berdell R. Funke, and Christine L. Case, *Microbiology: An Introduction*, 6th edition, (Menlo Park, Addison Wesley Longmann Inc., 1998), p13 - 14. The first virus to be isolated was the tobacco mosaic virus in 1935, and electron microscopes were not developed until during the 1940s.

the use of the term 'virus' was confused.²⁶ Germ theory had not been fully developed. The risks associated with pathogenic bacteria and viruses were only a part of the story. Lister's approach to antiseptics and subsequent developments of aseptic theories focussed attention on the infection risk, but the understanding of the body's resistance to infection through the immune system had not been resolved. Management of communicable infection was grounded in sanitarianism. Hand hygiene was known, de facto, to reduce the risk of cross infection. Use of face masks to prevent droplet spread of infection and inhalation of airborne infection was practised.

In the 1930s fear of infection remained a major concern in society. The risk of infection would have meant that nursing itself was a very dangerous occupation when measured against 21st century health and safety legislation. A number of the participants in this study recalled colleagues who died as a result of acquired infection. The oral testimonies reported in Chapter 4 indicated that death in service was not unknown and that contracting an infection through work was an occupational hazard. In the absence of effective treatments for infection, and in order to minimise the risk of infection to staff, safe systems of working were needed. These are interpreted as ensuring a clean environment, and rigour in the systematic ways of working to maintain exceptionally high standards of hygiene. Nursing, in the early 1930s, was characterised by a legacy for nursing practice influenced heavily by sanitarianism. Nursing is seen by many historians of nursing to have its roots in domestic service that had its routines of practice and hierarchy of tasks. Nursing had its routines and a hierarchy of tasks, which were needed to manage the infection risk to the patient by ensuring that nurses had the necessary level of skill to deal with the level of risk.

Nurses were almost always single women at the start of their probation training to become a State Registered Nurse. They were expected to 'live in' residences provided by the hospital. In 1939 the recommendation was for hours of duty to be reduced to

²⁶ Harold W. Jones, Norman L. Hoerr, and Arthur Osol, (eds), *Blakiston's New Gould Medical Dictionary*, (London, H. K. Lewis and Co. Ltd., 1951), p1128 refers to 'virus' as a 'general term for the poison of an infectious disease', as well as to being a pathogenic particle.

96 hours in a fortnight.²⁷ Days were long, being 12 or more hours, but with some time off duty amounting to 2–3 hours either, morning, afternoon or early evening, and a whole day off once a week. The daily routine was quite well prescribed. Living in residence often involved the need to share a room with possibly one or two other probationers. The home sister and sister tutor may have reserved the right to inspect the nurse's bedroom. Opportunities to socialise outside of work were limited. Time off-site was controlled with night-time curfews imposed. Against such constraints, and faced with environmental cleaning work, as the work of first year probationers was often described, it is unsurprising that many recruits chose not to stay.²⁸ This much is an accepted interpretation of the problems facing nursing in the 1930s and 1940s, and a number of commissioned and other reports were undertaken that concluded on the need to change the quality of the training and conditions of work. What is clear from these reports is that there is a lack of exploration of the detailed nature of nursing work except for the need to reduce the amount of domestic type work – work which was considered to be more economically undertaken by domestic staff or auxiliary nursing staff. Yet it is recurrent feature of these reports that the 'problem' of so called non-nursing work did not go away.

Alongside this problem, there were technological advances in medicine and surgery. In particular there were the bacteriostatic drugs in the sulphonamide family of drugs which had such dramatic results in the management of patients with pneumonia that for *Hilary Harris* they took all the joy out of nursing, and for *Nancy Newton* the best known sulphonamide, M&B 693, was a 'magic drug before penicillin which cut down the nursing side'.²⁹ There was no longer any need for cooling washes and the drug took away a lot of the heavy nursing. When penicillin became available similar and indeed more dramatic change took place with accounts that it revolutionised everything in nursing. And yet the historical accounts appear to be silent on exactly

²⁷ Bevington, *Nursing Life and Discipline*, p28.

²⁸ Christopher Hart, *Behind the Mask: Nurses, Their Unions and Nursing Policy*, (London, Baillière Tindall, 1994), p55; Elizabeth Merson, 'Nursing in Wartime', *International History of Nursing Journal*, (1998) 3, (4), p43-6.

²⁹ Harris, interviewed on 6 August 2008; Newton, interviewed on 19 December 2008.

what changed in nursing. Clearly there were changes to the demands for heavy nursing.

The use of sulphonamides and antibiotics demonstrated quite clearly that antiseptics of the internal body was possible. Whilst antiseptic lotions had been used on the skin for many years, sulphonamides and antibiotics provided evidence that there was an internal means to rid germs from the body. The technological advance inherent in the success of these drugs, in particular with antibiotics which had fewer side effects and were quicker acting than sulphonamides, created the potential for a reduced demand for rigour in the approach to hygiene. The end point for the study underpinning this thesis was 1948 when penicillin had become available to the general public in Britain and before the foundation of the National Health Service. Penicillin was first made available to troops in WWII in 1943, after pharmaceutical companies in the United States of America had been asked to develop its extraction from cultures of *penicillin notatum*.³⁰ Antibiotics were the first group of drugs to be bactericidal. For about a decade prior to antibiotics becoming available drugs belonging to the sulphonamide family of chemicals were achieving beneficial results through bacteriostatic action. Pearce described these as internal antiseptics that were the 'most important discovery that has been made in medicine since Lister's day'.³¹ The use of sulphonamides, particularly the sulphapyridine 'M&B 693', was reported by a number of participants as particularly effective in the treatment of pneumonia.

I have argued that nursing in the 1930s and 1940s, before the widespread implementation of the sulphonamide drugs and antibiotics, was grounded in sanitarianism. In addition I have argued that the routinisation of nursing work and the task allocation approach to implementing the routines were strategies to develop the necessary skills needed by the probationer in order to work safely in an infection risk environment. Another feature of this system of working was the hierarchy of tasks

³⁰ Robert Bud, *Penicillin: Triumph and Tragedy*, (Oxford, Oxford University Press, 2007).

³¹ Evelyn Pearce, *Medical and Nursing Dictionary*, (London, Faber & Faber Ltd., 6th edition, 1943), p116. Joseph Lister (1827–1912) known as the father of antiseptic surgery.

enabled the progressive acquisition of sophisticated skills. These skills were needed in order for the probationer to achieve the standard of practice necessary to work safely, and at the same time protect colleagues and patients, when handling potentially infective material. Living in a nurses' home with the constraints that were imposed added to protection of the nurse from external infection risks. This analysis helps to explain how the nurse was able to reach the standard of 'purity' to deal with the 'impure' (seen as infection) in the studies of nursing by Bashford and Vicinus, and of 'impurity' (seen as dirt) by Douglas.³² Participants in this study reported that the routinisation of care together with the task allocation of duties were associated with low incidence of hospital acquired infection, very few instances of pressure sores, and hospital environments that were scrupulously clean. Once basic lessons in managing hygiene were learnt, probationers could be more involved with patient care. Patient care might be demanding, as in the case of managing the patient with pneumonia before the pneumonia 'crisis', but rewarding. The advent of the sulphonamide drugs and subsequent introduction of antibiotics brought major changes to the ways that nurses would work in the future.

It is the contention of this thesis that sulphonamides and antibiotics at least played some role in solving the 'problem' of nurses undertaking environmental cleaning duties. Training was based on a hierarchy of routines, each of which addressed cleaning or hygiene requirements to some extent. This had enabled nurses to develop sophisticated skills in controlling the infection risks to themselves and their patients. But with sulphonamides and antibiotics, the need for intensive care routines for nursing seriously ill infected patients was reduced significantly. Skill mix issues could be addressed, for example, the introduction of the enrolled assistant nurse, and the transfer of responsibility for environmental cleaning to domestic staff as there was no resistance from a clinical perspective for these changes not to happen. Introducing wound redressing materials and equipment through central sterile service

³² Alison Bashford, *Purity and Pollution: Gender, Embodiment and Victorian Medicine*, (Houndmills, Macmillan Press Ltd., 1998); Martha Vicinus, *Independent Women: Work and Community for Single Women 1850-1920*, (London, Virago Press Ltd., 1985); Mary Douglas, *Purity and Danger: An analysis of concepts of pollution and danger*, (London, Routledge Classics, 2002).

departments would reduce the workload at ward level for preparation of these items.

The qualified nurse was to become deskilled from her expertise in managing infection risks in the decades after the 1940s, because she apparently no longer needed these skills. Nurses in the 1950s started to develop new roles and skills, and to seek the necessary education to enable these to be implemented.

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Pseudonyms are used for the nineteen participants named in this section.

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GLOSSARY

Antibody is a substance produced by the body that attaches to antigens on the surface of foreign cells as part of the body's defence against infection.

Antisepsis is the removal of contaminating micro-organisms through destruction by chemical agents.

Anti-toxin is a substance which attaches to a toxin to neutralise the effect of the toxin.

Asepsis is defined as being free of micro-organisms and includes the processes for preventing contamination by micro-organisms.

Autoclave is a sealable vessel for sterilising items by steam under pressure.

Back round is a nursing term for a routine to check patients for signs of pressure ulcers, including washing the patients back and sacrum.

Bactericidal refers to the destruction of bacteria.

Bacteriostatic refers to the arresting or hindrance of the growth of bacteria.

Bed pan round is a nursing term for a routine to issue bed pans to patients and to collect them from patients.

Cachexia is a condition of marked emaciation associated with very severe ill health.

Carbolic acid was used as a disinfectant or antiseptic according to strength of dilution. It is obtained from coal tar, and also known as Phenol.

Carbuncle is a hard, painful, and well defined infection of the subcutaneous tissue.

Cleaning is the removal of foreign material mechanically (dusting, sweeping etc) or chemically (washing with soap or detergent)

Disinfection is the killing of microbes using a disinfectant.

Draw sheet was a smaller sheet placed between a patient and their under-sheet to protect the under-sheet from soiling. It was used together with a waterproof mackintosh

Dressing Drum is a container used to hold wound dressings and swabs for sterilisation in an autoclave.

Dummy is the colloquial name given to a floor cleaning machine.

EUSOL is an acronym for Edinburgh University Solution of Lime. This is a solution of chlorinated soda and boric acid, and was used as an antiseptic in surgery and for cleaning infected wounds. It is no longer recommended for use because of its irritant and corrosive effect on granulating tissue.

Gallipot is a small container for holding fluids needed for the cleaning of a wound.

