

**Faculty of Health Sciences
WA Centre for Cancer and Palliative Care/Curtin Health Innovation
Research Institute**

**Exploring the interactions between radiation therapists and
cancer patients: An ethnographic study**

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**This thesis is presented for the Degree of
Doctor of Philosophy
of
Curtin University**

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Declaration

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

Susan Patricia Merchant

Signature: 

Date: 28/9/2011

As you make this journey, always remember that each day is a precious gift. If you can enjoy it for what it is and make the most of it, then believe it or not, there is another extraordinary gift waiting for you. Tomorrow. (Greive 2003, pp. 108-110)

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Abstract

Radiation therapists are responsible for the planning and delivery of radiation therapy treatment for patients diagnosed with cancer as prescribed by radiation oncologists. Treatment courses with a curative intent usually involve daily interaction between radiation therapists and the patient for six to eight weeks. Evidence in the literature suggests that patients with a diagnosis of cancer can experience levels of anxiety and depression, and radiation therapy can also invoke fear and anxiety. Psychosocial support of the patient has been found to enhance the treatment experience and the efficacy of the treatment. Radiation therapists need to communicate with patients and may have a role to play in reducing patient anxiety and distress. The aims of this study were to gain an understanding of the underlying beliefs, values, practices and systems that form the current culture of radiation therapists and how it might be affecting the extent of supportive care that their patients receive.

An ethnographic approach enabled the gathering of rich descriptive data through observations and interviews conducted in two radiation therapy centres between May-November 2009. Participants were radiation therapists, patients, nurses and administration staff. Four group interviews with radiation therapists were conducted between April-June 2010. Data was analysed by familiarisation with the raw data, charting themes using coding and identifying subthemes, and interpretation using mind mapping diagrams, consultation with supervisors and presentations to peers. Extensive reflective journaling was also used to assist data analysis.

Radiation therapists' interactions with patients are complicated by a combination of radiation therapists' cultural aspects, radiation therapists' perceptions of supportive patient care, and the environment where the interactions occur. This study disclosed new understandings and highlighted the complexities of four main cultural concepts. These concepts consist of: a disease focus, technology motivated, task and teamwork behaviour and a heightened awareness of time and space.

Interactions between radiation therapists and patients were identified as (a) structured consisting of information provision and instruction giving, and (b) unstructured (i.e. informal talk). The findings of the study indicated the lack of appropriate space or available space within treatment areas restricted radiation therapists interacting in-

depth or in meaningful interactions with patients. The amounts of time radiation therapists had available for interactions were limited because their role within the treatment area required greater amounts of time undertaking technical tasks. There was also pressure to keep to time with an emphasis on efficient throughput of patients. However, patients found interacting with radiation therapists helpful in reducing anxiety and normalising the process but required information to be individualised to cater for individual needs.

This study provides an understanding of the cultural and environmental factors underpinning the radiation therapist/ patient relationship. The findings suggest the need for Australian radiation therapists' to reassess their current approaches to supportive patient care. This study highlighted the need for radiation therapy education and training to be inclusive of communication skills and their use within different clinical spaces. The findings of the study suggest the need to develop a structured approach to supportive patient care by radiation therapists and to the future professional role development of radiation therapists in supportive patient care.

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This thesis is dedicated to the memory of my three-legged study buddy, Tiger, who kept me company during the final stages of writing but sadly could not stay until the end; I did not write fast enough.

List of Publications and Presentations

Publications

Merchant, S., Halkett, G., & O'Connor, M. (2011). Shape of things to come: factors affecting an ethnographic study in radiation therapy. *Journal of Radiotherapy in Practice/FirstView article*. Advance online publication. doi: 10.1017/S1460396911000033

Merchant, S., Halkett, G., & Sale, C. (2011). Australian radiation therapy: an overview -Part one. *The Radiographer*, 58(1) 20-24.

Presentations

August 2009 AIR Research Symposium “My Journey: The Big Red Bus
A Personal Account of the PhD Process” Perth, WA

October 2009 Combined Scientific Meeting (RANZCR, AIR, FRO &
ACPSEM) “The shape of Things to come:
Factors affecting an observational study” Brisbane, Qld

September 2010 16th ISRRT World Congress “Exploring the interactions
between radiation therapists and cancer patients’ Initial data
analysis results” Gold Coast, Qld

November 2010 Mark Liveris Seminar, Curtin University “Radiation
therapists’ interaction with cancer patients: Initial analysis
Perth, WA

April 2011 8th ASMMIRT “Interactions between radiation therapists and
cancer patients: An overview” Adelaide, SA

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Abbreviations

| | |
|------------|---|
| ACPSEM | Australasian College of Physical Scientists and Engineers in Medicine |
| AIR | Australian Institute of Radiography |
| ASMMIRT | Annual Scientific Meeting of Medical Imaging & Radiation Therapy |
| CT | Computed Tomography |
| FRO | Faculty of Radiation Oncology |
| HADS | Hospital Anxiety and Depression Scale |
| linac | Linear Accelerator |
| LL2 | Lower Level 2 (PMac) |
| M3, M5, M6 | Radiation therapy treatment units at PMac, East Melbourne |
| PMac | Peter MacCallum Cancer Centre |
| P.S.A. | Patient Services Assistant |
| PSA | Prostate Specific Antigen |
| QoL | Quality of Life |
| RAH | Royal Adelaide Hospital |
| RANZCR | Royal Australian and New Zealand College of Radiologists |
| RO | Radiation oncologist |
| RT | Radiation therapist |
| RTs | Radiation therapists |
| TS1, TS3 | Radiation therapy treatment units at RAH, Adelaide |

Glossary

| | |
|-------------------------|---|
| Beam check/warm up | The daily process of checking and running a treatment machine (linear accelerator) prior to delivery of treatment to patients. |
| Bolus/build up material | Material with similar density to human tissue used to “build up” dose in a treatment area when higher skin doses are required or to even out dose distribution. |
| Brachytherapy | The terminology used for radiation treatment given by inserting radioactive material directly into the site of the tumour. The surrounding normal tissue is spared from receiving high doses of radiation because the radiation dose falls off rapidly over a short distance. Treatment is delivered continuously and over a shorter time period than external radiotherapy (Refer to Dobbs, J., Barrett, A., & Ash, D. (1999) Chapter 5, p 60 for more detail) |
| Bunker | The name given to the treatment room housing the linear accelerator. Bunkers have thick walls purposely built to certain specifications to ensure radiation safety and protection of people in the surrounding environment. |
| Casts | This is the name given to an immobilisation device, custom made, to provide stability for accurate treatment delivery. Casts are usually made of a thermoplastic material. The material is heated and placed over the area of the body where stabilisation is required. Once the material is cooled the cast is a rigid structure in the shape of the area. E.g. in the case of head and neck immobilisation the cast forms a “mask”. |
| Computer planning | Specific computer programs to provide precise dose distribution to tumour site/area according to the treatment regime prescribed by the radiation oncologist. CT scans are taken of the area to be treated. The CT scan images are used to create a 3D plan of dose distribution to the tumour site/area. Organs and bone within the treatment volume are identified and contoured by the radiation oncologist and radiation therapist. The doses to these structures are calculated to ensure the dose received is within acceptable limits. E.g. In delivering treatment to a tumour site in the neck, planning of the dose distribution within the treatment |

volume requires serious consideration of the radiation dose to the cervical spine and spinal cord.

| | |
|--------------------|---|
| Control room | A room where the controls for the equipment (linear accelerator) are located, usually adjacent or next to the treatment room. |
| CT scan | A computed tomography scan is a number of images acquired with x-rays and it is taken in such a way that a computer can reconstruct cross-sectional images of the body in the area of interest. CT scans provide greater detail of soft tissue and bony structures than a single x-ray image and it is for this reason CT scans are important for planning radiation therapy treatment. |
| Electron cones | Special attachments used on the linear accelerator when treatment requires high energy electrons instead of x-rays. |
| Electron cut-outs | Cut-outs are generic and custom made shapes (made from a low melting point metal) for attachment to electron cones when treating with electrons to achieve the required treatment field size. |
| Erythema | This is the terminology given to the redness of the skin reaction within the treatment volume. |
| Field size | The size of a field (section) of the volume to be treated set on the treatment machine and usually visualised by the radiation therapist with the use of a “field” light. |
| Ionising radiation | “Ionising” describes radiation with adequate energy to remove/separate an electron from an atom and as a result the atom becomes ionised (refer to the following website for greater detail: http://www.who.int/ionizing_radiation/about/what_is_ir/en/index.html) |
| Linear Accelerator | Radiation therapy treatment machine that uses electricity to accelerate electrons in order to deliver high energy x-ray or electron beams for treatment. Sometimes they are referred to as a linac. |
| Maze | The corridor/entrance to the treatment room located next to or adjacent to the control room. The corridor is constructed to specified dimensions for radiation safety and protection. |

| | |
|---------------------------|--|
| Portal imaging | The electronic imaging devices used on treatment machines to capture images for correct placement of the radiation beam for accurate treatment delivery. |
| Simulator/CT | The use of either a combined simulator/CT or two separate treatment preparation machines are used to acquire accurate images for computer planning of the treatment area/volume. |
| Radiation Oncologist | A specialist doctor who prescribes a course of radiotherapy. (Refer to Chapter 5 of thesis for more detail) |
| Radiation Therapist | The title given to a university graduate who plans and delivers radiation treatment as prescribed by a radiation oncologist. . (Refer to Chapter 5 of thesis for more detail) |
| Radiation Therapy | Radiation therapy is the use of ionising radiation given as high energy x-rays or electrons to destroy cancerous cells and significantly reduce the size of tumours. (More detail is provided throughout the thesis) |
| Record and verify systems | Specific computer programs enable the recording and verifying of patient treatment details and the doses given. |
| Treatment preparation | Before radiation therapy can be administered accurate measurements and images are required to enable precise planning and placement of the radiation beams to the area to be treated. |
| Treatment couch/tabletop | The device a patient lies on and is positioned in preparation to receive treatment. Incorporated as part of the treatment machine it is calibrated for precise movements and enables the patient to be set up in a reproducible position at a specified distance from the machine. |
| Treatment console | The bench/desk area where the controls, cameras and computers are positioned and operated by radiation therapists within the control room. |

For further detailed descriptions please refer to:

Dobbs, J., Barrett, A., & Ash, D. (1999). *Practical radiotherapy planning* (3rd ed.).

London: Arnold.

Washington, C. M., & Leaver, D. (2004). *Principles and practice of radiation therapy* (2nd ed.). St Louis, Missouri: Mosby Inc.

Key to field notes and transcripts

Excerpts from field notes and transcripts are included in the findings chapters.

The following are examples of the abbreviations used:

Field notes and reflective journal: Excerpt is indented, in italics and denoted with FN or RJ and date.

The large glass doors with “Authorised access only” were closed throughout the day until about 4.45pm when one was left open. FN 5/6/09

Transcripts of individual interviews: Excerpt is indented, in italics and denoted with pseudonym, alpha-numeric code and line number (#). Nurse interviews are denoted with N1 or N2 followed with line number (#).