Hand Hygiene is the preferred term for hand washing. Hand hygiene may be described as either the social hand wash for the removal of transient bacteria or the surgical scrub to achieve a higher level of decontamination when asepsis is sought.

Immune system is the body system which works to counter infection.

Leucocyte is a generic term for a range of different white blood cells of which about 70 percent are phagocytes, and 25 percent lymphocytes.

Lymphocyte is a leucocyte responsible for antibody production.

Lysol is a trade name for a cresol based chemical used as disinfectant or antiseptic depending on concentration.

M&B 693 a sulphapyridine, developed by the pharmaceutical company, May and Baker, was introduced from 1936, it replaced Prontosil and had some effectiveness against streptococcal infections. It became a popular drug in Britain until it was superseded by antibiotics.

Miasma was considered to be a cause of disease and arose from foul air and dirt in the environment. By removing dirt and 'filth' and providing clean air miasma was eradicated.

Opsonin is a substance in the blood that is part of the complex mechanism that enables white blood cells to identify foreign cells.

Penicillin was first available to the general populations of North America and Europe after World War II, but it took some years before widespread availability was commonplace. The availability of penicillin to the British public began in 1946.

Phagocytosis is a process where by a cell (phagocyte) ingests another (foreign) cell.

Pneumonia refers to an inflammation of the lungs normally caused by infection. Lobar pneumonia refers to inflammation within the lobes of the lung of which there are three on the right side of the chest and two on the left. Lobar pneumonia can affect one or more lobes.

Prontosil a sulphanilamide preparation, was developed in Germany in 1935, and was the first useful drug in the sulphonamide group of drugs.

Sanitarian nursing was an approach to nursing which placed emphasis on cleaning and hygiene. Described by Florence Nightingale, it continued with little change well into the twentieth century.

Sanitarianism refers to the belief that protection from ill health and improvements to health are achieved through the removal of dirt and filth from the environment and the provision of pure air, pure water, good nutrition and good light. It was the key strategy of the nineteenth and early twentieth century public health movement.

Specialling is a nursing term for the one-to-one care by a nurse of a critically ill patient.

Sterilisation is the process of killing all living organisms.

Sulphonamide is a generic term for a family of sulphur containing drugs. The sulphanilamide group was the first to be used, exemplified by Prontosil. The sulphapyridine group, of which M&B 693 was the most well known, was popular in the late 1930s and 1940s. Other groups include sulphathiazole, sulphadiazine, and sulphaguanidine. In the twenty first century the American spelling has been adopted whereby 'sulpha' is replaced by 'sulfa'. However the original spelling is used throughout this thesis to reflect the spelling of the time.

Toileting is a nursing term that refers to assisting patients with their elimination needs.

Toxin a substance which is toxic to the body. Some bacteria produce toxins.

Tuberculosis refers to an infection by *Mycobacterium Tuberculosis*. It is difficult to treat because the micro-organism has a high lipid content cell wall that resists penetration by antibiotics. The locus of the infection can be a specific organ within the body. Two common forms of particular concern are pulmonary tuberculosis in which the micro-organisms in the lung can be expelled by coughing, and spinal tuberculosis in which the infection resides within the spinal column.

Appendix 1

CALCULATION OF SAMPLE SIZE

The challenge to collecting oral history was to find informants. How many former nurses from the period under study might still be alive? Of these how many might be traceable, and able and willing to give their memories of the period. There is no ready means of identifying this population. Therefore a number of assumptions need to be made. Abel-Smith (1960) identifies 1,795,000 women in the 1931 census for England and Wales aged between 15 and 24 (p260). People aged 15–24 in the 1931 census would be aged between 25 and 34 by the year 1941. Census data for 1941 is not available. It is reasonable to assume that during the 1930's the majority of nurses were in the age range represented by the 15–24 age range of the 1931 census. These women would be 85-94 at the 2001 census if they were still alive. The 2001 census identifies 731,556 women aged 85 and over (National Statistical Office 2007). This is approximately 40 percent of the 1931 population. However the for those aged 95 and over, and deaths since 2001 we can assume that this population has reduced in 2007 to around 179,500, ie 10 percent of the 1931 population level of the 15–24 age group, or 25 percent of the 2001 census level. This is not an unreasonable assumption since the 2001 census age group of 85 and over is above typical life expectancy and would therefore be expected to decline at a greater rate. This analysis suggests that 10 percent of the nursing workforce from the 1930's might be expected to be alive at the time of this study. How many this might be can be estimated from Abel-Smith (1960).

Abel-Smith (1960) identified 44,769 female nurses were single and were aged 24 or under in 1931 (p 264). In the worst case scenario suggesting, we might assume that all nurses 24 years or younger were single, suggesting approximately 45,000 nurses in the target age group. Applying the assumption that 10 percent remain alive in 2007, this suggests about 4,500 former nurses are alive in 2007. Abel-Smith (1960) identified that, over all age groups, eighty eight percent of the nursing workforce in 1931 were single (p258). Therefore if the 44,769 aged 24 and under represents only 88 percent, 100% becomes 50,874 nurses aged 24 or under. In round figures approximately 51,000 nurses could have been in the age group 15 -24, and this reduces to 5,100 in 2007.

Able-Smith's (1960) analysis identified that approximately 20% of the nursing workforce were nursing assistants (p272). Applying this to the assumptions reached about former nurses alive in 2007 then 4,500 reduces to 3,600 former registered nurses or nurses in training, and 5,100 reduces to 4,080 former registered nurses or nurses in training. Of these, it is estimated that 50% would be unavailable due to ill

health and infirmity or subsequent death. Of the remaining, a 2% sample would yield between 36 and 41 persons. The inclusion criteria would be nurses (trained or in training) who worked in a hospital setting, either voluntary or Local Authority hospital, on or before 1939. Further inclusion criteria require them to have cared for persons in medical, surgical or orthopaedic wards. Exclusion criteria relate to the ability to participate in the study – thus incapacity due to dementia, or diseases affecting ability to communicate effectively, for example stroke.

Appendix 2**LETTER OF INVITATION TO POTENTIAL PARTICIPANTS****University Header**

Address

Dear

A study of nurses' work with patients suffering from life-threatening infection 1919 – 1939¹

Thank you for your interest in our project. The study seeks to collect the memories of former nurses about their work in hospitals before the introduction of antibiotics. We are particularly interested in work with patients who developed acquired infections, eg septicaemia from wound infections. We are also interested in measures used to control the risk of cross-infection. The present generation of nurses in the UK have no experience of nursing without the availability of antibiotics. There is interest in knowing how you nursed without the use of antibiotics to control infection. Written information from textbooks and journals of the period tells us very little about what nursing work was actually like.

Please read the enclosed Interview information sheet which outlines some details of the meeting we hope you will agree to.

If you are agreeable to helping with this project please sign one copy of the enclosed Consent Form. Please ask someone else to witness this form, and return it in the enclosed envelope. The other copy is for you to keep. Once we have received your consent, David Justham will contact you about arrangements for the meeting.

With gratefulness for your interest,

Yours sincerely

David Justham
Lecturer

Christine Hallett
Senior Lecturer

¹ The study evolved from an initial plan to focus on the period from 1919 (the Nurses' Registration Act 1919) and the commencement of World War II. The title of the study as shown in these appendices reflects this earlier timescale. As the study developed it became more relevant to focus on the timescale encapsulated by the discovery of penicillin in 1929 to its widespread availability in 1948.

Appendix 3

CONSENT FORM

University Header

Title of project: A study of nurses' work with patients suffering from life-threatening infection 1919 – 1939

David Justham has explained to me the nature of the research and what I would be asked to do as an interviewee. He has given me my own copy of the interview information sheets, which I have read.

I consent to take part as an interviewee and I understand that I am free to withdraw at any time without giving any reason, and without detriment to myself. I understand that I can be accompanied during the interview by a person of my choosing. I agree that the venue for the interview will be at a place and time acceptable to me. I confirm that I worked as either nurse in training or registered nurse at some time prior to 1940.

If I have any concerns about the study or the conduct of the interview I know that I can contact Christine Hallett, Senior Lecturer, Faculty of Medicine and Health Sciences, University of Manchester on to express my concerns.

Signed..... Date.....

NAME (BLOCK LETTERS).....

Address for correspondence.....

.....

Full Telephone number (including STD code):.....

Witnessed..... Date.....
NAME (BLOCK LETTERS)..... (BLOCK LETTERS)

Please return one copy of your completed form to:

David Justham,
PhD Student,
(insert address)

I confirm that I have fully explained the purpose and nature of the study and any risks involved.

Signed.....Date.....

NAME (BLOCK LETTERS).....

Appendix 4

PARTICIPANT INFORMATION SHEET

A study of nurses' work with patients suffering from life- threatening infection 1929 - 1954

Thank you for your interest in our project.

Part 1 - The purpose of the study and your part within it.

What is the purpose of the study? The purpose of the study is to collect memories of former nurses, and in particular their memories of how they cared for patients who acquired an infection whilst in hospital, and what nurses did to prevent cross-infection. The study considers the time before the widespread use of antibiotics. We are particularly interested in work with patients who developed acquired infections, eg septicaemia from wound infections. We are also interested in measures used to control the risk of cross- infection. There may be insights from your experience which the present generation of nurses in the UK would find of interest. There is particular interest in knowing about nursing without the availability of antibiotics to control infection. Written information from textbooks and journals of the period tells us very little about what nursing work was actually like.

Why have I been invited? You have contacted us in response to publicity asking for help. We want to meet former nurses who worked in hospital before the widespread use of antibiotics, that is before the early 1950's. We hope to be able to interview 40 former nurses.

What would be your part in the study? We would like to invite you to take part in the research study. Before you decide you need to understand what it is about and what your part would be. Please take time to read through the following information carefully. Talk to others about the study if you wish. If you agree to take part we would like you to take part in an interview in which you will be asked about your memories of nursing before the introduction of antibiotics.

When and where will the interview take place? The interview will be arranged for a time and place acceptable to you. This would normally be where you live. You can have a relative or friend present during the interview if you would like this. You can withdraw your consent for the interview at anytime. There is no time limit for the interview. This will depend on you. You might want to stop the interview for a rest, or ask for the interview to continue on another occasion. It is absolutely fine for you to state your wishes to the interviewer and this will be respected.

Do I have to take part? It is up to you to decide. Read this information sheet carefully, and when we contact you we will explain the study and answer any questions. We will ask you to sign a consent form to show you have agreed to take part. You are free to withdraw at any time, without giving a reason. You have this choice and we will respect your decision.

Part 2 – The conduct of the study

What will happen if I agree to take part? You will be invited to be interviewed. This interview will be arranged for a time and place acceptable to you. This would normally be where you live. Following the making of arrangements, you will be contacted 2 days before the interview to check that it is still convenient for the interview to take place.

Can I have someone with me during the interview? You can have a relative or friend present during the interview. We encourage this.

How long will the interview last? As a guide, it is anticipated the interview will last between 1 to 1.5 hours, however, there is no time limit for the interview. This is in your control. You might want to stop the interview for a rest, or ask for the interview to continue on another occasion. It is absolutely fine for you to state your wishes to the interviewer and this will be respected.

Will the interview be recorded? We would like to record the interview using a digital audio recorder. The recording, with your consent, will form part of an audio archive which will be deposited in the oral history collection at the Royal College of Nursing's Archive in Edinburgh. If you wish it, we will prepare a copy of the recording for you to keep. The interview could proceed without being recorded though this would make it more difficult for the interviewer to record what you say.

Can I use photographs and other memorabilia? If you have any photographs or other memorabilia which you think might be of interest to the project, we would be very grateful for the opportunity to view these. The interviewer will be pleased to discuss these with you during or after the interview.

Who will be the interviewer? The interviewer will be David Justham. He is a Registered General Nurse who qualified in 1975, and has held various posts working in accident and emergency departments, orthopaedic wards and occupational health. He is now a Lecturer with the University of Nottingham's School of Nursing, Midwifery and Physiotherapy. He is undertaking a Doctor of Philosophy degree with the University of Manchester's School of Nursing, Midwifery and Social Work. The interview will form part of the work towards that qualification. David can be contacted on 01522 573897, or email: david.justham@nottingham.ac.uk or by post at David Justham, School of Nursing, Midwifery and Physiotherapy, University of Nottingham, c/o Lincoln County Hospital, Greetwell Road, Lincoln, LN2 5QY.

Who is overseeing the project? The senior supervisor of the project is Dr Christine Hallett, Senior Lecturer, School of Nursing, Midwifery and Social Work, University Place, University of Manchester, Oxford Road, Manchester M13 9PL; tel:- 0161 275 2000; email: Christine.hallett@manchester.ac.uk

Is there a payment for taking part? We do not have money to pay you for your time and involvement with the study.

What do I do if there is a problem? Contact David Justham in the first instance to discuss your concerns. Alternatively contact Christine Hallett if you remain unhappy or wish to complain about the conduct of the study.

Will the interview be confidential? Any recording of the interview will only be listened to by those directly involved in the study, and anyone else you authorise. Parts of the interview, in written form, may be reproduced anonymously as part of the research thesis. We will ask you to complete a "deposit agreement" on which you can tell us your wishes about the storage and future use of your interview. Unless you wish it, your name will not be associated with any audio or written transcript.

What will happen if I no longer want to be involved with the study? You can withdraw your consent to be involved at anytime. If we have already collected information from you we will ask whether you want this destroyed, returned to you or if we could keep it for possible use in the study.

Who is organising the study and funding the research? The study has been approved by the University of Manchester. Some of the money towards the research costs has been provided by The Wellcome Trust.

Who has reviewed the study? The study has been reviewed and approved by the University of Manchester's Committee on the Ethics of Research on Human Beings. This is an independent group of people from University of Manchester and exists to protect your safety, rights, wellbeing and dignity.

Further information and contact details

For general and specific information about the project, or advice about participation contact David Justham. David can be contacted on 01522 573897, or email: david.justham@nottingham.ac.uk or by post at David Justham, School of Nursing, Midwifery and Physiotherapy, University of Nottingham, c/o Lincoln County Hospital, Greetwell Road, Lincoln, LN2 5QY.

If you are unhappy about any aspect of the project contact the senior supervisor of the project Dr Christine Hallett, Senior Lecturer, School of Nursing, Midwifery and Social Work, University Place, University of Manchester, Oxford Road, Manchester M13 9PL; tel:- 0161 275 2000; email: Christine.hallett@manchester.ac.uk

NB This information sheet was published in a large print version (Arial 14) which extended to four sides of A4 but printed on A3 in booklet form.

Appendix 5

CLEARANCE NOTE AND DEPOSIT INSTRUCTIONS

A study of nurses' work with patients suffering from life-threatening infection 1919 – 1939

The purpose of this "deposit agreement" is to ensure that the storage and future use of your interview is in strict accordance with your wishes.

Under the 1988 copyright Act your written permission is required for any future use to be made of your contribution.

This does not restrict any use you may wish to make of your interview but does allow us to ensure that it is preserved as a permanent public record and resource for use in research, publications, education, and broadcasting.

I agree to my interview being used for:	Yes	No
research purposes		
educational purposes		
reference in radio or television broadcasts		
reference in publications		
I agree to my name being mentioned		

Do you wish to apply any time restrictions before your contribution is released		
Please state number of years (up to a maximum of 30)		

Are you willing to give your copyright to the University of Manchester		
--	--	--

Signed Print Name

Address

.....Post Code

Telephone No.....

Date of Recording./...../2008

Place of Recording

Signature of Project Worker

Date/...../2008

Note: After the completion of this project the master copy of your interview will be stored at the Royal College of Nursing Archives, 42 South Oswald Road, Edinburgh, EH9 2HH

Appendix 6**LETTER SENT TO THE LOCAL PRESS APPEALING FOR PARTICIPANTS**

LETTER

On departmental letter head (Manchester or Nottingham)

Dear Reader,

Were you ever a nurse before 1940, or do you know someone who was? We are doing some research about nurses' work with patients who might have acquired an infection when in hospital before the use of antibiotics. We want to find out what was done, what were the practices and procedures that nurses used. We are investigating the period before the introduction of antibiotics. If you worked in a hospital during this period or know of women who did – a relative, your own mother perhaps, or a friend – and would be willing to share memories with us, we would be very pleased to hear from you.

The study is being organized through the School of Nursing, Midwifery and Social Work at the University of Manchester. We are interested to understand if nursing practices from before 1940 might be of relevance to the current generation of nurses. These nurses have no experience of working in the UK without antibiotics.

Please either write to the address at the top of this letter or ring 01522 573897 to speak to David. He can then tell you more about the project and hopefully arrange to meet you.

Yours Sincerely,

David Justham, MSc, RGN
Lecturer
University of Nottingham

Christine Hallett
Senior Lecturer
University of Manchester

Appendix 7

BRIEF BIOGRAPHY OF EACH PARTICIPANT

Alice Allen (Mrs) had always wanted to be a nurse, and did all the sick nurse badges in Brownies, Guides and Rangers. Wanted to start nurse training in 1941 but had to wait until 1942 because her mother was unwell. She was advised by the family doctor not to train in the local hospital. She trained in a local authority hospital in London. Worked on a medical ward on qualification then spent some time working matron's office before undertaking 6 months surgical night duty and then taking her Part 1 midwifery. She returned at the request of matron to run the theatre suite. After six months joined the Queen Alexander's Royal Army Nursing Service (QAs) taking on a 4 year commission, became a regular for several years. Married and worked in the northwest of England. Worked in nursing until retirement from the NHS, and continued to use her nursing with the Red Cross until she was 70 years of age. Age at interview: 85 years.

Barbara Bennett (Mrs) Commenced nurse training in 1938 at a voluntary hospital in the northwest of England, after she realised that her first employment as a secretary was not for her. Both her parents were teachers and encouraged her to try nursing. Worked in the Accident and Emergency Department on qualification, and was encouraged to join the Territorial Army (TA) by her matron and remained in the TA for 25 years. Served overseas during WWII, and returned to civilian nursing in 1949 and undertook midwifery training. She moved to a small 'war memorial' hospital in north Wales, and in 1953 worked with an orthopaedic consultant to develop an orthopaedic department at the hospital. Age at interview: 87 years.

Carol Clark (Mrs) commenced nursing in 1932 at the local sanatorium, taking the British Thoracic Association (BTA) certificate, before transferring to the northwest in 1934 to undertake general training in a local authority hospital. She married before the start of WWII and had to leave nursing but undertook volunteer ambulance work because of her infectious diseases ambulance training. She returned to hospital work in 1940 because of a shortage of nurses, but left due to pregnancy in 1942. Returned in 1950 to the sanatorium and became night superintendent from 1952–1980. Was co-author of a history of her sanatorium. Age at interview: 93 years.

Dora Davies (Mrs) Commenced nursing in 1932 aged 20 years at a voluntary hospital in the northwest. Once qualified became a staff nurse on a male medical ward where she met her future husband who was a junior doctor at the time. She stayed until 1938 before transferring to undertake private work in a nursing home, principally on night duty, in west Yorkshire. Was married during the war and in 1946 went to join her husband who was working in West Africa. Never returned to nursing after the end of WWII. Age at interview: 96 years.

Edith Evans (Miss) Worked in a children's hospital with babies for 2 years before commencing general nurse training in the northwest 1936 aged 19 years. She worked in gynaecology for one year on qualification before undertaking her Part 1 midwifery in a different location in the northwest of England. Returned to nursing in a small hospital for 2 years. Age at interview: 91 years.

Florence Farmer (Mrs) had an ambition to become a medical practitioner but had to forego this for family reasons. She commenced nurse training in 1936 at a voluntary hospital in the northwest of England, and then worked on night duty in theatre on qualification. Joined the Army Nursing Service in 1943, and had postings in India and Burma. [Evidence from the interview suggests the Burma experience was psychologically traumatic.] On demobilisation did not return to nursing but followed her husband in a career in chiropody. Age at interview: 90 years.

Gloria Garner (Mrs) commenced nurse training aged 23 years at a voluntary hospital in the northwest of England in 1940 in response to the war effort. She had

been a volunteer through the British Red Cross for a number of years. On qualification stayed at the hospital and worked for 16 years leaving to look after her ill father. He lived a further four years. She then returned to undertake health visitor training and followed this career path until she retired. Age at interview: 91 years.

Hilary Harris (Mrs) commenced nurse training in 1934 aged 18 years having first explored a career in teaching. Trained at a voluntary hospital in the northwest of England, and once qualified stayed on at the hospital working in theatre specialising in trauma work. She left in 1942 to look after her family. Returned to nursing in 1950, and held a series of administrative posts, including Night Superintendent, at hospitals in west Yorkshire for 21 years. Age at interview: 93 years.