Yes they see the patient on the first and last days of treatment. If the patient wants they can be seen more regularly. The doctors tend to see the patients weekly. Tom B5.2 #25

Transcripts of group interviews: Excerpt is indented, in italics and denoted with pseudonym (where possible), group number and line number (#).

I think a lot of it is that Gen Y bit that we’ve got to get our notes and work done, have to get the patients through... Madge Gr2 # 1495

Prologue

To look at the mundane world really closely can generate boredom. We think nothing is happening and prefer some “action”. If we want to be good ethnographers, the trick is to go beyond such boredom, so that we can start to see remarkable things in mundane settings. (Silverman, 2007, p. 16)

Immersing myself in observations of the everyday procedures of a profession I have been involved with for more than thirty years, required looking above and beyond the obvious. Indeed, the field work consisted of long, tiring days punctuated with moments of illuminating brilliance, what I and my supervisors referred to as “ah ha” moments. I enjoyed the discussions and conversations in the field that my presence promoted, always aware that this in itself was noteworthy. Field notes became a log of observations, conversations and reflections.

I lived in Melbourne during this time and each day as I walked the streets of Melbourne to return to our apartment I mulled over the day and the conversations that had occurred. Many different thoughts would fleetingly pass into my mind and I would often find myself at the apartment not remembering the walk home. Such is the preoccupation that field work demands.

After attending my first professional conference, the AIR/ISRRT (Australian Institute of Radiography/International Society of Radiographers and Radiological Technologists) conference, in Sydney in February 2000, I resolved to undertake further study. This was the catalyst that began an academic journey over the next decade. I undertook a Graduate Certificate in Grief and Palliative Care Counselling at the University of Adelaide, followed by a Master’s degree in Health Sciences at the University of South Australia.

During this time I also became a member of the AIR Radiation Therapy Advisory Panel and a member of the SA state branch of the AIR. It was through these meetings that I befriended an inspiring young radiation therapist who had just completed her PhD; she was only the second Australian radiation therapist to receive this academic

award. This radiation therapist was later to become my supervisor and I have her encouragement and belief in me to thank for continuing my studies.

My passion for supportive patient care ignited a desire to make a difference in some way in radiation therapy. My recent academic achievements and my many years of clinical experience created a foundation to launch into a new and exciting phase of life. After careful consideration I applied for, and gained a scholarship to study at Curtin University and my new academic journey began.

In collaboration with my supervisors I decided that my research should be carried out at a public radiation therapy department where there were large numbers of patients, radiation therapists, equipment, and techniques. I also thought that the most suitable department would be a well known centre that favoured research. Adelaide has two radiation therapy services spread over several sites, one public and the other private. I had spent a large part of my working life in South Australia, at the public radiation therapy centre for the first fifteen years and later at the private practice making me well known to most SA radiation therapists during those years. I decided that I would need to look beyond the state borders but despite undertaking the degree through Curtin University in Perth I did not consider the radiation therapy centres there because the set up is similar to Adelaide.

I also took into consideration the distance from family and friends and where my spouse was able to gain employment. My employment in Melbourne in the role of radiation therapist was on a casual basis for three months, and my continued casual employment at the Epworth Centre (in partnership with the Peter MacCallum Cancer Centre) also assisted the decisions on the setting for my research. As an employee I was in an easier position to negotiate my research request. On this premise I chose Peter MacCallum Cancer Centre (PMac), East Melbourne campus, as the primary site for my study.

However, once I had started fieldwork at PMac I considered the possibility of conducting fieldwork at a second site. My ties with the radiation therapy world of Adelaide I used to my advantage, and I approached the chief radiation therapist at the Royal Adelaide Hospital (RAH) about spending a few weeks within the radiation therapy department to compare and consolidate the themes I had found during my

Melbourne observations. On my exit from PMac at the end of October 2009 I took up fieldwork at the RAH at the beginning of November.

My return to Adelaide to observe within the department, where I was first introduced to radiation therapy over 30 years ago, certainly stirred many previously submerged memories. As I walked along North Terrace from the railway station I was caught up in the wonderful scene that was before me. This terrace is home to many beautiful buildings including the Adelaide University, University of South Australia, the museum, art gallery and library. The ambience of the surrounds contrasted with the feelings of confrontation I experienced as I walked to the hospital; a walk I had taken many times before as a student and young qualified radiation therapist.

The walk along North Terrace was very much steeped in inner thoughts and anguish at re-entering a workplace of many years ago. Drawing closer to the hospital I began to feel mixed emotions, those of coming home but also feelings of apprehension as to how I would be received. I had already undertaken several months of observations in Melbourne so my thoughts were also punctuated by the themes I had seen emerging from those periods of observation. Would I find it very different? Would I know many of the employees? Would it be a greater challenge? These were some of the questions I silently asked myself.

Entering the radiation therapy department this time, despite my previous visits when negotiating to do my study there, I somehow felt different and I reflected on what it was that perhaps contributed to this feeling. It certainly felt like “back to the future” as many things had changed although others seemed exactly the same. Some of the staff that I “grew up with” were still there and looked very much as before although slightly older, greyer and perhaps wearing glasses or with a more portly figure. Others I had never met until now or I had met but failed to recognise them as they had been students on placement at the private practice.

I recognised a need to understand and reflect on these feelings because I carried some “baggage” with me left over from my experiences working there so long ago. The experience and feelings I had could be compared with someone returning to their native land after many years in another country to find the values and traditions have developed and changed along with the younger generations. I am unsure of the

impact this may have had on my research but its existence is worthy of reflection if nothing more.

It all began here at the RAH in 1975 when I was accepted as a student radiation therapist. I entered a three year traineeship that consisted of full time work and part-time study. During this period I had daily contact with cancer patients and was part of the radiation therapy treatment team. This was the beginning of my passion for supportive patient care. Over several decades many changes have taken place with the introduction of new technology and improved treatment conditions. This has seen radiation therapy become one of the important treatment modalities for cancer.

Due to family commitments I worked at the private practice in a part-time capacity for a number of years before resuming a full time position. Around the time I left the public hospital and started at the private centre I experienced the loss of my parents, my father from complications of lung cancer and less than three years later the loss of my mother as a result of breast cancer. It would be remiss of me not to recognise the impact of these personal losses on my professional life.

The resumption of full time work highlighted my dissatisfaction with some aspects of my role as a radiation therapist. As an experienced radiation therapist I felt it was my responsibility to ensure the ongoing development and improvement of patient care continued alongside the changes in techniques and technology. On restarting full time employment and after attending my first professional conference I undertook a small project to develop a suitable patient gown. As a result my passion for supportive patient care was rekindled and I decided to undertake further studies in counselling and health sciences that would provide greater skills in this area.

In the final phases of writing this thesis I was privileged to discover the work of Annette Street (1992). Her critical ethnography of Clinical Nursing Practice was an inspiration to me and spurred me on in my academic writing. I finally understood why the writing of this thesis was so laborious despite the enjoyment I experienced on the completion of each chapter. Street provided me with the answer. Just as the nurses Street had interviewed and observed, I had participated in oral communication within the clinical setting. It was enlightening to realise thirty years of refined oral communication skills did not transpose into the same expertise in academic written

communication, and I could finally allow myself to be content with the level of my achievements.

The instigation for this research was my quest for increasing awareness and changing practices to embrace a supportive patient care environment within the radiation therapy culture. This quest was born in the early years as a radiation therapist and nurtured on my return to a full time position. I hope that the findings from my work will inspire and motivate greater supportive patient care measures within radiation therapy by radiation therapists in the years to come.

1. Tracing the Topography

Introduction

Those of us who look after people with cancer are dealing with individuals. We are not treating tumours, or disordered body parts, we are caring for people. ...individual human beings are far more than a collection of components bolted together in a predictable and categorical fashion. (Munro, 2003, p. 18)

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1.1 Background

It is recommended that more than 50% of all patients diagnosed with cancer receive radiation therapy at some stage of their disease (Baume, 2002; Delaney, Jacob, Featherstone, & Barton, 2005). Radiation therapy is the use of ionising radiation given as high energy x-rays to destroy cancerous cells and significantly reduce the size of tumours. In Australia radiation therapy is mostly delivered externally (external beam radiation therapy using high energy x-rays) by large machines called linear accelerators but it can also be given internally with the insertion of radioactive sources at the tumour site (brachytherapy).

Radiation therapy is given as a stand-alone treatment for cancer or in conjunction with surgery and/or chemotherapy. External beam radiation therapy usually consists of consecutive treatments given five days per week. This takes place over a period of up to eight weeks for patients who are receiving treatment with a curative intent and one to two weeks for patients who are receiving palliative treatment. Differences in treatment regimes and prescribed dosage can occur with variations in protocols when waiting lists are long, machines require servicing, or in the case of a machine break down (Delaney et al., 2005; Hand, Kim, & Waldow, 2004).

Radiation therapy health professionals are responsible for the organising and delivering of radiation therapy to individuals diagnosed with cancer. In Australia the health professionals who work in radiation therapy are radiation oncologists, radiation therapists, nurses, medical physicists, and medical engineers. Radiation therapists are skilled professionals who, in consultation with radiation oncologists, coordinate the design and planning of a treatment course of radiation therapy for each individual patient. The role of Australian radiation therapists is to tailor each patient's course of radiation therapy treatment as prescribed by the radiation oncologist. Radiation therapists are also responsible for the delivery of the radiation treatment involving them in daily interactions with patients over prolonged periods of time.

Empirical data and anecdotal accounts suggest that attention to emotional and physical needs in radiation therapy enhance the well being of the patient as well as the efficacy of the therapy (Bolderston, 2008; Halkett & Kristjanson, 2007; Halkett

et al., 2010; Mose et al., 2001). However, until more recent years there has been a lack of research into the role of radiation therapists in providing supportive patient care.

The current study investigated the role of radiation therapists in their provision of supportive patient care through the exploration of their interactions with cancer patients; to inform the radiation therapy profession and other associated health professionals of the role of radiation therapists in caring for patients with cancer.

1.1.1 Historical overview of radiation therapy

Radiation therapy began soon after the discovery of x-rays and radium at the close of the nineteenth century. Australian doctors were as enthusiastic as their European colleagues in embracing the potential of radiation for medical treatment with one of the first medical uses of radiation being to treat skin lesions (Johnson, 1954).

As treatment modalities improved and patient numbers increased more people became involved in the delivery of medical radiation treatment. Radiologists and radiotherapists (now known as radiation oncologists) were doctors specialising in the use of medical radiations and were assisted by nurses and others with knowledge in photography, electrical engineering or physics (Merchant, Halkett, & Sale, 2011; Witz, 1992).

The patriarchal nature of the medical profession and their dominance of subsequent emerging allied health professionals is a point worthy of discussion in the development of the radiation therapy culture (Larkin, 1978). According to Larkin the demarcation of boundary setting between radiologists and radiographers saw radiographers take on the technical parts of the job along with caring for the patient while in their care, and the doctors took on the diagnosing and interpreting aspects of the work. The early days of female and male division of labour added to the complexities of the emerging medical radiation professions (Merchant, Halkett, & Sale, 2011). Taking into consideration the argument used by Witz (1992) that several tensions existed within the radiographer role; the role was controlled by the specialist doctor and tensions also existed within the role between male and female radiographers.