Jane Jones (Mrs) commenced general nurse training in November 1944. She left school early to help on the family farm, before starting a secretarial course, but returned to farm work. Having reached 18 years of age needed to register for war work, and decided to enter nursing at a voluntary hospital in northwest of England. Following registration undertook midwifery training, and practiced midwifery for a while before retraining as a health visitor. After a career break to look after her children until they moved to secondary school, became a health visitor for 11 years until she retired. Age at interview: 82 years.

Kate King (Mrs) began as a 'junior' nurse, aged 17 years, at a cottage hospital in the west midlands in 1939 before commencing general nurse training at a voluntary hospital in northwest England at 18 years old. Following qualification she worked as a staff nurse on nights in the accident and emergency department for a year. Subsequently she trained as a midwife and remained in midwifery for the remainder of her professional career. Age at interview: 86 years.

Louise Lloyd (Mrs) commenced nurse training at a local authority hospital in the east midlands region of England in January 1940, aged 21 years. She undertook general training before moving into midwifery training in London. On completion she returned to the east midlands where she spent the rest of her career in midwifery but also managed to teach sewing at an evening class. Age at interview: 89 years.

Michelle Moore (Mrs) had an arts degree when the war started, and was taking further studies but the college closed because of the war. She decided to train as a general nurse to help the war effort, commencing in January 1940 at a hospital in the west midlands region of England. She completed her pre-registration nursing. She married during the war, but became a war widow with a young child. She left nursing to teach art, but return to become a health visitor in 1956. Age at interview: 92 years.

Nancy Newton (Mrs) commenced general nurse training in 1939 at a local authority hospital in London aged 18 years. Once qualified worked as a staff nurse for 6 months before undertaking midwifery training. Following this she travelled, working as a nurse aboard passenger ships. Age at interview: 87 years.

Phyllis Porter (Mrs) commenced nursing in 1939 at age 18 years at an orthopaedic hospital in south Yorkshire completing her Orthopaedic Nursing certificate, before moving to the east midlands to undertake her general nurse training at a voluntary hospital in 1941. She left nursing soon after qualification because of marriage. She returned to part-time work for a short time after her children were born but did not stay in nursing for long. Age at interview: 87 years.

Rita Reed (Mrs) worked for a pharmaceutical company and was trained to be a Red Cross Nurse at the factory. The training involved some hospital work and through this she joined the Civil Nursing Reserve for one year before commencing general nurse training in March 1943 at a local authority hospital in the east midlands. On qualification went straight to midwifery training, and worked in midwifery before getting married. After a break she returned to general nursing as a sister in outpatients for two years before taking a post as a community midwife. Subsequently

she became a supervisor of midwives and then a tutor in midwifery until her retirement. Age at interview: 86 years.

Susan Shaw (Mrs) had thought she might be a mathematics teacher but worked as a volunteer at the hospital which caused her to change her mind. She commenced general nurse training aged 17 years in March 1943 at a local authority hospital in the east midlands region of England taking her State Registered Nurse examinations in June 1946. Following qualification she stayed at the hospital as a staff nurse for two years before getting married but continued to work part-time. Once her children were born she returned to work part-time but then converted to full-time employment to support her family after the untimely death of her husband. Age at interview: 85 years.

Thelma Taylor (Miss) started her nursing career in 1942 aged 17 years at a cottage hospital in the east midlands before moving in 1943 to undertake general nurse training at a voluntary hospital in the same region of England. Following qualification she was a staff nurse at her training hospital before moving to a local authority hospital as a surgical ward sister until her retirement. Age at interview: 85 years

Violet Vickers (Mrs) left school at 14 years but stayed at home to look after the house as both her parents had to work. She left home in 1947 to commence nurse training at a voluntary hospital in the east midlands region of England aged 19 years. Following qualification she worked as a staff nurse for one year at her training hospital before moving to London to undertake her Part 1 Midwifery, and then moving to east Yorkshire to complete her Part 2 Midwifery and stayed for four years. After her marriage she took a break for three years, and then returned to the east midlands to work as a community midwife until she was 60 years old. Age at interview: 82 years

Wendy Woods (Mrs) always wanted to be a nurse. Due to ill health during childhood was persuaded by parents to take secretarial work which she did for 18 months but it did not satisfy her. She commenced general nurse training in early 1950 aged 18 years at a voluntary hospital in the east midlands region of England. She worked as a staff nurse on a surgical ward on qualification before becoming a night sister in 1956 at age 24 years. She subsequently became a nursing officer, but did not like the administration role, and returned to being a ward sister in November 1973 until her retirement Age at interview: 78 years.

Appendix 8

GUIDED INTERVIEW SCHEDULE

A study of nurses' work with patients suffering from life-threatening infection 1919 – 1939

The Biographical section:

(aim of this section is to settle the interviewee, and ease him/her into recollection of the period under study) Make sure you also get date and place of birth, place of training and work.)

Establish:

Date and place of birth

Motivation to enter nursing

When training started

Where training took place – which hospital, how training was organized

(theory/practice split)

Places where the participant worked, especially hospitals, and specialisms within hospitals

Establish, (if known), if the hospital was Voluntary or Local Authority run

Nursing in general:

(aim of this section is to enable memories of the general work of nursing during the period, to explore its discipline and routines and conditions of work)

Explore memories of training

Memories of ward work

What was good and what was not so good.

Explore particular routines for the day

How duties were allocated

How work was recorded

Explore memories of procedures eg, re: cleaning – daily, weekly, monthly, yearly

Explore working relationships with medical staff, ward rounds etc

Explore relationships with other hospital staffs, eg cleaners, porters etc

Explore relationships with patients and visitors

Focusing on preventing cross infection:

(aim of this section and the next is to move towards the specific focus of the study – that of nursing the infected patient and the prevention of cross-infection)

Explore procedures eg wound dressing and redressing (eg when in the daily routine, preparation of trolleys, curtaining/ side rooms/ sterilisation of equipment), catheter care, respiratory care, hygiene procedures

Hand hygiene

Patient hygiene, toileting

Ward management – bed spaces, visitor numbers, movement of patients

Cleaning, disinfection and sterilisation – distinction

Risks to self

Focusing on the infected patients

Provide prompts to explore through anecdote and case histories the place of

Nutrition

Temperature management

Clean air

Comfort

Motivation of patient, of self

Risks to self, to visitors, to others

and other issues of relevance

Appendix 9

EXAMPLE OF AN INTERVIEW TRANSCRIPT

Interview with Mrs Alice Allen on the 14th July [2008]

DJ: Thank you for allowing me to hear your story and memories of nursing. Could I just ask you tell me what the motivation was for you to enter nursing if you can recall that and when did you start training?

Mrs A: Well, I started training in 1942. I wanted to go in 1941 but my mother developed headaches and I was an only child and in the end my local GP said "If you are going to nurse get away". So I went in March '42. But my mother tells me that at the age of 3 in Reading in Berkshire I saw 3 QAs crossing the road and I said I am going to be like that when I grow up.

DJ: Gosh

Mrs A: And I never remember a time when I didn't want to be a nurse. You know I had little Red Cross outfits and my dollies were bandaged. And as soon as I could I joined Brownies and did all the sick nurse badges and Guides and Rangers and .. er.. I had quite a fight to get away from home. But I did and I wanted to do it and love it and still love it. And I managed to nurse until I was 70. You know you have to give up at 65 but....er....by saying I didn't have to be insured I stayed on the Manchester Royal Bank and ...erm... in my Red Cross capacity managed to nurse until I was 70.

DJ: Incredible. When...

Mrs A: Go on...

DJ: Sorry. How old were you when you entered nursing to start training?

Mrs A: I was 18.

DJ: You were 18. And you started in Stepney did you say ?

Mrs A: I went to...er...I was meant to go to Gloucester Royal and I interviewed for Gloucester Royal because in Maidenhead in Berkshire...er...they sent a proportion of their applicants to Gloucester Royal but there was a 10 month wait. And I had already been waiting a year sort of ... fighting my parents but having difficulty persuading them to let me go and my GP who was a wonderful man said "Write to London County Council because they will take you quickly".... so I did and I ... er ... interviewed with them. I think they took me 6 weeks after and I was so lucky to go to Mile End because at that time London County Council had 2 flagships and I can't remember the name of the first one but the other one was Mile End and it was loosely affiliated to the London. We took London medical students and we took our exams at the London, you know, our State exams.

DJ: Yes

Mrs A: State exams at the London and it was absolutely wonderful which of course when I went the war was on and life was ...er... all my nursing years, I think, have been exciting because ... because I always loved it so much.

DJ: Was all your practical training at Mile End itself?

Mrs A: Well no because we were bombed out 3 times. First time we lost all the sluice blocks from the end of a 3 high group of wards. The second and so we had to be

evacuated. We went to the Northern Hospital at Winchmore Hill which was a fever hospital where we learned a lot. It wasn't only fever patients it was .. er.. German POWs, a very prestigious orthopaedic unit, encephalitis – it had been the centre for encephalitis, air raid casualties brought in from Central London. It was a very valuable part of one's training really. And we were billeted out and it was awful you had to walk 2 miles across the park to get to work. Erm, .. the second time where... we woke up one morning and where the Laundry had been there was a hole in the ground. So that time we were evacuated to Harold Wood in Essex and that had been a hospital for older people, and it was mostly... we took the men coming home from Dunkirk so you know it was a little bit after your period but it was very interesting. And we met VADs for the first time. We hadn't met VADs before and they were quite wonderful. And then the 3rd time I think we had a gun battery in Victoria Park and it shook all the buildings so therefore they had to be .erm..... we went to Bishop Stortford in Hertfordshire. That was a ? building. I don't remember what that was but again it was a lot of air raid casualties. So, you know, we did a lot of nursing and you were dealing with people who came out in greenline ambulances from the bombed areas and all the wounds were sutured with black thread because there weren't any sutures as they were all gone to the troops.

DJ: So just ordinary cotton thread you mean?

Mrs A: Yes like we used to buy to sew on buttons.

DJ: Right.

Mrs A: I don't know if you can buy it these days. It was linen thread. But there was some white but that was kept for the Theatres for the services patients but all the air raid casualties were stitched up with black. We only kept them overnight. They usually moved on on trains to Scotland the next day.

DJ: So when you trained were there any particular specialities you enjoyed working in rather than others and what did you specialise in when you first qualified?

Mrs A: When I first qualified in those days we did 3 years for the state and 1 year for the hospital certificate. So when you were coming up to your . er..... I always loved orthopaedics and when I qualified I had been working on a Medical ward and the Sister was superb. So you had to go and ask them if you had a vacancy you you accept me as a staff nurse. So I first did 6 months on this medical ward and then Matron asked me if I would consider working in Matron's office for a bit with the records and going into the School of Nursing and marking the books of the regional preliminary training school to see if I would like to be a tutor. So I did that work but I didn't feel that I knew enough of the world to be a tutor so I asked to go to a surgical ward and I did 6 months surgical night duty and then I said no I did not want to make a decision until I had done Midwifery so I went to see the Sister on the Maternity ward and said would you accept me if I apply here and she said yes and I had to fill in a piece of paper because in those days you had to agree to do both ...it was in two parts ... you had to agree to do two parts. Erm, and ..er.. so I did Part 1, while I was waiting for the results. Oh, I had done 6 months on Theatre as a senior probationer, you were probationers, and erm the theatre sister broke her leg and the deputy sister on theatre went off to the Army and Matron said would I postpone my community Midwifery and go and run the theatres as a staff nurse. Which of course was a great honour. I'd enjoyed the stint in the school and enjoyed marking the books and being in the office so off I went to theatre for 6 months. My friend came home from the army and she said - Matron said we would like you to go to Battersea Polytechnic they run the Sister Tutor's course and I said I don't know I'd like to think about it – my friend came home from the army and she said you will do better to go in the army and see the world a bit before you erm..before you settle down. So..erm ... I applied to the QAs and they took me much to Matron's annoyance. [laughs] Off I went into the army.

DJ: Right

Mrs A: So I had great nursing experience there because after 6 months.... I went on a 4 year commission and after 6 months I was invited to a regular commission and ... er ... I did that and the – what happened in those days you were moved all around the hospitals in the UK to get a good picture of it so I went to Shorncliffe in Kent and had all the troops coming home from India and learned about that all the wives and the forms of abortion and I had to practice a bit of Midwifery there. And I also did theatres because that what the army does if there isn't much theatre and I love theatre. The I went to Hawley as a potential regular for 6 months under intensive supervision and they said yes I could be a regular and I was sent to Millbank to do a theatre course. From Millbank I went to Chester to do orthopaedics, and then I went to Catterick because the theatre sister there had gone on compassionate leave, and then I went to Chepstow because there was an army's boy battalion there. One had to teach, if you were a regular you had to teach. So I did theatres there then I went to Cambridge and then to the holding unit at Aldershot and then I went to .. overseas. I practiced theatre on the troop ship, The Independence, on the Bay of Biscay – the boat rocked to and fro and you never saw such antique drums of dressings and such. And then I did theatres in Malaya, theatres and Officers' Ward. But of course that was all tropical diseases.

DJ: That's right

Mrs A: Yes

DJ: If I can bring you back to England

Mrs A: Yes, do

DJ: What were, erm , you spent most of the time working in theatre, it seems to me.

Mrs A: When I was qualified.

DJ: When you were qualified. But when you were working on the wards what what do you particular remember about the work and the routine when working on the wards?

Mrs A: We were very disciplined. Erm, we had a Sister, a Deputy Sister, a staff nurse – maybe 2 staff nurses, 2 fourth year, 2 third year, 2 second year, 2 first year, a ward orderly who was ..er.. wonderful people and domestics and everybody .and if Sister said jump you jumped. And we did, although I perhaps shouldn't say it, we did things properly and I do think as regards infection ...erm our aim was preventative really but we DID [emphasised] wash our hands properly and we did .. you never had long fingernails or hair which was escaping under the thing [nurse's cap]. And we had clean clothes even though we had to launder them ourselves when ... And er every morning certain, depending on your grade, the juniors scrubbed all the enamel ware and it was boiled up in the steriliser and then the ward floors they sprinkled damp tea leaves and swept them and then, especially again in the orthopaedics wards, everything was damp dusted. They were up the top doing the poles.

DJ: And this was the nursing staff?

Mrs A: No, the orderly did this, the domestic did the floors, the nursing staff – not they didn't they were taking bowls and so on – but it was their responsibility and I remember once as a very junior staff nurse the domestic didn't turn up and we had a round of ward dressings to do and you couldn't start the dressings 'til one and a half hours after the damp dusting was finished and so I thought the only way to get on with the dressings is to do the damp dusting. And unfortunately one of the assistant matrons appears and I was up on the beds dusting the top and she tore strips and strips off me 'cos it wasn't my job. But it was,in the regional preliminary training school we had to clean our own rooms and they were very thoroughly inspected and ? so what we were taught that by the time we went on the ward at 3 months we should know what the domestics work was, what the ward orderly's was and we

should be able to do it twice as well in half the time. And, but they were wonderful domestics and orderlies and they did the work properly.

DJ: And was it the same person – it was an orderly attached to the ward so you knew..

Mrs A: Yes, yes they were attached to the ward and the orderly had the ear of Sister and one of her jobs before she went off in the evening she took all the flowers out of the ward, and in the morning Sister or whoever was her deputy, would be in the kitchen after the breakfasts had gone out and every sets of flowers were cleaned and, you know, rearranged fresh water and I think that's one of the reasons for infections to develop they don't do flowers today. I've visited hospitals and I am appalled .I mean, I spend my time and you never left dirty crockery on the lockers either. There was no contract cleaner who left unfinished suppers and the night staff came and cleared it away.

DJ: In those days you had a ward kitchen and did you make meals, well breakfasts toasts and things in the ward or did it still come up from kitchens then?

Mrs A: The main food came up in big containers but we did early breakfasts at six o'clock for the theatre patients and if anybody was admitted we could always draw .. we always had on the ward six eggs and we were never short of milk not like later years when you had to go round and cadge milk in the middle of the night. We always had bread and butter and eggs and so if any patient was admitted and they had not had a meal or anything or need.....you couldn't send visitors to the canteens because they didn't function for the visitors so we had to be prepared to knock up a light meal or a snack for people. But otherwise the ward kitchens were not used except for...er... mid morning drinks and evening drinks.

DJ: And was it the nurses job to organise the drinks or was that upto the orderly? can you remember?

Mrs A: The orderly did the morning ones. Erm, they didn't have the evening meal until 6 (there were no 5 o'clock ones in those days) and the night nurses did a drink at half past nine, and therefore if you were nippy with the ten o'clock drugs you could cache in on the milk which was still warm from them to drink. Milk or horlicks [laughs].

DJ: Yes, yes I remember that a little bit. We were talking about the routine and you were saying about cleaning and that the ... erm ... the junior staff were having to clean the instruments and enamels were sterilised. What were the staff nurses' duties for the day?

Mrs A: Er, she would take the report from the night nurse. Well staff nurse and Sister both of them took it... erm.. the two senior qualified staff on would take the report and then erm .. they would have a little conflag and they would come and tell us what our specific jobs were. All the washing bowls were given out by the night staff so at 8 o'clock, we went on duty at 8, erm ... and our first duty was to help patients with breakfasts but if they could eat them themselves then we actually cleared it onto a big trolley in the middle of the ward although the orderly was on at that time we cleared the.... we took the plates and things because if they hadn't eaten their food then we had to tell Sister food or drink or whatever it was. One thing we did make was egg and brandy and milk for patients who were really poorly and of course, you know, the ones that had had major gastric surgery and had started off on 20 mls of water then of course that was our responsibility. But other than that the juniors would go and sit down by patients that need ... 'cos patients were very ill in those days so of them. There was the odd "up" one that could help but not a lot and erm.....so we would, we would know the erm.. fourth year nurses would probably cope with the sterilisers and pu the stuff in that was already clean because if you had time the night before then every receiver and bowl and gallipot in white enamel was scoured with powder, white sort of powder, the night before and it was all piled up in the sluice and then junior nurse would carry it down and the staff nurse, junior staff nurse and fourth year or

third year acting up would actually place it in the steriliser and then there was the odd catheter which could be boiled but mostly the catheters went in formalin containers after we had cleaned them. It was all done on the ward.

DJ: Right

Mrs A: There was none of this central services and I may be speaking unfairly but judging my nursing years further on we had less infection when the nurses were dealing with it than we did when the CSSD who were obviously very good but I saw a few unpleasant things which came out of packs from CSSD in the early days.

DJ: Things that shouldn't have been there maybe that had been recycled?

Mrs A: Yes, there was no recycling. And things like intravenous tubing was thrown away oxygen tubing was thrown away. There was none of this recycling business and I am not sold on it [laughs].

DJ: When you were talking about catheters being put in formalin. Are you talking about urinary catheters there?

Mrs A: Yes, any sort of catheter, chest ones ? [23:59] drains or I think that was it and of course supra pubics in those days had abdominal catheters. All of those had to be meticulously cleaned and then they were put into formalin.

DJ: You say that the patients were really quite ill in those days. Were many of them up and about or were they .. did they stay in bed much? What do you remember of that?

Mrs A: Well I would say in a 30 bedded surgical ward plus a side ward with one bed in it there were possiblysix who would get up unaided.

DJ: Right

Mrs A: Not more. And in the medical wards perhaps just before they were going and they were, just a minute twenty forty eight and six side wards yep 54 bedded, there might have been 2 ... not more.

DJ: So if you had a lot of patients on bedrest..

Mrs A: Yes

DJ: What about bedsores, pressure sores?

Mrs A: Well you did a pressure sore round. On the medical wards about 10[am] you started. The ...erm coffee break for the nurses was 9 til 9.30 and 9.30 to 10 and then when you got your full staff back again you started dressings on the surgical wards and erm the senior people would do the dressings and the junior people would do positioning and pressure sores. And you did change positions regularly and if they were bad enough to be changed half hourly, hourly or two hourly they were on a chart and you signed the chart and if they were four hourly well then it came into the routine of the ward but I would say anybody that with broken skin when you had got them turned that the skin, the area in question was visible you had to run, 'cos there was always two of you to do it, you'd to run an fetch a senior person to look at it so that they were very carefully monitored. And we did not have the infected sores which I met later on in my nursing career and we were meticulous with the turning but there were a lot more nurses per patient.

DJ: Would you say so?

Mrs A: O yes we were never short staffed not on a ward theatres was a bit ropey but not on the wards. And erm.....as I say...and if they got infected erm..... we usually if

the skin was broken ...we usually, and we thought that it could be infected we used EUSOL and when they were healing we used Lotia Rubra and just very occasionally if they didn't respond to either we used honey.

DJ: Did the honey work?