In the days prior to any formal radiography training in Britain many nurses undertook x-ray work within hospitals bringing a strong female presence to the role (Witz, 1992). The x-ray nurses placed emphasis on the caring skills within the role in contrast to the male culture from technical backgrounds that brought a technical focus to the role. The male radiographers attempted to cast the nurses caring skills as less important than the technical skills of the males in the role of radiographer. This, according to Witz, was an attempt to establish the role as more suited to males and to discourage females, despite the large number of females already undertaking x-ray work (Witz, 1992).

Although the role and education of the modern radiation therapist is the same for both males and females, the two contrasting areas of supportive patient care and technical expertise continue to exist (Baume, 2002). Australian radiography and radiation therapy developed in a similar fashion to their British counterparts and these contrasting roles are rooted deeply in the beginning of the role as the doctor's assistant mirroring the suggestion by Witz (1992) of the complexities around the involvement of personnel from both nursing and technical backgrounds.

1.1.2 Development of the radiation therapist role

Although not the central focus of this research the development of the role of radiation therapists as professionals contributes to their current role and plays an important part in their culture. Autonomy is mentioned in several texts as a measure of professionalism (L. Williams, 1998; Willis, 1983) and it is well documented that allied health professionals have limited autonomy because their professional status has been under scrutiny as a result of the dominance of the medical profession (Davies, 2000; L. Williams, 1998; Willis, 1983). This is also reflected in the development of radiation therapists as professionals.

Radiation therapists continue to struggle for autonomy (Acharya, Acharya, Raja Vatsavayi, & Cox, 2009; Colyer, 2004; Eddy, 2010), and this struggle is further complicated because much of the role requires the work to be carried out in teams of two or more. The continual introduction of new equipment and its associated technology provides different avenues for radiation therapists to exercise greater

autonomy in their work. However, this could also contribute to a decline in radiation therapists attending to the supportive needs of the patient.

The education of the modern day radiation therapist is arguably one of the few health professional courses that is specialised from the start. Radiation therapists specialise in a specific treatment method, i.e. radiation, of a specific disease, i.e. cancer, from the moment they start their degree at university. Doctors, nurses and many of the allied health professions tend to have a more general education and specialise at a later stage of their studies. The lack of generalisation is not reflective of the common trend in health which is towards a bio-psychosocial model of health and wellbeing that is now being embraced in some areas of cancer treatment (Engel, 1977).

In Australia, radiation therapists are tertiary educated, having completed a three year bachelor degree at university and a further professional development year within an approved clinical setting (Australian Institute of Radiography, 2009; University of Newcastle, 2011). However, recent changes have occurred with the first cohort of students of a new four year course at the University of South Australia graduating at the end of 2011 (E. Giles, personal communication, August 6, 2011). This course includes clinical placements within the four year course eliminating the required professional development year of current three year programs (University of South Australia, 2011).

In recent years Monash University has instigated a graduate entry course (Masters of Radiation Therapy) comprised of a distance learning program delivered over two years. The course is supplemented with 59 weeks of clinical placement (Monash University,). The University of Sydney now also offers graduate entry courses leading to a Masters in Radiation Therapy (The University of Sydney, 2011).

1.1.3 Radiation therapists

Radiation therapists perform a number of tasks in order to provide a course of radiation therapy. These tasks can be divided into three main stages: planning preparation, treatment planning, and treatment delivery. The first stage requires preparation for planning the course of treatment, commonly referred to as “simulation”, and it may be performed either on a treatment simulator and/or using Computed Tomography (CT) (Eatmon, 2004; Leaver, Keller, & Uricchio, 2004).

This session allows three dimensional imaging of the tumour location to take place in preparation for accurate treatment planning.

1.1.3.1 Planning preparation.

Simulation also involves the determining and recording of parameters, body contours, skin measurements, immobilisation devices, and localisation of the treatment volume by radiation therapists. Throughout these procedures the radiation therapists are responsible for ensuring that the patient is comfortable with positioning and measurement requirements (Leaver et al., 2004). On completion of the simulation session the patient is informed of a future appointment for the commencement of treatment.

Prior to the radiation therapy simulation session the patient usually attends an appointment with a radiation oncologist to discuss his/her disease and to develop an appropriate treatment regime. At the simulation appointment some information about the planning preparation procedure is usually provided. However, the approaches to, and timing of the provision of information and education about radiation therapy and possible treatment side effects varies from centre to centre (Halkett, Short & Kristjanson , 2009).

Studies have shown patients with cancer experience levels of fear and anxiety about radiation therapy treatment because they fear the unknown or have preconceived ideas about the treatment (Halkett, Kristjanson, & Lobb, 2008; Long, 2001). These studies highlight the importance of providing each patient with adequate and appropriate information and education. It is, therefore, pertinent that information about radiation therapy procedures, preparation, and treatment side effects is provided at various time points throughout the treatment trajectory starting at, or prior to the simulation appointment.

However, a recent study (Halkett et al., 2010) explored the information process of radiation therapists at simulation and found several limitations that made effective interaction between radiation therapists and patients difficult to achieve. The study reported that radiation therapists have limited opportunities at the simulation appointment to provide the patient with detailed information because there are usually time restraints in place for the use of the equipment and the radiation

therapists are required to focus on the technical aspects of the work. The authors suggested the use of a radiation therapist consult appointment prior to simulation to address the inadequacies and barriers found in the study. In addition, further exploration of the barriers inhibiting radiation therapists' effective communication is pivotal for instigating changes in the approaches and attitudes of radiation therapists to patient education and information provision.

1.1.3.2 Treatment planning.

During treatment planning radiation therapists develop an optimal treatment plan for the patient. One or more radiation therapists of the planning team liaise with the radiation oncologist to determine the treatment volume and the appropriate prescribed dosage. Once this step is completed radiation therapists use computer software to design the treatment configuration that can be best used to provide optimal treatment for the patient.

During the time patients are waiting to start treatment, planning radiation therapists have little or no contact with them unless a change in appointments or further preparation is required prior to the commencement of treatment. The period of time prior to the start of the patient's treatment will depend upon the time restraints within individual radiation therapy centres; the availability of treatment machines; and the individual's planned disease management. For example, the combination of chemotherapy with radiation therapy treatment, will also determine the commencement of radiation therapy (Eatmon, 2004; Prestwich, Shakespeare, & Waters, 2007).

Waiting to commence radiation therapy treatment; however, has been found to compound the fears and anxieties of patients if they are not provided with adequate and appropriate information about their treatment (Long, 2001). This places further emphasis on the need for determining ways to overcome the barriers that radiation therapists face in providing effective communication. To ensure patients are well supported radiation therapists must employ appropriate strategies to provide patient information and education from the start of each individual patient's treatment trajectory.

1.1.3.3 Treatment delivery.

The final stage involves the delivery of the radiation therapy treatment. A team of radiation therapists deliver the treatment using complex equipment called linear accelerators (see Figure 13) that produce high energy radiation (Leaver & Alfred, 2004). Treatment is given daily for most radical courses of radiation therapy providing the patient with an opportunity to interact with radiation therapists for approximately fifteen minutes a day. The daily treatment regime of most patients usually fosters familiarity with radiation therapists giving them the opportunity to interact with patients on a different level to the radiation oncologist or nursing staff (Halkett & Kristjanson, 2007; Halkett et al., 2010; Shi et al., 2009).

For the period of the patient's six to eight weeks of treatment the radiation oncologist routinely sees the patient to review their progress and assess any side effects they are experiencing but this is not generally on a daily basis. The level of involvement of the nursing team is also dependent on the treatment the patient is receiving and their need for specific nursing care. As such daily nursing care is rare unless the patient requires medication or dressings.

Therefore, the daily interaction patients have with radiation therapists could provide each patient with a level of support throughout the treatment trajectory that might not otherwise be achieved. However, the demands of the technical aspects of the work often limit radiation therapists using the allocated time to have meaningful interactions with their patients. Exploration of the daily work of radiation therapists is critical to understand the barriers that impinge on radiation therapists' ability to communicate effectively with their patients.

1.2 Aims of the study

The aims of this study were to gain an understanding of the underlying beliefs, values, practices and systems that form the current culture of radiation therapists and how it might be affecting the extent of supportive care that their patients receive.

This study will provide radiation therapists with an understanding of their culture and their interactions with patients that may assist their future measures of supportive patient care within radiation therapy and in turn enhance the experiences of individuals undergoing radiation therapy treatment.

1.3 Methodology

An ethnographic research approach was used in this research to gather rich descriptive data that enabled an in-depth understanding of the culture of radiation therapists and the radiation therapy environment. Fieldwork, consisting largely of observations and interviews, provided an insight into the foundations underpinning the current roles and practices of the profession.

The interpretive theoretical stance of symbolic interactionism (Blumer, 1969), and the dramaturgical concepts of Goffman (1959) were the theoretical perspectives used to inform this research. Interpretations of the radiation therapists' daily work were based on the meanings radiation therapists attached to their everyday practices and interactions.

To challenge the taken for granted ways within the culture and explore the interactions of radiation therapists this research took a critical stance informed by the work of Thomas (1993) and integrated ideas from Foucault (1975, 1995) as tools to explore (Manias & Street, 2000), and unravel aspects of space and control, and to understand the "medical gaze".

1.3.1 Ethnography

Ethnography is a way of conducting research to understand the experiences and actions of a group of people in a particular setting, and the meanings the people give to these experiences and actions (Brewer, 2000). Ethnography requires the researcher to work closely with the participants to become familiar with their behaviour and social actions, and their daily practices and processes. This closeness with the participants necessitates that the main collection of data is through observations and interviews.

As an ethnographer, it was necessary for me to become a participant observer requiring many hours of observing, watching, and talking with radiation therapists and patients within the radiation therapy environment. Participant observation refers to the researcher participating within the environment of those being researched, and at the same time observing the day-to-day social actions of the participants (Spradley, 1980). Immersion into the field for lengthy periods of time developed

familiarisation with the setting, and the participants, and assisted in the building of rapport and trust between the participants and me as ethnographer.

The focus in ethnographic research starts broadly and gradually changes focus because there is constant refining and adjusting of the observational lens each time the researcher re-enters the field. The narrowing of the focus happens because data analysis occurs simultaneously with data collection. The use of other data collection methods assists this process. These include interviews, document reading, and reflective journaling (Brewer, 2000).

The ethnographer must balance the dichotomous position of being a participant of the setting and an observant researcher. This is often referred to as the insider/outsider dichotomy (Brewer, 2000). A balance of the two is important for data collection and analysis to occur because becoming a total insider would disrupt critical reflection and the ongoing analysis required to narrow the focus of the research.

As a radiation therapist, I was aware of continuing this delicate balance between being one of the participants and also the observant researcher. Maintaining this balance enabled me to accept that my perspective and interpretations through emersion into the research setting provided only one version of truth and not to presume I would view the radiation therapists' world as they did (Brewer, 2000).

Ethnography is a key research methodology in social research, and has been used in health and education studies for many years. Research undertaken using an ethnographic approach has provided in-depth understanding of a variety of different areas in health, particularly in nursing (Manias & Street, 2001; Street, 1992, 2001). However, there is little evidence in the literature of the use of ethnography in radiation therapy. Two examples of recent nursing theses that used ethnography are provided below to highlight the appropriateness of an ethnographic approach and the reason behind the use of ethnography for this research.

1.3.2 Ethnography in health studies

Paech (2007) used ethnography in her doctoral research based on the culture of intellectual disability nursing at a centre in Adelaide. The research was conducted

when many people with intellectual disabilities were undergoing relocation from the centre to community settings, creating issues with the provision of nursing care. Care for this group of individuals was further complicated by the earlier abolishment of an education program for nurses in intellectual disability nursing. The study, undertaken when many changes were occurring within the disability services in South Australia, revealed the inadequacies of the then current system and provided important recommendations to overcome these gaps. As a result a model for intellectual disability nursing was established.

The ethnographic approach enabled Paech to expose the systemic inadequacies that impacted on the care provided by revealing that unregulated workers, particularly in upper management, lacked education in health that severely undermined the level of care for the residents with intellectual disabilities. Paech determined the need for explicit education in intellectual disability nursing for all nurses both registered and enrolled nurses to enable these nurses to deliver appropriate care for individuals with intellectual disabilities in diverse settings.

The decision making of renal nurses in far north Queensland was explored by Hardcastle (2004) in her doctoral thesis. The study was undertaken in a rural renal unit where the primary care givers of the patients are the renal nurses. The thesis investigated the assumptions of these nurses being autonomous in their decision making and the implications of these assumptions on accountability. As a result of this comprehensive study Hardcastle made recommendations for further research into the role emotions play in decision making, a need to acknowledge risk and uncertainty with decision making, and the ethical challenges that are imbedded in the daily practices within a small rural renal unit.

Paech used an ethnographic approach to expose systemic issues that resulted in important changes in intellectual disability nursing. The serious implications of decision making and accountability of a small group of nurses was revealed in the ethnographic research of Hardcastle. These two examples highlight the importance of using ethnographic research to challenge inadequacies and give a critical understanding of assumptions within the culture of a healthcare setting.

The successful use of ethnography to study small groups of people in healthcare settings supports the notion that an ethnographic approach was appropriate to explore and reveal the cultural aspects of radiation therapists and the impact of these aspects on their interactions with patients.

1.4 Methods

Fieldwork for the current research, consisted largely of observations and interviews, and was undertaken at two Australian clinical sites. Observations were made of radiation therapists and patients in the treatment areas of radiation therapy from May until October, 2009 at Peter MacCallum Cancer Centre (PMac) and for one month in November 2009 at the Royal Adelaide Hospital (RAH).

During the period of fieldwork individual interviews were conducted with 12 patients, five radiation therapists, and two nurses to understand, confirm, and verify the observations.

On completion of fieldwork four group interviews with radiation therapists were conducted between April-June 2010 to supplement and triangulate the data. Two groups of radiation therapists with less than five years clinical experience and two groups of radiation therapists with more than 12 years of clinical experience were conducted to ascertain the perspectives of radiation therapists about the culture, and the roles of radiation therapists in the past, present and future.

1.5 Structure of the thesis

This thesis consists of eight chapters. Chapter Two provides a review of the literature associated with relationships and communication between health professionals and patients with cancer. It describes perspectives of caring in health, supportive care for patients with cancer, and care of patients with cancer undergoing radiation therapy.

Chapter Three introduces the positioning of the research, and provides description of symbolic interactionism; the theoretical underpinnings of the study. Goffman (1959) and his dramaturgical concepts were used to understand the daily work and interactions of radiation therapists. The chapter describes ethnography as method and methodology with reference to Spradley (1980) and justifies the use of the critical

stance taken in this research with reference to the work of Thomas (1993). Foucauldian poststructuralist ideas were incorporated to understand elements of space and control.

Chapter Four describes the methods employed for data collection and data analysis. Details of the main data collection methods of observation and interviews are described, and descriptions of the aspects of the setting, the participants, ethical considerations, and rigour are provided. Reflections of the researcher as the main research instrument are also given.

Chapter Five sets the context of the study with detailed descriptions and discussion about two Australian radiation therapy treatment environments, the radiation therapy personnel, the patients who utilise the services, and the practices and processes that occur within these environments.

Chapter Six presents the findings of the culture of Australian radiation therapists. The four themes of “disease focus”, “technology motivated”, “task and teamwork behaviour” and “time and space awareness” consisting of a number of subthemes are described, and discussion is given with comparisons made with the literature.

Chapter Seven presents the findings of the interactions of radiation therapists within the treatment areas of radiation therapy with their patients, and between themselves. The chapter uses a patient-professional communication conceptual framework (Feldman-Stewart, Brundage, Tishelman, & SCRN Communication Team, 2005) to guide the descriptions and discussion. The chapter is divided into four parts: the environment, the participants, the interaction process, and the outcomes. The findings of the interaction process are presented in two sections; interactions between radiation therapists and patients, and interactions between radiation therapists. Each section consists of structured and unstructured interactions. The interactions between radiation therapists and patients are further divided into the three subthemes: information provision, instruction giving and informal talk. The interactions between radiation therapists are divided into the subthemes: collaboration, communication, and conversation.

Chapter Eight concludes the thesis with a summary and discussion of the findings chapters and presents the key findings and recommendations arising from the findings. The strengths and limitations of the study are presented and areas of future research are considered.

2. The Trodden Tracks

Investigating the Literature

Those first images, the echo of words we think we have left behind, accompany us throughout our lives and sculpt a palace in our memory to which, sooner or later-no matter how many books we read, how many worlds we discover, or how much we learn or forget – we will return. (Ruiz Zafón, 2004, p. 6)

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2.1 Introduction

The literature presented in this chapter provides an understanding of the experience of radiation therapy; the physical and psychological functioning of patients' prior to, during, and at the completion of radiation therapy; the supportive care needs of patients with cancer; and supportive patient care in the context of radiation therapy treatment for cancer. A review of studies on information provision and communication between cancer patients and health professionals enables further understanding of these interactions in providing supportive patient care and identifies gaps in the literature that support the need for this study.

Although in recent years a greater contribution has been made to the literature pertaining to radiation therapists' relationships with patients it remains limited (Bolderston, 2008; Halkett et al., 2010; Halkett et al., 2009). It is for these reasons it is necessary to explore the available literature to become familiar with the meanings associated with health professional-patient interactions to determine how this fits with or could be adapted to the interactions between radiation therapists and their patients.

There is a wealth of literature that discusses, reflects and summarises doctors and nurses' communication skills and approaches to patient care with nursing research adding to the body of knowledge of communication and interaction in health, and enhancing nursing approaches and practices of supportive patient care in cancer (McCabe 2006; Price 2006). For example, a study conducted by Street and Blackford (2001) provided insight into the patterns of communication between nurses and general practitioners who provide palliative care. The authors identified the issues that hindered effective communication. They highlighted the need for strategies to assist new approaches for effective communication and reporting in order to enhance the services and care provided to patients within palliative care settings.

Wengström, Häggmark, & Forsberg (2001a) explored the coping strategies of patients with breast cancer and their abilities to cope with radiation therapy treatment. The family and friends of this group of patients were found to be important in the women's coping abilities with radiation therapy at the three time

points; before the start of treatment, at the end of treatment, and three months post treatment. However, the women were also found to use a number of different strategies to cope with treatment and these strategies changed over time. The research provided the basis for a further study undertaken by the same authors Wengström, Häggmark, & Forsberg (2001b) that explored a nursing intervention to assist patients with breast cancer and their coping abilities with radiation therapy. The study reported that individually tailored interventions assist patients to cope with treatment. The study also emphasised that there is additional need for improved approaches, by health professionals to cater for the individual needs (including family and friends when appropriate) and well being of patients receiving radiation therapy.

These studies provide a glimpse of the broad scope of research into communication and supportive care needs of patients with cancer from both the health professionals' and the patients' perspectives. Measures of supportive care and the effectiveness of communication in the caring and treatment of patients with cancer are complex, demanding exploration of the barriers and enablers within different healthcare settings. The current study has been undertaken to provide understanding of the radiation therapy setting and to reveal the gaps in the practices and processes of radiation therapists to expose the factors that inhibit effective communication and supportive care.

2.2 The experience of radiation therapy treatment for cancer

Patients diagnosed with cancer have a complex array of needs during the management and treatment of their disease (Sanson-Fisher et al., 2000). There are also indications that the experience of radiation therapy treatment of an individual with cancer can severely impact on their daily life (Wells, 2003). Wells (1998) conducted a study, using naturalistic inquiry, to investigate the lived experiences of twelve patients who had completed a course of radiation therapy for head and neck cancer. Each patient was given a diary at the completion of their course of treatment to freely record their experiences, eventful happenings, and their emotions about their involvement in radiation therapy. Prior to being interviewed the patients

returned their diaries to the researcher who used the diaries as a source to guide the interviews which were conducted approximately one month later.

Wells found that the majority of these patients experienced distress during and after treatment but tended to downplay the problems they were facing during their attendance for treatment. Physical symptoms, such as loss of appetite, lack of sleep, and difficulty in breathing, resulting from skin and throat soreness in reaction to treatment, disrupted their daily life. The physical problems in turn affected the emotional coping of the patient, causing further distress. However, the patients were reluctant to draw attention to their symptoms as they did not want to appear to waste the radiation therapists' and nurses' time, and they wished to appear positive to those providing the treatment (Wells, 1998).

There was evidence that this group of patients continued to suffer some distress after the completion of treatment indicating that recovery after radiation therapy also requires consideration in the treatment management of radiation therapy patients. However, the study was conducted post treatment and relied heavily on the patients' recall of events after they had completed treatment. Data provided by this group of patients could have been distorted because of the lapse in time between receiving treatment, using the diaries and participating in the interview. However, it gives an indication that patients do experience distress and the physical side effects of treatment can cause further distress to the patient.

Larsson, Hedelin, & Athlin (2007) recently interviewed nine patients between six and eight weeks after the completion of a course of radiation therapy to the head and neck region. The intention of the research was to explore the treatment experiences of these patients to gain a greater understanding of the impact on their day-to-day life during this time. Larsson et al. used the themes: "information and education", "eating problems", "social and emotional support", and, "contacts and continuity in these", to guide the interviews and to assist the patients to give in-depth descriptions of their experiences. The study found that patients who have radiation therapy treatment experience disturbances in their day-to-day activities as a result of problems arising from the cancer and the treatment. For example, the inability to eat and drink was found to disrupt daily activities both socially and emotionally. The lack of nourishment also impacted on the patient's ability to engage in daily physical

activities. However, it was reported that these patients tended to downplay these issues.