Mrs A: Yes It was like the surgical wounds if they didn't respond people developed infections and I remember I patient a lovely chap but he, he ...it just gaped and in the end we got down to linseed poultices... 2 hourly linseed poultices and he walked out of the ward and he had been so desperately ill. I don't know if want to put it down but the other thing we did, a lot of us, for our very ill patients, in the training school we went up to the hospital chapel for half an hour every morning and we started 30 in the regional preliminary training school but only 18 went back to the 3 hospitals including ours. The others were weeded out along the way. And at our little talk at the end the tutor said could you try once in every 24 hours to go into the chapel and ask for help with your work and for your patients. And I know that a lot of us did. And we never stopped. And when I was nursing very poorly patients – I specialised a little boy with osteomyelitis and this chap whose wound had burst open and in the middle of the night when I was there alone and I didn't know if they were going to live or die – they were terribly toxic – and, and, er.. I would just go and pray. And it sounds a funny thing to try and do with infectious diseases its' just that they were so dreadfully ill and they used to get medical and surgical patients. We had medical problems – on the medical wards we had cancers with open suppurating wounds and erm.. we just used to pray for them. And sometimes miracles happened. And I think that helped us in our nursing. The more we did it, I mean I did it right up to the end at Manchester Royal when I was a Nursing Officer and at Barnes when I was a night services manager and you'd get a bleep, and nursing officers had to answer every bleep, and I'd run from St Mary's through all the corridors upto the top of the surgical wards saying "God guide me in what I should do". I mean it does work.

DJ: So are you saying that in a real sense nursing was a vocation in those days?

Mrs A: O yes,.....well that's going on a bit from pre-war but the people who came in 1942 some of them became nurses because they didn't want to go in the forces, erm .. they didn't stay. Er, the ones...some were weeded out in the regional preliminary training school. Another one stayed a year. She was brilliant academically but she hadn't patience with the patients. She went off and became an engineer and was commissioned in the Wrens. And others left and did other things. So yes I think at that time it was certainly a vocation. I didn't have any friends that weren't there because they didn't want to be there we all wanted to be there.

DJ: Yes. Thank you for that. Can I take you back to this boy with osteomyelitis.

Mrs A: Yes

DJ: and the patient you were putting the linseed poultices on and you were saying they were very ill. You were saying they were a death's door.

Mrs A: Yes, yes they were.

DJ: What was the nursing routine with those patients at that time? What can you remember? What were you doing to.....

Mrs A: get them better?

DJ: Yes

Mrs A: Both of those I nursed on night duty. I love night duty because you could give individual care. Well Terry was only four and a half and ..erm... because he was so desperately ill night sister would put a special on him and so I specialised him and what

I used to do during the night was ..erm.. his parents used to stay all night but they just sat there and both of them were working. His father had been in the army and he had lost an arm say (unclear). I used to do half hourly obs. He was in a typhoid state. He was cachectic, semi-conscious plucking at the bedclothes tiny emaciated little boy. I used to try and give him little sips from a teaspoon of glucose and water, we used to have liquid glucose in a jar, glucose and water and then he'd run in and out of a feverish state so I used to give him wet sponge, cool sponge, you'd put the sponges under the arms and sponges in the groins and at his forehead and erm...of course sometimes he would perspire a lot and you had to keep changing all his clothes. He wasn't continent at that stage. You just did things like that. And I think we used to have a 96 hour fortnight so that would be a sort of a you know one worked 12 nights or so and I just remember doing that all the time. But as I say it was very worrying so I used to nip over to the chapel when I was relieved for my break. And gradually he became conscious again but you see I do think in those days I don't remember any medicines - I think we only had sulphonamides and you couldn't, which was bacteriostatic, and you couldn't have given that to Terry because, and it was his erm...he had osteomyelitis - it was his left leg it was dreadfully painfulerm so all..it used to help him if nurse would sit and put a hand on his leg. I think more than any pharmaceutical stuff it was just loving care that healed him.

DJ: Yes

Mrs A: Eventually, and we always said "Mummy was here" and she was a hospital cleaner and she needed the money you see and we used to say come here and sit in the easy chair and Dad came too but he had a lot of pain from this amputation. So it was really down to the nurses. But I think with a lot of these things, I mean when I think back like the measles children who got pneumonia and because, in the deprived areas, erm ...the children were undernourished well malnourished and they didn't have much money and they had miserable little homes and they came into hospital and then the infections just spread because they had no resistance to it. Things like tonsillitis would go round a ward and we had a gastro-enteritis epidemic and we had a whole ward of children - we didn't have enough intravenous sets and in any case we didn't have enough nurses to cope with them. We had two nurses die from contracting it.

DJ: Two?

Mrs A: Two yes, two nurses and we just used to just try and spoon Ringer's solution into there little mouths. And...but when they came in they were almost moribund. It was, and as I say, the children that were already in, eventually we close the ward completely to admissions, but you had two or three in and however much, it was a very modern ward for those days. It was four beds in the ward and there were 36 beds but even so the infection spread. The nurses wore gowns and they wore masks and they wore headscarves tied round their hair. We didn't have all that many gloves because there weren't many and what we had we had to patch but you know we did our best.

DJ: Yes

Mrs A: But the infections did spread...and they did die. That was...and then the chap with the linseed poultice, Sidney News[? unclear], he was 16 and he had appendicitis and he developed peritonitis and then, and then the wound opened and, erm ..., it was quite obvious that it was going to be really infected and gape and there was no question of re-suturing it. And first of all we tried, what was the pink stuff we used for poultices, erm....

DJ: Calomione?

Mrs A: NO, it was a ..erm.. pink sort of like lint it was impregnated lint you could buy it in the chemist to use at home. Now you would be able to find out what it is. But it,.. and you put it in the ringer and you put it on 4 hourly. So we tried that for Sidney but

it didn't work. And you know very very copious fluids to try and get the infection through and he wasn't as crit.. desperately sick as the little boy because he was a fairly healthy 16 year old to start but for 3 weeks you know we were frightened of septicaemia. And he teeters on the brink. And all we could do was give him what fluids he could take. He was so tired because he was so ill. So we used to try and give him beaten up egg in milk stuff like that. And we, we...he had a brother who was 17 a year, just a year older, and sometimes his brother would, and we didn't have enough eggs for him, but they had a café and his brother used to bring in the eggs and if his brother would beat up the eggs and milk he would take them. So we used the brother to give them to him.

DJ: Right

Mrs A: And I forget, it was one of the very senior surgeons who said that these, I can't remember what these poultices were called, that they were not working he said we were going to have to go back further – let's try linseed. And the linseed worked. But it took a long time. He was in the ward a long time. But I remember, I remember the night he was admitted you know and obviously the appendix had perforated and in those days the ward nurses accompanied the patient to theatre and if you could be spared you could remain, they would let you stay, so that you saw what was happening and when he went back to the ward you knew what you were nursing. So what they would do would let the ward nurse go up and perhaps send a runner from another ward perhaps just to cover your job on the ward. So I went to theatre with Sidney but I couldn't stay because we hadn't got a runner that night. But the girl that went sent that it was infected, you know, and when they clamped gunge came out. But we used.., eventually we put the linseed poultices on 2 hourly night and day. It was a rare old business because you had to make them and then like an antiphlogestron poultice you would put them upside down on the steriliser to get them hot enough.

DJ: Right

Mrs A: Spread the linseed mixt on the lint and a layer of gauze over that and then you would put a linen dress, linen dressing towels which were autoclaved, and then you would put that on top of the steriliser and then the poultice and then your piece of cotton wool [?] so that all that got lovely and warm and then you'd whip it off and take it to the patient then put a flannelette many tailed bandage

DJ: Right

Mrs A: Over and over and over. It workedeventually. [44.23]

DJ: And how did you do the dressings in those days? I mean, if I use the word "Aseptic Technique"

Mrs A: Yes, we did.

DJ: How, how was that aseptic technique – did you use forceps to handle things or...?

Mrs A: We had forceps yes. We had dissecting forceps. But I wouldn't...I don't think they had them anywhere [?everywhere]. As I say Mile End was one of two. Hammersmith was the other one. They were the two flagship hospitals of the LCC, and we were told that we were very fortunate to be there, and, erm....as the years went by we realised that some of the staff we had there became very famous indeed because they were the pick of the bunch, you know. Er, so, yes we always used aseptic technique. The only thing was occasionally you couldn't boil the forceps up quick enough. We... when you did the dressing round, staff nurse or sister gave you the list so you had one trolley. You had one trolley, you had...you didn't have individual packs for everybody in those days so you had to boil all your stuff up first say. So you had on the trolley a pile of dissecting forceps and a pile of sinus forceps and a pile of probes and then all the drums of dressings and things and, erm...but you

kept them covered with the linen towel and took out what you needed. So if there were one or two clean dressings to start with, you know, clean stitched wounds being taken down for the first time you did those first.

DJ: Right

Mrs A: (unclear) Then you went on

DJ: So you didn't strip your trolley down between each dressing then?

Mrs A: No

DJ: How interesting?

Mrs A: Yes. That came later with, with the individual packs, you see.

DJ: Yes

Mrs A: Erm.... and of course went I got to the western Pacific you'd you were lucky, the same on the troop ship, you just didn't have stuff.

DJ: Do you remember that transition when penicillin started to be introduced?

Mrs A: Penicillin?

DJ: Yes

Mrs A: Oh yes, there was non for the civilians. Out at the Northern Hospital, at Winchmore Hill, first we got it for the POWs. And that was, er.. you mixed er.. you put sterile water into a rubber topped vial and shook it up to dissolve the powder. And the POWs didn't want it because they thought we were killing them. They'd been brainwashed. And, erm... I am ashamed to say...suppose you put 2 mls of water into a vial you would leave a little tiny bit in the bottom and we collected all those tiny bits and we took them to the places like the orthopaedic wards where people were desperately ill erm..... and then we would draw them up to get a dose and give it to our own people.

DJ: Creative

Mrs A: Well it seemed wrong somehow that they shouldn't have any at all.

DJ: Yes

Mrs A: I think we were always very careful with the penicillin. We always swabbed the tops very carefully, and mixed it.

DJ: And how was it regarding the change in the patients, and and the nursing of those patients because you'd been telling me about Sidney and the boy being so very ill for such a long period of time. Did it make a very rapid change?

Mrs A: We didn't get a lot. It came in slowly

DJ: Right

Mrs A: So the change was slow. We also saved little bits if we had air-raid casualties with infected wounds that were too sick to go upto Scotland. And then, erm..... but the other thing which helped infected wounds was when the troops came home from Dunkirk, they'd had emergency amputations in the Casualty Clearing Stations and they came in plasters and then, they were put in the iron beds, we took the plasters off and of course they were all maggoty but the wounds were clean. And then we re-amputated and replastered. But those maggots did a wonderful job.