The findings of this phenomenological study support those of Wells' (1998) study in that the treatment experience disrupted the day-to-day lives of the patients and there was a tendency by the patients to downplay their fears and symptoms of treatment. The study also found there were different periods of waiting experienced by the group throughout the treatment trajectory such as waiting for the treatment to start, waiting for the treatment to be completed, and waiting for the return to good health. Patients' also reported an inability to talk about problems or seek help with the treatment staff because of time restraints, which was similar to Wells' (1998) findings. The limitations of the study are also that the research was undertaken a number of weeks after the patients' completion of treatment relying heavily on the patients' memories, which could distort and inhibit detailed descriptions of particular events.

In the paper written about his reaction to a diagnosis of prostate cancer Roos (2003) discusses his unspoken fears and the emotions he dealt with during this time. These emotions included his own, those of his family, and those of his friends. He also discusses his learning experiences as a cancer patient and the formal information provided to him about radiation therapy treatment. He found the information was restricted by three factors: not knowing what sort of questions to ask, the limited amount of time available to talk with health professionals, and the information that was provided was quite formal and technical in content (Roos, 2003). This is interesting in that it highlights the need for radiation therapists to reassess the information needs of patients, the delivery of the information and to engage strategies to ensure each patient understands and receives individually appropriate information.

Although discussing treatment for prostate cancer, Roos' account resonates with the research findings of the experiences of the two different groups of patients with head and neck cancer (Larsson et al., 2007; Roos, 2003; Wells, 1998). Issues of time available to talk and not knowing what questions to ask indicate possible gaps in the provision of adequate supportive care in radiation therapy.

It is apparent that fears of radiation therapy treatment and the possible side effects of the treatment can cause anxiety and distress in newly diagnosed cancer patients who are recommended external beam radiation therapy (Halkett et al., 2007; Long, 2001). Long (2001) used hermeneutic phenomenology to understand the radiation therapy treatment experiences of 20 patients. Open ended interviews of between 40 and 60 minutes were audio-taped and transcribed verbatim. From interpretations of the transcriptions there was an overarching theme of “being informed” with three related subthemes “supported”, “everydayness”, and “regaining a sense of self”.

The study reported that being informed was an important aspect of the supportive care health professionals can provide patients undergoing radiation therapy. Those participants who felt well informed reported they were happier and more prepared for the treatment. However, some participants reported confusion because they received conflicting information from health professionals. The research found anxiety and the lack of certainty were significant contributing factors in the experience of patients receiving radiation therapy treatment. Importantly, the provision of useful information assisted in reducing levels of anxiety and fear. Participants identified that they wanted more information but they did not know what questions to ask or who the appropriate person was to approach (Long 2001). Although the study by Long highlights that patients reported receiving conflicting information from health professionals, details are unclear of the discrepancies and the type of information, and at what stages of the treatment trajectory this occurred. Issues about information were also reported by Roos (2003) suggesting the need for further exploration of information processes within radiation therapy.

The radiation therapy associated fears of 34 women with breast cancer were explored during their course of radiation therapy treatment using semi-structured interviews (Halkett et al., 2008). The interviews were conducted at four time points; after the patient’s initial consultation with the radiation oncologist, immediately after their planning appointment, in the first week of treatment and again at the completion of treatment. The findings of the study indicated the women were most fearful of radiation therapy prior to treatment. The women’s fears of radiation therapy included “fearing the unknown”, “getting burnt”, “damaging internal parts” and “anticipating tiredness”. The women found the uncertainty of the treatment and possible side

effects difficult because they were unsure how to maintain and plan their time and factor in activities such as employment and family chores. However, once the women had commenced their treatment it was found their initial fears often abated because they became familiar with the radiation therapy staff and the treatment requirements (Halkett et al., 2008).

A second theme of “ways of coping with the fear of radiotherapy” also emerged prior to the commencement of radiation therapy treatment and is linked closely to the first of “fears about receiving radiotherapy”. The women found that they coped by attempting not to be concerned or worried about the treatment until they arrived to start the treatment. On the other hand, some of the women sought to find out as much information as possible. At the completion of treatment the women reflected on how they had come to radiation therapy with preconceived ideas formed from listening to the experiences of others. Anxiety and fearing the unknown prior to starting radiation therapy echo the findings of Long (2001); Halkett et al. (2008) recommend that radiation therapy health professionals need to ensure that patients’ fears be anticipated and addressed at the start of the patient’s radiation therapy treatment; beginning at the initial appointment and occurring again at the planning appointment.

In 2004 research was undertaken to explore the treatment experiences of five separate groups of men who were treated for prostate cancer (Kelsey, Owens, & White, 2004). A qualitative approach was undertaken employing focus groups to collect data. The same interview framework was incorporated in each group to cover the following five main points: “recognition of symptoms”, “impact of diagnosis”, “knowledge and information”, “support during radiotherapy”, “life after treatment” (p. 273). These group interviews were audio-taped and transcribed verbatim and supplemented with the field notes that were taken simultaneously. There were two focus groups of men, a total of ten men, who had been treated with brachytherapy and three focus groups of men, 17 in total, who had external beam radiation therapy. The focus groups were conducted between six and eight weeks after the men had completed their course of treatment. The study findings provide a greater understanding of men’s experiences with a cancer diagnosis and treatment. Of particular interest are the comparisons drawn between the experiences men had during brachytherapy and external radiation therapy. Overall, each group indicated

they felt supported by staff but on closer examination of the data some differences in the level of support and information giving was evident between the two groups. The men who had brachytherapy had the support of one coordinating specialist nurse and generally felt well supported but the men who underwent external beam radiation therapy were cared for by a diverse group of professionals who varied in the level of support they provided the men. However, the relaxed nature of the daily contact the radiation therapists had with the men, who had external beam radiation therapy, was deemed important in providing a close relationship and normalising the experience (Kelsey et al., 2004).

The difference in coordinated care and information provision by the multidisciplinary team when compared with the coordination of services by a single professional suggests emphasis should be placed on the importance of the cohesion of a multidisciplinary team and structures put in place to allow for seamless delivery of supportive care. Kelsey et al. (2004) also relied on the memories and recall of particular events of the participants because the study was conducted at the patients' completion of treatment. The findings of all of these retrospective studies indicate the need for the current research to reveal a more comprehensive understanding of the experiences of patients with cancer rather than relying heavily on the patients' memory of the events.

Studies have found the experience of radiation therapy treatment is further complicated for those people who reside in rural and remote areas because of the distance separating them from radiation therapy services. The experiences of people with cancer living in rural areas that necessitated travel to an Australian metropolitan radiation therapy centre for treatment was explored in a project to determine the need for radiation therapy service provision in Toowoomba (Martin-McDonald, Rogers-Clark, Hegney, McCarthy, & Pearce, 2003). Forty-six patients from rural areas of southeast Queensland participated in semi-structured interviews of 60 to 90 minutes duration, either face-to-face or by telephone. There were seven significant themes that emerged from the data analysis. These themes were: "being away from loved ones", "maintaining other responsibilities while undergoing treatment", "emotional stress", "burden on significant others", "choice not to have radiation therapy", "travel and accommodation", and "financial burden" (Martin-McDonald et al., 2003). These

findings indicate there are further issues some patients encounter during their course of radiation therapy treatment in addition to the physical, emotional and adjustment problems associated with radiation treatment and a diagnosis of cancer.

A report (Hegney, Pearce, Rogers-Clark, Martin-McDonald, & Buikstra, 2005) based on the findings of the study suggested three key recommendations for health professionals in the support of patients from rural areas: ensure there is explanation of the choice of treatment facilities; provision of information prior to radiation therapy about practical issues such as accommodation and travel assistance; and provide ongoing support throughout treatment of psychosocial aspects such as the separation from family and friends in conjunction with support for the physical effects of the treatment. These recommendations require further research to articulate how information provision is structured and delivered within radiation therapy centres.

In 2003 Canadian researchers conducted in-depth interviews with 118 radiation therapy patients (Fitch et al., 2003). The study was conducted to elicit the perspectives of patients about travel for treatment at a time when re-referral from southern Ontario centres to distant radiation therapy centres was instigated because of long waiting lists. The study gathered data from three different groups of patients. One group contained patients who were re-located and travelled to a facility more than 150 km from their homes, the second group travelled daily between 0.5 – 120 km each way, and the third group were patients who travelled similar distances for treatment as the first group but it was within expected protocol because the travel involved access to their closest facility unlike those in group one who were re-located for treatment.

Interviews were conducted at three time points, prior to commencement of treatment, midway through the patient's course of treatment and on the completion of treatment. The research highlighted there are travel related challenges for those patients who must travel to access radiation therapy treatment. The study found that many patients were distressed about the idea of travel to access treatment facilities, as the travel was tiring, and arrangements for travel could be difficult. This supports the findings by Martin-McDonald et al. (2003) who also found that the inconvenience of living away from home placed an additional burden on patients. One salient finding in the

study was the boredom that a number of patients experienced while living away from home, indicating a need for structured interventions to support the patient at this time. However, some patients found it beneficial staying at accommodation with other patients because there was a sense of camaraderie and support (Fitch et al., 2003).

The individual treatment experience of each patient should be considered and understood by the health professionals involved in radiation therapy treatment delivery in order to provide the best possible level of supportive care throughout the course of treatment. This is reflected in the report of the research work undertaken by the Cancer Council of New South Wales (Girgis & Burton, 2001). Girgis and Burton reported that the assessment of unmet needs and physical issues of patients with cancer is central to the improvement of the care provided. Furthermore, the consideration and review of these issues and needs will only be achieved if the treatment team are aware of the individual physical and psychosocial needs of each patient, and strategies are employed to address all individual needs and issues.

There are a multitude of issues patients with cancer may face prior to, during and after completion of radiation therapy treatment. Daily activities can be disrupted because of physical problems caused by the disease or side effects from the treatment of the disease. The physical problems can impact on the emotional status of some individuals and in turn can make coping with treatment challenging. However, some studies found despite feelings of distress there was a reluctance of patients to show their feelings and instead they preferred to appear positive while attending for treatment. The putting on of a positive face is also reflected in patients' reluctance to draw attention to themselves by asking questions or talking with a radiation therapist or nurse.

There was also some indication that patients did not ask or seek advice because they did not know what to ask. There was also confusion over who was the appropriate health professional to ask, or it was felt there was insufficient time to ask. Gaining an understanding of the complex nature of the issues encountered by these patients, through accounts of their experiences, highlights the necessity for continued exploration of communication and information needs and supports the need for this study.

2.3 Physical and psychological functioning of patients with cancer

The diagnosis of cancer has a psychological impact on many patients, often resulting in anxiety and distress. Prevalence rates of emotional distress range between 20-35% (National Breast Cancer Centre & National Cancer Care Initiative, 2003). It has also been well documented that there is an increased risk of clinical depression and other mental health problems such as post traumatic stress disorder and anxiety disorder in people who have received a diagnosis of cancer (National Breast Cancer Centre & National Cancer Care Initiative, 2003; National Comprehensive Cancer Network, 2011; Sellick & Crooks, 1999). Patients who have been previously diagnosed with a mental health illness can be further compromised (McIllmurray et al., 2001; National Breast Cancer Centre & National Cancer Care Initiative, 2003; Newell, Sanson-Fisher, & Savolainen, 2002; Redman, Turner, & Davis, 2003; Ryan et al., 2005; Sellick & Crooks, 1999).

The radiation therapy treatment experiences of patients provide an overview of many issues that these patients encounter and endure. There is evidence that a diagnosis of cancer and the consequent treatment and management of the disease can change the physical and psychological functioning of the individual (Bottomley, 1997; Liu, Meers, Capurso, Engebretson, & Glicksman, 1998). The literature also suggests a diagnosis of cancer can cause fear and anxiety because there are feelings of uncertainty associated with the individual's future and being faced with their own mortality (Bottomley, 1997). Roos (2003), in his report of his personal experiences with prostate cancer, also mentions being afraid of what the future might hold. Importantly he was reluctant to disclose his fear to his family or friends. Fear, anxiety and feelings of uncertainty have been associated with individuals who are recommended radiation therapy treatment (Halkett et al., 2007; Long, 2001).

An American study was undertaken (Liu et al., 1998) to ascertain the changes in the physical and psychological condition of 24 patients in their first and second weeks of radiation treatment, and then one month after treatment was completed, and again three months later. All patients were reportedly supported psychosocially by nurses and social workers throughout the period of the study, although how this was achieved was not stated. Evaluation of physical and mental status was assessed at each time point using the Rand SF-36 item health survey (Hays, Sherbourne, &

Mazel, 1993). The study found that those patients who started with and maintained a good mental status seemed to be better equipped to cope with the physical side effects of treatment. The researchers suggest psychosocial support provided from the beginning of treatment can assist patients in maintaining their physical and mental condition and this in turn will assist the patient's coping mechanisms. The recommendation was made that patients should also have continued psychosocial support available on the completion of treatment (Liu et al., 1998).

This study acknowledged the need for psychosocial care provision for patients throughout and after radiation therapy treatment. The study does not address the types of support, the procedures necessary to provide support, or who is responsible for the provision of support within radiation therapy. The current study will disclose the role radiation therapists play in the provision of psychosocial care and reveal the existing gaps in the procedures and types of support Australian radiation therapists currently provide.

A review of the literature published between 1980-2002, pertaining to psychological functioning of patients with cancer prior to, during, and on completion of radiation therapy treatment, was conducted by Stiegelis, Ranchor, and Sandermann (2004). The research selected was limited to those studies where the participants had received external beam radiation therapy. Published papers were omitted if the focus was on physical functioning because the review was only concerned with patient psychological functioning. A total of 45 studies (22 cross-sectional studies and 23 longitudinal studies) of the psychological functioning before, during, and at the conclusion of radiation therapy treatment were reviewed. The authors reported that, despite the review indicating a vast range in results, there were some trends to consider (Stiegelis et al., 2004).

The review found there was a connection between treatment side effects and psychological functioning where low mood status was reported near the completion of treatment when treatment side effects were at their worst. Recommendations by the authors were made for the implementation of strategies to ensure patients are screened for psychological status with consideration of the physical effects of treatment (Stiegelis et al., 2004). Anxiety was found to be higher just prior to the commencement of treatment but gradually lowered during treatment.

The review reported one of the studies, on the other hand, found symptoms of depression rose during radiation therapy suggesting a later adjustment to the diagnosis of cancer and treatment. However, the review indicated there were methodological limitations of the study and therefore conclusions were difficult to draw. Stiegelis et al. specified that in order to develop strategies to enhance the treatment experience further research is required using the same or similar validated instruments, the use of similar definitions, and the same time points. Further research will then provide a greater understanding of the psychological functioning of patients prior to, during and on completion of radiation therapy. It is important to note that despite the wide range of results of individual studies, this review clearly shows that patients undergoing a course of radiation therapy are challenged both physically and psychologically and there are indications that patients will experience different levels of functioning at different time points throughout the treatment.

The psychological functioning of patients can be further understood from research by Holmes and Williamson (2008) who conducted a cross-sectional survey of 100 patients with cancer during their first or second week of radiation therapy treatment. The questionnaire consisted of two parts; the first part aimed to collect the demographics of each patient including an independent variable of pain, and the second part consisted of the Hospital Anxiety and Depression Scale (HADS). The authors noted that some of the options of HADS worked on assumptions there was some element of depression or anxiety already present and this was taken into account in the analysis of the research. Clinically significant levels of anxiety were found in six participants and a further 14 patients had elevated levels of anxiety. Depression was identified in six as being clinically significant and another 14 had above normal levels of depression (Holmes & Williamson, 2008).

The patients with head and neck cancer were found to have the greatest mean level of both anxiety and depression. However, despite the small sample size of participants these findings closely mirror the findings of distress of patients receiving radiation therapy for head and neck cancer in studies conducted by Larsson (2007) and Wells (1998), and support the need for further research to identify strategies to assist in reducing the distress of patients with cancer who receive radiation therapy treatment. The study identified pain as significant in the development of psychological issues,

along with the side effects of adjuvant chemotherapy. Furthermore, this study found 10 out of the 12 identified clinically anxious or depressed participants were females and the age range was 40 to 50 years. However, acknowledgement was made by the researchers of the small numbers and convenience sampling limitations of the study that made correlations difficult to ascertain, and suggestions were made for the findings to be used as a pilot for further research into the complexities and significance of anxiety and depression in patients undergoing radiation therapy (Holmes & Williamson, 2008).

The need for psychosocial support for patients receiving radiation therapy was examined by Brix, Schleussner, Füller, Roehrig, Wendt, and Strauss (2008) using semi-structured interviews prior to the start of treatment and after the completion of treatment. A total of 239 participants were interviewed prior to treatment commencing, and 208 of these were assessed again at the end of treatment because of the withdrawal of participants from the study or failure to be followed up after their treatment concluded.

All participants were interviewed to obtain demographic details, personal history and current life situation. This was followed-up with the participants completing four questionnaires to identify the need for psychosocial support, assessment of fatigue, the assessment of resilience, and quality of life (QoL). A short version of the German Hornheide Screening Instrument (HSI) was used to ascertain those patients needing psychosocial support by identifying the extent of problems related to the patient's disease, and assessing separate areas of physical and psychological needs (Brix et al., 2008). The five scales of "general fatigue", "physical fatigue", "mental fatigue", "reduced activity", and "reduced motivation" of the Multidimensional Fatigue Inventory (MFI), were used to measure fatigue (Smets, Garssen, Bonke, & De Haes, 1995). The capabilities and competence of the individual and their perceptions of self and life were measured using a German version of the Resilience Scale (RS) (Wagnild, 2009). Resilience was only assessed at the first interview because the researchers accepted that resilience was an inherent characteristic of personality. The last of the four questionnaires centred on QoL and used the SF-12 (Gandek et al., 1998) to assess physical and psychological aspects of the patient's QoL. The patients

were also asked to rate information and optimism levels, and to indicate if they would want psychosocial support and if so to specify the support they would prefer.

Distress related to cancer was found to be significant in patients receiving radiation therapy treatment. The study found greater than 70% of participants had a need for psychosocial support regardless of gender or age (Brix et al., 2008). This contrasts with other studies (Sanson-Fisher et al., 2000; Stiegelis et al., 2004) that have shown a larger number of females have a need for psychosocial support, and have suggested women are more likely to need psychosocial support because of balancing their family commitments with employment outside of the home whilst simultaneously coping with their disease and treatment. Despite the discrepancies of gender, the research by Brix et al. (2008) indicates there is a need for further research to establish what interventions should be put into place to reduce the distress patients experience with a diagnosis of cancer, and the subsequent management and radiation therapy treatment of the disease.

Patients fear the treatment prior to starting because of a fear of the unknown combined with their preconceived notions of radiation therapy (Halkett et al., 2008). Some patients experience a lowering of their mood status towards the end of the course of treatment because of the physical effects of the treatment. It was also suggested patients might experience a low mood state because the end of treatment indicates detachment from the health professionals and the prospect of facing the future alone (Stiegelis et al., 2004). However, it was reported patients who received psychosocial support throughout treatment coped better with the treatment and its side effects (Liu et al., 1998).

It is evident from the literature that there are many contributing factors in the physical and psychological functioning of patients undergoing a course of radiation therapy. The diversity of the findings indicates the numerous issues and the subjectivity of the interpretations of these factors. However, it is apparent that patients experience anxiety and depression, and mood levels are affected by physical aspects of the disease and treatment side effects at different time points of the treatment trajectory. The current study does not consider the measurement of levels of psychological distress but instead focuses on the processes and procedures that support or inhibit the provision of continued psychosocial support for patients

through communication and interactions with radiation therapists. Deeper understanding of the levels of support within radiation therapy will provide a greater awareness of the strategies required to improve the treatment experience for all patients.

2.4 Interactions between health professionals and patients

An important but possibly one of the most difficult aspects of being a health professional is the establishment of a good relationship with the patient (Crowe, 2000; Vermeire, Hearnshaw, Van Royen, & Denekens, 2001). Effective interactional processes between health professionals and patients with cancer can enhance the patient's treatment experience, decision making, compliance with treatment, provide greater satisfaction and assist the psychosocial needs of the patient (National Breast Cancer Centre & National Cancer Care Initiative, 2003). However, despite the evidence to suggest the need for supporting both the emotional and physical needs of the patient, many health professionals are not appropriately equipped with communication skills of active listening, empathy, and the ability to understand and acknowledge the person's feelings (Dowsett et al., 2000; K.-L. Martin & Hodgson, 2006). In addition, there is the perception that there is insufficient time available for meaningful interactions to occur (Thorne, Hislop, Stajduhar, & Oglov, 2009).

2.4.1 Relationships between health professionals and patients

There is a body of evidence that supports the importance of the benefits of a strong health professional-patient relationship. A strong relationship can assist in achieving positive outcomes such as improved quality of life and reduced emotional anguish (Schnur & Montgomery, 2010). In particular, the benefits of a strong relationship could be realised in radiation therapy where radiation therapists have the opportunity to form meaningful relationships with their patients. The formation of strong relationships between radiation therapists and patients could enhance the treatment experience by assisting in the reduction of fear and anxiety patients have of radiation therapy treatment and their disease.

Schnur and Montgomery (2010) conducted a systematic review of therapeutic relationship factors and the consequences of these on the outcomes of psychotherapy

for individuals with cancer, and found there was a lack of the therapeutic relationship factors of “therapeutic alliance”, “group cohesion”, “empathy”, and “goal collaboration” discussed in psychotherapy literature pertaining to cancer. However, the authors found studies that indicated the relationship between the professional and the patient assisted pain reduction and reduced emotional, and psychological, distress. Although the primary intention of the review was focused on the use of professional psychotherapy interventions in cancer, it highlighted that the importance of the factors of a therapeutic relationship should be recognised by all health professionals who are involved with the treatment of patients with cancer (Schnur & Montgomery, 2010).

The importance of a therapeutic relationship is also emphasised in nursing literature. Nursing philosophy is built on the premise that the establishment of a therapeutic relationship with the patient, through good communication, is essential to patient centred care (McCabe & Timmins, 2006; Price, 2006). Nursing academics and educators refer to the therapeutic relationship as important in providing emotional comfort to the patient. This assists the development of trust and understanding between the nurse and the patient and is central to the establishment of a positive relationship (McCabe & Timmins, 2006).