DJ: That's right. Because they are using them again now, you know.

Mrs A: Yes

DJ: Deliberately putting them in.

Mrs A: They did a wonderful job. Awful amputations, I mean they just had to hack something off to save the person's life. They couldn't come back to England 'cos of the torpedoes some of them went all the way to America and back again without getting off the ship. And they came 30 at a time in the greenline ambulances. We only had them 12 hours and then they... we put them in the beds and you took the plasters off, you prepped them and off they went to theatre and they were re-amputated, re-plastered and they were off again at six the next morning. But they were clean wounds.

DJ: Yes. Can I take you back to where we started the conversation and, and one of the things you were talking about was the, erm...the dust – you had to do the damp dusting, the dust had to settled before you started to do the dressings.

Mrs A: Yes

DJ: But tell me about the ventilation in the ward – did you have windows open? Did you have to, sort of, clear the air out so to speak? What do you remember about that?

Mrs A: We had tall windows which opened at the top. You pulled... you had a pole. You opened the tops. And of course with the tuberculosis patients we had glass verandas, glassed verandas, which were OK when you got out to the fever hospitals where the bombs hadn't fallen but in Stepney erm.... they caved in on you. (laughs). Yes but we did... I think we always had some windows open. I don't remember a stuffy ward. Of course they were high wards.

DJ: Yes

Mrs A: Erm... erm.... and beautifully polished floors.(un clear) and they took a pride in their work so you got clean places. You never saw dirty sticky lockers like you see today. And when a patient was discharged nurses' job was to clean the bed and the locker clean all the mattress and everything like that. Cos we had erm... a game, that was at Mile End, we had all the erm.. thick rubbery covers on the mattresses whereas when we got out to base they were ordinary mattresses and with waterproofs on. But we did put the mattresses out in the sun, when there was sun. And if you'd got an infection erm... then they were taken away to be fumigated. So, erm...I'm sure it was the prevention in those days. But it was the way of life.

DJ: And you were saying that there was...erm...it was very disciplined was the nursing. What were the relationships like with the other disciplines, like with medical colleagues....

Mrs A: With ?

DJ: With medical colleagues and so on?

Mrs A: We got on very well. Erm.. I mean the doctor was always God. Whereas in later years when I became more senior you realised you knew more than the baby doctors. But in those days we did what they said and we were taught you never... you do first and question later. So we never questioned anything. But we did respect our doctors ermm.. 'cos I was very lucky – I worked for Gordon Sears and he was a super bloke. And he set the standard. He'd got a great sense of humour but he set the standard and you could go to him. As a staff nurse in theatre we couldn't scrub up properly because they had stopped giving us Lux soap and I went down to the

Hospital Secretary and he said you'll have to ask Mr Sears 'cos you know they ran the hospital, the medical superintendents, and I went in and said "Please sir, please can we have some Lux soap. My nurses hands are red". He said "Of course you can have Lux soap, my dear". And we had it. Erm... we respected our doctors, and they were so good to us. And they would take us on their teach., the senior staff, when there was a ward round the doctors, perhaps half a dozen of them, but there was always Sister and the staff nurse and there was always one, when you were newly qualified they made a point of including you on the rounds because you jumped from in those days we certified our own deaths you see once you were qualified – it was a dreadful responsibility. You used to ring up your friend and say come and, come and agree with me, erm... but they were so kind and helpful to us. And they did teach us. Gordon Sears was marvellous, and the surgeons would teach us. If it was a case of, say, you know, taking out a chest drain or something like that "you see that chest drain will have to come out. Have you done it" "No" Well if it was a time when neither Sister – day off - or Deputy Sister – time off – he'd say "would you like me to do it or would you like to do it under my supervision?" And whatever you said they would do. They were so helpful and considerate. Erm.. and we respected them very much. And I don't ever remember having any problems with the medical staff. They were great.

DJ: Good. Is that Gordon Sears who wrote the text book?

Mrs A: Yes. He wrote lots. I got one there (points). I got the latest one there. And he wrote my reference when I joined the army. I like to think and, you know, and for the Colonial Service and he, he always took a ward – the biggest heaviest medical ward was, was his and he was meticulous on his rounds. And this was the Sister I asked to work for. She was superb. And when I was a new staff nurse he was there you see, and he said oh, you know, good you're qualified. And he was so kind and helpful. And the patients adored him. From a 13 year old I can remember to the very old he, he was marvellous. I don't, now you see nowadays the nurses aren't close enough. You might do the first year together in university but there isn't the same relationship that we used to have. Although, you know, as I became more senior you get to know, when you've known them as housemen, when they are Consultants and you are senior you work together very well. But in the interim period it is not all so easy.

DJ: Yes

Mrs A: As you have probably found?

DJ: Yes. Well this has been excellent.

Mrs A: Well, I'm sorry I do tend to go on.

DJ: Well you haven't. Its been wonderful. I mean that little gem about saving little bits of penicillin that's wonderful

Mrs A: (laughs)

DJ: But is there anything else that you think I should have heard and you haven't told me? [58.59]

Mrs A: Well of course we, we ... there was the trachy care, which .. one did get a few trachys in those days, erm..if you got diphtherias in and you.... I think we had more infectious patients in the side wards then we do today. So that had to be very meticulous. And then we nursed chicken pox in the side wards and we put all the crockery and, WE WASHED it in carbolic, and then it was taken away and boiled. And two of us got chicken pox and spent three weeks in the isolation bay at the hospital. Erm... I think the measles children, there again, I mean on the kiddies ward, little tiny ones in oxygen tents, we had to be very careful there with risks of infection and dealing with them through sleeves in the tent.

DJ: Right

Mrs A: And you'd got a very ill child somehow or other you'd always get her specialised. And it wasn't always a senior nurse it was a good nurse 'cos, you know, all nurses aren't good. Some of them cut corners, especially some of those that are very clever, academically. Our Gold Medallist was a hopeless nurse. Erm...I do think with the tuberculous patients, which you could get on any ward, we had metal mugs with slip up lids..

DJ: Right

Mrs A: and the junior nurse had to scrub them in the sluice and then boil them in the bed pan steriliser every morning but I think they were a lot better than today's little polystyrene things that people expectorate into and then they get it on their fingers

DJ: Yes

Mrs A: because they were big mugs and they may have filled them with frothy sputum but they were cleaned every day. Erm... I do think with the tonsillitis, which again they developed on the surgical wards 'cos of the strep infection – somehow we weren't always prepared for that and I went round one morning with this Charge Nurse, and two excellent male charge nurses, and we went round with washing bowls, and he went first to take the four hourly temperatures, and he'd just draw the curtains and say "His tomorrow's come". And they developed quinsies, and we hadn't wa.., we didn't know, because we were giving them glycothymaline for their quinsy. We might have been treating their fracture or their appendix but hat was an infection we didn't really rally up with..

DJ: Right

Mrs A: and that time. Erm...(reads notes) I think mastoids were another one. You'd get kiddies with earache and the risk of meningitis we monitored the kiddies with earache very carefully because the fear of a mastoidectomy was instilled into us as being very, very much a thing to avoid. The whooping coughs erm... You see we did have more of these on the general wards. The kiddies we used to use a ..., you were frightened of bronchal pneumonia, so you had steam kettles with long spouts and they inhaled, and we did see quite a lot of crisis and lysis with the, with the whooping coughs. Dreadful to see. Erm... chicken pox we got landed and the terminal disinfection, the bath and the hair wash and all clean clothes, the dreadful.. Gastroenteritis I've said. Small pox I told you. We had the whole hospital closed. It developed with the merchant seamen, so the whole hospital was closed, and I can't remember for how long but it was three or four weeks because we got absolutely cheesed off. Couldn't go out. No staff were allowed out. No patients in no patients out.

DJ: And there'd be no visitors or anything?

Mrs A: No visitors, nothing. But how we got money I can't think, but erm... I know we had to boil it and drop it in the buckets. Shingles was another thing they developed and we used to paint it with a sort of varnishy thing. It wasn't very nice and we didn't like the thought of, you know, getting herpes if you got a chicken pox. Erm.... I do think when the nurses packed all the drums it was a job during visiting hours. You didn't have hoardes of visitors round the beds bringing in infections you had TWO. Each patient was issued with two cards and the junior nurse stood at the ward door she took the cards when they came in and she gave them back when they went out and another two came in. You didn't have as much infection and that was one way we controlled it. Erm.... Steam sterilisers we did let them boil the right time. Erm.... used to get quite a lot of eye infections on surgical wards. Here again I think it was, you know, probably (? word) resistant – hot spoon bathing there was nothing else you see. The bloke who was noticed to have a penile discharge he'd got a problem with a fractured femur – the poor man we had to deal with him with gowns and gloves and so on and I did feel sorry for him. He was a little Jewish gentleman and very pleasant. And there it was – he did have syphilis. Erm..... UTIs – we used to get a lot of UTIs on

the gynae wards – I don't know how much, how many of the threatened abortions were helped on their way but we used gallons of barley water.

DJ: Oh right.

Mrs A: (? words) Infected leg ulcers were another thing you got because of the people, they were malnourished, again there was one man – who he ate large sandwiches because he didn't understand record books and you know his legs, they were dreadfully ulce...you could smell them a mile away. We got them better. Erm... flowers I said, handwashing – I tell you what we didn't have these horrible rough paper towels you have now. When did the ... scrubbed up your hand to do the dressings we had autoclaved linen towels and you dried your hands on those and much better than when I was doing drug rounds as a Nursing Officer to help out I noticed the nurses were not washing their hands between eye drops and ear drops and they said "My hands are so sore" and I don't know about these spirit rubs – they wouldn't do any good on my hands. I can understand the nurses not doing it. They're pushed for time and why they won't buy them nice soft paper towels God only knows. I do think we though more about the diet, we saw that the patients ate, erm ... orthopaedics got extra food you know 'cos they got vitamin C to heal the bones and multivitamin tablets. And tuberculosis patients got extra food, erm we didn't use disposable equipment. You never wore uniform outside hospital. I think that takes infection into wards unless you were a community midwife or Queen's Nurse. You'd wear your hat and you got cheap bus fares. Erm Visitors, there wasn't more than two visitors because there was only two chairs per bed and God help you if you sat on a bed, nobody sat on a bed. It was unheard of. So.. and now for the future, I think we are international travellers so, actually in the Royal I was called down once to Accident Room at night and asked "Have you seen this before" I said "Yes, its leprosy" There wasn't a doctor in the hospital that had seen it. Now they have elephantiasis and yaws and they have, they die of measles still in the western Pacific because they haven't got any drugs. You get infections from cockroaches, scorpions. You get snake bites, You get, they keep baby crocodiles for pets, you get those ... all these things are coming to England now because we are international travellers. I ask myself if the voluntary service people know what they are going into. We don't have a tropical diseases hospital anymore for them to go and do a six month course.