2.4.2 Patient centredness

“Patient centredness” and “patient centred care” are well known terms in nursing (McCabe & Timmins, 2006). However, the conceptual model of health which has largely influenced the medical professionals’ knowledge and practice has been the traditional biomedical model that is science based and reductionist. This model of health uses the how and what the patient is feeling to hypothesise, test and provide solutions for the patient’s problems (Engel, 1980). The biomedical model of health does not account for the behavioural, emotional, social, and spiritual psychosocial aspects of a person and the impact of these in the treatment of the illness of the individual (Engel, 1977).

Engel (1977, 1980) proposed an alternate model of health called the bio-psychosocial model which considers the patient as well as the illness. Engel argued that this alternate model of health places the patient at the centre and provides greater

understanding for the treatment of the patient because it considers the environment and life situation of the patient and takes the focus away from the disease and onto the patient with the disease.

Engel's model was incorporated within a recent patient centred conceptual framework of the doctor-patient relationship created by Mead and Bower (2000). Patient centredness, according to Mead and Bower, identifies the importance of a bio-psychosocial model of health within a complex conceptual framework consisting of five dimensions that also include therapeutic alliance and professional-patient relationship and relies on both participants working together in mutual agreement. A review of the literature assisted the authors in understanding the concept of patient centredness. The authors proposed that a patient centred model of medicine would differ from the traditional biomedical model with five dimensions; "bio-psychosocial perspective", "patient-as-person", "sharing power and responsibility", "therapeutic alliance", and "doctor-as-person" (Mead & Bower, 2000).

The bio-psychosocial perspective of the Mead and Bower model provides a way to look further than the biomedical problems of an individual and to consider the impact of other aspects on the individual such as life style and environment, which provides more opportunities to encourage wellness and health promotion. The patient-as-person promotes the notion that the patient's personal experiences and meanings add to the bio-psychosocial perspective. Mead and Bower argue that two people with the same injury or illness might have very different perspectives because of the impact on their lifestyle and current circumstances.

The third dimension of the Mead and Bower framework is the encouragement of equality in the doctor-patient relationship by moving away from the traditional paternalistic relationship where the doctor controls the interaction. Rather it promotes shared involvement in decision making and responsibility. Therapeutic alliance is more likely to be achieved and to provide a greater possibility of patient compliance within a patient centred approach. Patient centredness promotes and is central to the mutual agreement of communication goals (Mead & Bower, 2000). The last dimension of doctor-as-person acknowledges the role the doctor has in the interaction with the patient. The patient and the doctor work together in patient centred care rather than the doctor controlling the interaction (Mead & Bower, 2000).

This model of patient centred care discusses the doctor-patient relationship but the framework is adaptable to other healthcare professionals' relationships with patients. The framework is a positive step towards the understanding and development of meaningful relationships with patients by healthcare professionals.

2.4.3 Concepts of patient care

The impact of a diagnosis of cancer on patients and their families and subsequent management of the disease on social aspects has also been acknowledged. The loss of physical and/or mental capacity can disrupt daily life in many ways, for example, the ability to actively participate in employment. This can create financial difficulties, impacting on both the patient and the family and can contribute to an overwhelming loss of control further adding to anxiety and depression (Ahlberg, 2006).

Psychosocial care of the cancer patient commences from the first diagnosis of cancer and proceeds throughout the management of the disease (National Breast Cancer Centre & National Cancer Care Initiative, 2003). Research in this area has led to the development of clinical practice guidelines and recognition of the need for psychological interventions by clinicians for improved patient care in patients with cancer (National Breast Cancer Centre & National Cancer Care Initiative, 2003). Improving the assessment of patients' individual needs while the patient is undergoing treatment has been shown to have a positive impact on awareness by healthcare professionals of the physical and emotional needs of the patients (Han et al., 2005; Newell, Sanson-Fisher, Girgis, & Ackland, 1999; Thorne, Bultz, Baile, & The SCRN Communication team, 2005a; Wells, 2003).

Care is a broad concept in the literature and for the purposes of understanding psychosocial care within radiation therapy this section is further divided into "supportive care" and "perspectives of care" to articulate the different meanings given to care in the context of cancer.

2.4.3.1 Supportive care.

Effective communication skills are important in the development of a health clinician/patient relationship with clear evidence to suggest this relationship should be used to further ensure emotional support of the patient during the diagnosis and

treatment phase of their disease (Hack, Degener, Parker, & The SCRN Communication Team, 2005; Halkett & Kristjanson, 2007; Halkett et al., 2008; Halkett et al., 2010; Halkett et al., 2009). Several studies have shown the same situation is apparent in radiation therapy, requiring the combination of good communication skills and information provision to establish and maintain a professional rapport (Halkett et al., 2008; Halkett et al., 2010; Hinds & Moyer, 1997; National Breast Cancer Centre & National Cancer Care Initiative, 2003; Wells, 2003).

Empathy is also recognised as important to the formation of strong therapeutic relationships in the supportive care of cancer patients (Schnur & Montgomery, 2010). Empathy is a factor of health professional-patient therapeutic relationships frequently discussed in psychotherapy literature, and is recognised as a core element in nursing (McCabe & Timmins, 2006). It is described as an essential component in the provision of clinical care for cancer patients. Empathy involves effective communication and active listening by the health professional with the ability to understand and share the emotional state of mind of the patient, and understand the significance and meaning of the patient's behaviour (National Breast Cancer Centre & National Cancer Care Initiative, 2003).

Hinds and Moyer (1997) conducted a qualitative study using grounded theory to understand 12 patients' experiences of support while undergoing a course of radiation therapy. Three different sorts of support were found: "being there", "giving help", and "giving information". Support in this study was seen to be provided "within the context of a relationship" (Hinds & Moyer, 1997, p. 375) and assisted the patient to feel a sense of worth and to be recognised as an individual with an identity. The authors also recognised the levels of support depended on the familiarity the relationship fostered but supportive needs of patients differed over time and could differ with the people providing it.

These findings were mirrored in a study conducted by Halkett and Kristjanson (2007) of relationships between radiation therapists and cancer patients. Thirty-four patients with breast cancer participated in semi-structured interviews. The interviews were conducted at four different time points but not all of the participants were interviewed each time. The authors used the definition of emotional comfort

provided by Williams & Irurita (2006) who stated emotional comfort is a patient's experience of a relaxed physical state accompanied with agreeable and positive feelings. The study revealed that emotional comfort was of high importance to patients undergoing radiation therapy, and a high level of emotional comfort was more likely to occur when there was positive interaction between the patient and the radiation therapist (Halkett & Kristjanson, 2007).

A recent study by Jones, Regan, Ristevski and Breen (2011) examined the perceptions of cancer patients' communication experiences with clinicians in a "supportive care screening" process. There were 154 participants from six hospitals who were currently undergoing treatment for cancer (chemotherapy, radiation therapy or surgery). The process for supportive care screening used in the study was a combination of a validated screening tool developed by the National Comprehensive Cancer Network (NCCN) called the Distress Thermometer and a problem list, a discussion between the clinician and the patient about identified problems, and provision of information guided by a resource kit developed by Monash University. The study found the majority of patients confirmed the process assisted good communication and encouraged them to clarify unmet needs, initiate communication, and validate their needs. Patients appreciated the one-on-one time with the clinician, and the attention to both physical and non-physical needs. It was also found the clinicians were more focused in their attention to the patient, and the researchers believe the process created a patient centred communication model as a result (R. Jones et al., 2011).

2.4.3.2 Perceptions of care.

Studies based on the development of a good rapport between cancer patients and health professionals involved with their treatment have indicated a direct influence on the patient's well being (Allen, 2006; Bottomley, 1997; Halkett & Kristjanson, 2007; Halkett et al., 2008; Hjörleifsdóttir, Hallberg, Gunnarsdóttir, & Bolmsjö, 2008). A study undertaken by Hjörleifsdóttir et al., (2008) took place in three Icelandic oncology clinics. The researchers used semi-structured interviews to explore the experiences of 25 oncology patients receiving radiation therapy or chemotherapy. They also explored the perceptions of care and service provided by the outpatient oncology clinics. The study indicated that most patients considered the

formation of “positive relationships” with health professionals and “caring encounters” to be two of several factors important in providing support and giving hope during the period of receiving treatment (Hjörleifsdóttir et al., 2008).

Radiation therapists’ concepts of care were explored in a phenomenological study using focus groups to interview a total of 27 radiation therapists (Bolderston, Lewis, & Chai, 2010). The majority of participants were females with a wide range of years of professional experience. The three main themes that emerged from the data were: radiation therapists perceived care in radiation therapy to consist of the connections made between the patients and themselves, the care provided through the use of technology, and the speciality and uniqueness of being a radiation therapist.

However, Bolderston et al. (2010) reported that there was contention between the radiation therapists as to whether technology and the technical aspects of the work should be deemed part of caring. The authors suggested further research should be considered in terms of producing greater awareness and understanding of caring in the role of the radiation therapist highlighting that the current study is required because there are no previous studies that focus on the day-to-day activities of radiation therapists to ascertain their perspectives and the types of care they provide patients in the radiation therapy environment.

The assessment and understanding of care within radiation therapy must also consider the impact of the highly technical environment on perceptions of care of both the healthcare professionals and the patients. Barnard and Sandelowski (2001) propose that the perceived tensions between technology and the health care of humans are complex and argue that it is not the technology that can de-humanise the experiences of care rather it is the use of the technology and the perceptions of those that use it. The authors state that technology, rather than completely opposed to caring, is part of caring and can be incorporated into humanised care (Barnard & Sandelowski, 2001).

A different view of health professionals’ perceptions of technology in caring is demonstrated in a recent ethnographic study of renal nurses’ perceptions of quality nursing care in a satellite dialysis unit. It was found that technical knowledge and technical skills were considered important factors of quality care by the nurses (Bennett, 2011) because they associated it with a higher status in the nursing team.

This placed emphasis on the technology used and highlighted it as very important to quality care, whereas, issues of transport and long term blood pressure controls were not considered important in quality nursing care because the management of these issues was associated with a lower level of rank in the team (Bennett, 2011).

The above subsection demonstrated the broad use of the terms “care” and “caring in health” and provides an understanding of the components of supportive patient care. Assessment and understanding of patients’ individual physical and emotional needs by health professionals can assist the patient to have a more positive treatment experience. Patients have indicated a preference for health professionals who are understanding and focus on the individual needs of the patient, offer advice, answer questions and provide information.

In reviewing the literature, supportive patient care and psychosocial care are overlapping and integrated terms for a situation where there is focused attention by the health professional on the physical and emotional needs of the patient, and provides both the clarification of unmet needs and the validation of the needs of the patient. Providing support through positive interaction can provide a level of emotional comfort, assisting the patient to experience less stress and anxiety.