DJ: That's right

Mrs A: And if this climate is going to warm up we are going to get mosquitoes, we are going to go back to a need for mosquito nets and malaria is not funny.

DJ: That's right

Mrs A: You know, I nursed cerebral malaria and it was no joke at all and people died. So I do think if they are studying infections, if they know what happened years ago. See when I went to the Solomons, when did I go – '53, I was back in pre-war England – the days of my youth but the dieases were a lot nastier.

DJ: Yes

Mrs A: So,... and I think midwifery is the same. We had a doctor in one of the remote islands and she went into labour at 6 months and she had to get the house boy to deliver the baby and tell him what to do.

DJ: Gosh

Mrs A: And, and I .. you know, think of the risk of the infection there, a house built of palm leaves on bamboo and the roof and from the roof dropped the scorpions and along the cut grass outside comes the snake and you have got a new baby delivered by a house boy whose... well you know its we need to know more about infection. So I don't know. I think you have chosen a fascinating subject. And I am sorry if I have bored you I tend to get carried away.

DJ: You have not bored me in the least. It has been an excellent hour listening to your

Mrs A: You know I loved my job. I still love it. Because I belong to quite a lot of church groups and once a nurse, always a nurse. I love to come home and look it up. And we've got magnificent libraries in Sheffield although I miss Manchester University Library which I used go to. And Peter [son or grandson] will look things up in Edinburgh for me because he almost lives in the University library and we get Scientific American which keeps us upto date. But I feel that nursing is so exciting these days, but it always has been really.

DJ: Yes. That's wonderful.

Mrs A: You need a good brain to keep up these days though.

DJ: Thank you for your time.

Mrs A: You are very welcome. I have enjoyed it too.

Appendix 10

DID FLORENCE NIGHTINGALE ACCEPT GERM THEORY?

This paper was originally written in 2010 as part of an attempt to understand the evidence that nursing adopted germ theory from the earliest days of the theory. My analysis of debates as to whether Nightingale accepted germ theory or not was central to an appreciation that the transition to germ theory was not instantaneous nor did it occur in a relatively few years. Evidence presented in the main body of the thesis suggests that the transition to germ theory was not completed until the advent of the sulphonamide drugs and antibiotics.

My starting point is that Lynn McDonald argues (vehemently) that Florence Nightingale accepted germ theory. My contention is that the evidence used by McDonald does not adequately support her argument.

Lynn McDonald writes "At the practical level Nightingale was **always** [my emphasis] an effective opponent of germs, even while conceptually supporting the "miasma" or environmental theory". (see p15 of Lynn McDonald, (ed.), *Florence Nightingale: The Nightingale School*, (Volume 12 of the Collected Works of Florence Nightingale, Waterloo, Wilfrid Laurier University Press, 2009) p15)

Key point here is ALWAYS opposed germs.

On p16 of the same volume McDonald notes that Nightingale approved the syllabus of lectures that the medical instructor John Croft prepared for the Nightingale School in 1873. This is interpreted to mean that she approved the content. There is, as far as I can establish, no evidence to suggest that Nightingale saw the content – though some lectures were printed. Croft concludes his lecture on Disinfectants and Antiseptics with the warning that "these antiseptics were not substitutes for ventilation, fresh air and cleanliness, Nightingale's point precisely" (McDonald's words). The person chosen to lecture could hold a sceptical view about germ theory, preferring to tow the party line – why else might he have been approved by Nightingale to lecture!

Gerard Vallee, (ed.), *Florence Nightingale on Health in India* (Volume 9 of the Collected Works of Florence Nightingale Waterloo, Wilfrid Laurier University Press, 2006) p863 writes "The least that can be said is that Nightingale was reluctant to go along with the speculations of germ theory. She preferred the miasmatic or environmental theory for practical and perhaps even moral reasons: germ theory logically led to isolation of the patient at the micro level, and quarantine measures at the macro level. Throughout her life she advocated sturdy measures to remove the causes of infection: dirt, overcrowding, bad ventilation and bad water. She resisted germ theory for its connection with contagion theory – germs being the main disease-causing entities transmitted by contact – although her measures for removing the causes of infection made for good "germ practice".

Valle also adds (p863) "Only in the 1880's did she [Nightingale] finally accept germ theory as a valid theory....." Sutherland had explained to her about Koch's discovery of the Cholera bacillus "Thereafter Nightingale still remained a reluctant germ theorist, grudgingly accepting the theory but continuing to make sarcastic references to it" (p863).

Vallee argues for a reluctant acceptance of the theory. I would prefer an analysis which suggests that she accepted the existence of the theory, but not necessarily the validity of the theory. Any competent "scientist" would recognise, intellectually, that a range of theories might exist to explain a phenomenon. That does not mean they agree with or accept the theory.

Throughout her life Nightingale had observed that her sanitarian measures, grounded in miasmatic theory, had improved health and/or prevented infections developing. Her theory was valid, and therefore she had no reason to change. Her sarcasm against germ theory is evident (or germ theories –plural - as Worboys’s analysis demonstrates - Worboys, Michael. *Spreading Germs: Disease theories and medical practice in Britain 1865–1965*, (Cambridge, Cambridge University Press, 2000).)

Both Vallee and McDonald cite Nightingale’s correspondence from 1885 in which she writes “The mania of tracing any disease not to some glaring obvious sanitary defect, but to insects, bacteria, bacilli, protoplasm – what can I call them? – is becoming an incurable lunacy.....” (Vallee, p923 and McDonald, Vol. 12, p17) I get a sense of Nightingale’s dismay at the madness of people accepting the theory.

Elsewhere Vallee and McDonald also cite an 1890 letter to W R Robertson – though Vallee gives a fuller, and hence more insightful extract. Writing about agricultural students, Nightingale says “but I hope they will not go mad about “bacilli” and “germs” and “bacteriology”, which has been the “fad” here.[omitted by McDonald who begins here] But I think [it] [[Vallee puts “it” in square brackets and I believe it refers to “fad”]] is passing away in its dangerous aspect (Koch’s), viz., that of considering the “germs” as the origin, not the product, of which uncleanness, bad drainage, bad water supply, etc., are the origin” (Vallee, p864 and McDonald, Vol. 12, p18). McDonald in McDonald, Lynn., (ed.). *Florence Nightingale on Public Health Care*, (Volume 6 of the Collected Works of Florence Nightingale Waterloo, Wilfrid Laurier University Press, 2004) p567 cites a letter dated 27 July 1883 to a Dr Gillham Hewlett, sanitary commissioner for Bombay in which she writes “Alas! I wish I could say that we are making progress in Europe in sanitary things. It seems rather as if we were making retrogression (since twenty years ago). The insanity of our doctrines about “germs” and proceedings about cholera is so virulent...”

1883 also saw the publication of Nightingale’s first entry into Quain’s Dictionary of Medicine in which she writes “ ‘Infectious hospitals’ and ‘wards’ whether necessary or not, are not a part of hygiene, and the doctrine of ‘disease germs’, in the sense in which it may lead to considering ‘infection’ inevitable, must not be taught as a principle of sanitary nursing. That there is no such thing as ‘inevitable’ infection is the first axiom of nursing” [McDonald, Vol.12, p738]. In this extract the cynicism expressed in the phrase ‘doctrine of disease germs’ reveals a scepticism of germ theory.

McDonald, Vol. 6, p578 cites from a letter to Henry Bonham Carter dated 7th May 1897, by Nightingale who wrote “You know of course there is another nurse “down” [at St Thomas’s], this one with scarlet fever. Not a single creature has spoken to me or thought of fault in the sanitation. *Has anything been discovered? Who is the sanitary officer?*” This extract illustrates a very telling scenario – one in which Nightingale was (aged 77) beginning to be overlooked by others – she was no longer the great authority she once was. Her “outdated” resistance to germ theory meant that this increasing persuasive theory offered explanations for causes of infection outside of the “blind” quest for cleanliness.

McDonald, Vol.12, p871/2 cites an address by Nightingale dated June 1897 to the Nurses and Probationers trained under the “Nightingale Fund”. Nightingale wrote “let me note here, in passing, every year we know more of the great secrets of nursing. One is aseptic.....Aseptic means absolute cleanliness.” “A great doctor, a friend of mine, says, “Call it germs, bacillus or dirt, the treatment is the same, that is, cleanliness.” The use of term ‘asepsis’, which is associated with germ theory, does not imply acceptance of germ theory. Nightingale clearly linked it to her sanitarian ideals.

McDonald notes (Vol12 p xiii) that Nightingale “continued to produce papers and reports of various kinds well into her seventies ... She did not do any serious writing in her eighties, when blindness and failing mental faculties gradually stopped her. There are only brief messages from 1902 on.” The poor eyesight, and failing energy is

recognised in Nightingale's letter of 16 December 1889. Then aged 69 she comments that "As for revising my article for Dr Quain before Christmas, the type is so bad, the mornings are so dark, and my eyes are so bad, that if he must have it before Christmas, I think I must return it to him as it is."

In summary: there is no evidence that Nightingale accepted the validity of germ theory intellectually. Whilst she was evidently aware of germ theory as a theory, she continued to subscribe to her long held beliefs that cleanliness, fresh air, ventilation, and clean water were the basis for avoiding infections.

Is it possible that McDonald has accepted Vallee's analysis superficially without exploring Vallee's acknowledgement of Nightingale's scepticism of germ theory. The evidence cited by both Vallee and McDonald fails to convince that Nightingale accepted germ theory. Correspondence from her later life indicates that she remained unconvinced about germ theory. The possibility that she was becoming out of touch with society is evident in her seemingly being ignored about a nurse with Scarlet Fever at St Thomas's Hospital.

Nevertheless her powerful influence on the nature of nursing which emphasised the quest for cleanliness as principle function of the nurse meant that it took two to three generations of matrons and ward sisters trained in her methods to pass through the hospital services in the UK before change in nursing practices began to appear. Thus whilst medical science continued to develop the ramifications of germ theory, nursing continued to emphasise (through its training and practice) approaches to care grounded (originally) in Nightingale's sanitarian nursing.