The focus on technology can be perceived as de-humanising care by some health professionals. Whether technology is deemed de-humanising or if it has a role within human caring is most likely to be determined by the use of the technology and the users of the technology. This study will further demonstrate radiation therapists’ perceptions of care within radiation therapy, and the role radiation therapists play in the provision of care within the highly technical radiation therapy environment.

2.5 Communication in health care

A critical analysis by Thorne, Bultz, Baile, and The SCRN Communication Team (2005a) based on the lack of effective communication in cancer care highlighted the negative impact a lack of effective communication had not only on the participants but also on the health care system. The researchers concluded from the existing evidence that poor communication is costly to both humans and the economy, equating good communication as best practice (Thorne et al., 2005a).

The benefits to the health care system outlined by Wissow (2004), from studies conducted in the USA, indicated fostering of health professional and patient relationships in patient centred practices contributed less to malpractice claims (Wissow, 2004) supporting the conclusions made by Thorne et al. These studies identified several factors of length of time and number of consultations, gender, cultural background and specialty that were found to influence patient centred practices and require further exploration in the future.

2.5.1 Goals of communication

The combination of agreed treatment goals and how these goals are to be achieved between the health professional and the patient, in conjunction with a sense of personal connection between the two participants, is generally referred to as therapeutic alliance. Therapeutic alliance is one of the four constituents of a therapeutic relationship in psychotherapy (Schnur & Montgomery, 2010). The idea of goals and goal setting as central to the communication between the health professional and the patient (Hack et al., 2005) is also reflected in the “patient-professional communication framework” (Figure 1).

Feldman-Stewart and colleagues developed the framework to assist greater ability to explore possible factors that inhibit good communication between the health professional and the patient. This framework is built on the concept that each participant entering into the interaction has a need for a particular set of goals to be addressed. The goals are the purpose of the communication and the achievement of the participants’ goals will be determined by the contributing factors of the communication process (Feldman-Stewart et al., 2005).

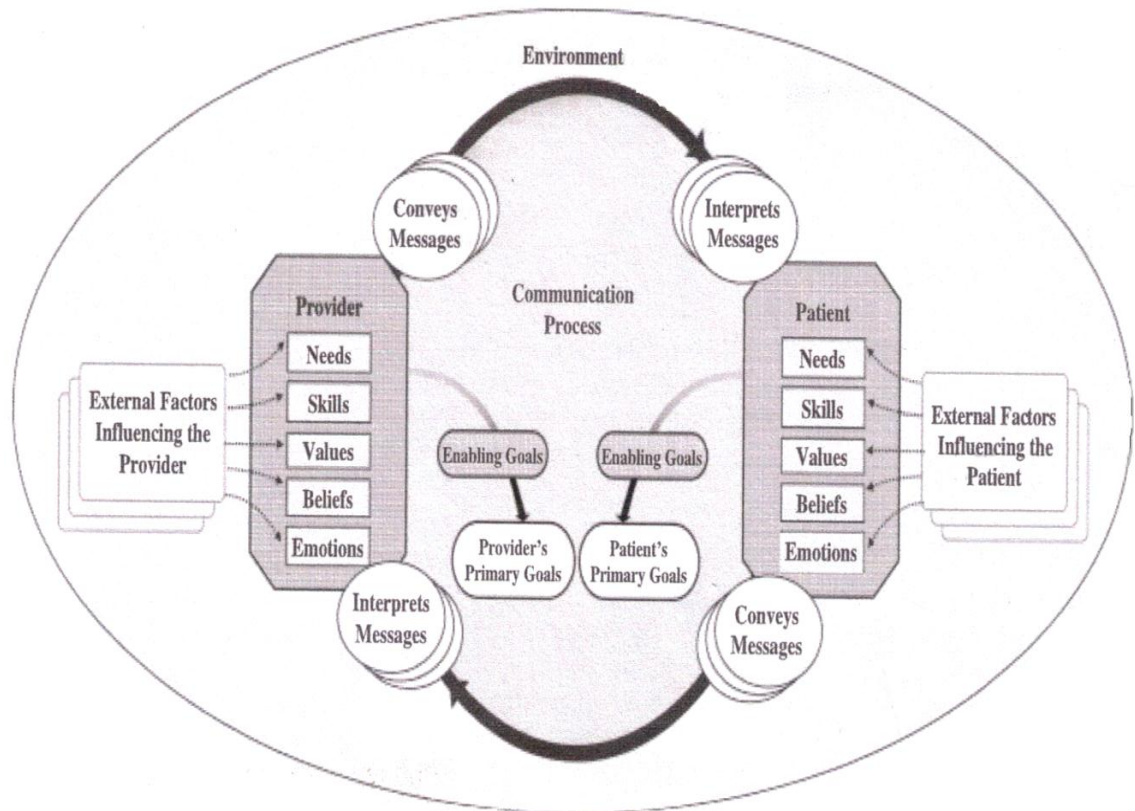


Figure 1 Patient-professional communication conceptual framework

From “A conceptual framework for patient-professional communication: an application to the cancer context,” by D. Feldman-Stewart, M. D. Brundage, C. Tishelman, SCRN Communication Team, 2005, *Psycho-Oncology*, 14(10), p. 803. Copyright 2005 by John Wiley and Sons. Reprinted with permission.

The communication process involves both participants in the sending and receiving of messages, and the process will be influenced by the individual characteristics, perceptions and current life situation of each participant. Environmental factors such as the cultural, social, physical and legal aspects of the setting where the interaction between health professionals and patients occurs will also have an impact on each individual achieving the goals of the communication (Feldman-Stewart et al., 2005).

A unique feature of the Feldman-Stewart et al. framework is that the goals are differentiated and include the primary goals, and secondary or enabling goals. The authors describe a primary goal as the motive for the communication to take place and the secondary goals as steps in the process that enable primary goals to be obtained. The messages participants use to attain their primary and secondary goals

are central to the communication process, and they are identified as three different types. The messages can consist of verbal messages where either spoken or signed language is used, non verbal signs through body language and vocal tones, and passive messages through long pauses or silence (Feldman-Stewart et al., 2005).

The framework provides a structured way to explore inadequacies in communication between health professionals and patients in a number of settings and can also be adapted for communication involving more than two people. It provides a structured avenue for further research into the gaps that may occur in specific situations of communicative actions and has demonstrated the complexities of and within which communication takes place (Feldman-Stewart et al., 2005).

Communication in the context of cancer often presents difficulties and challenges and it is for these reasons Schofield and Butow (2004) put forward a plan for a coordinated structured approach for the development and implementation of evidence based communication research in cancer. The seven steps of the approach are: identification of difficulties, documentation of patient-clinician interviews, identification of practices with better outcomes, development of guidelines, testing the effectiveness of intervention, dissemination of the intervention, and the adoption of the intervention. The authors proposed the seven part model to be used to direct improvements in communication, to assist the identification of gaps and justify further research to improve communication and the experiences of patients with cancer (Schofield & Butow, 2004).

Communication is important in the provision of radiation therapy treatment because the management of a patient's course of treatment involves a team of health professionals. Coordination and delivery of a patient's treatment is a complex arrangement and requires effective communication between team members. It also requires that radiation therapy health professionals provide effective communication and education to the patient because of the intricate nature of the treatment. The following sections review the importance of communication and the relevance of communication in the treatment management of patients with cancer.

2.5.2 Communication between health professionals and patients

Effective communication is necessary to establish the individual needs of the patient, to provide relevant information and to enable appropriate supportive care for the patient. The use of good communication is central to forming a therapeutic relationship and the foundation of quality patient care (Grundy, 2006; McCabe & Timmins, 2006; National Breast Cancer Centre & National Cancer Care Initiative, 2003).

Nursing literature emphasises the importance of “therapeutic” communication in the establishment of the nurse-patient relationship to facilitate the nurse in the steps required to evaluate and provide nursing care for the patient (McCabe & Timmins, 2006). A nurse engaging in therapeutic communication should convey empathy and purpose in an open, honest and caring manner. In the same way the nursing literature highlights the significance of “patient-centred” (McCabe & Timmins, 2006, P.51) communication in providing a sense of respect and concern for the patient adding to a positive therapeutic relationship. According to McCabe & Timmins these two components of communication play an important role in developing the relationship between the nurse and the patient to facilitate the provision of quality supportive care.

The literature indicates in the treatment of individuals with cancer there is an association between effective communication and patient compliance, satisfaction and decision-making (Halkett, 2005; National Breast Cancer Centre & National Cancer Care Initiative, 2003). Active listening and empathy as previously mentioned are important elements in the relationship building process. They are valuable components of communication and can contribute to a patient’s emotional and psychological adjustment to their disease (K.-L. Martin & Hodgson, 2006; National Breast Cancer Centre & National Cancer Care Initiative, 2003).

2.5.3 Communication and information provision in radiation therapy

Effective communication skills and training for health professionals have been emphasised by a number of researchers indicating the significance of the impact on patients’ treatment experiences, in particular the cancer patient (Halkett & Kristjanson, 2007; Halkett et al., 2008; Hjörleifsdóttir et al., 2008; National Breast

Cancer Centre & National Cancer Care Initiative, 2003; Wells, 1998). As a result, there have been specific guidelines written and published with workshops and presentations offered to health professionals Australia wide (National Breast Cancer Centre & National Cancer Care Initiative, 2003). This has encouraged an emphasis on supportive patient care, in particular, through good communication for health professionals involved in the treatment and care of cancer patients (National Breast Cancer Centre & National Cancer Care Initiative, 2003; National Comprehensive Cancer Network, 2011).

Radiation therapy can induce further fears that include concerns of accuracy, short and long term side effects and coming into contact with other cancer patients further compromising the psychological well being and coping mechanisms of the patient (Halkett et al., 2008; Long, 2001). This provides further indication for all health professionals involved in the treatment of the patient with cancer, including radiation therapists, to ensure both the physical and emotional needs of the patient are considered in the care given (Turner, Zapart, Rankin, Luxford, & Fletcher, 2005).

In more recent years studies have recognised the benefits of improving the communication between patients and radiation therapists. Provision of patient information and education about radiation therapy treatment is an important part of patient care and is essential for cancer patients (Halkett et al., 2010; Halkett et al., 2009). There are a number of ways of communicating and providing information to patients, many of which are used within specialised clinics such as radiation therapy centres. These can include one-to-one discussions and the provision of pamphlets, recorded audio-visual materials, information sessions and internet websites (Häggmark et al., 2001; R. B. Jones et al., 2006; Parker, Davison, Tishelman, Brundage, & The SCRN Communication team, 2005; Zissiadis et al., 2006).

Literature has reported that information and education for patients with cancer needs to be inclusive of what patients want to know but information giving can vary between professionals (Feldman-Stewart, Brundage, Hayter, Groome, Nickel, Downes & Mackillop, 1998; Halkett et al., 2009). Several researchers have shown that patients receiving radiation therapy rate sources of information differently to radiation therapists indicating the information needs should be inclusive of what the patient wants to know; not just what radiation therapists assume patients need to

know (Bolderston, 2008 ; Halkett et al., 2008; Halkett et al., 2009; Sharpley & Christie, 2007; Zissiadis et al., 2006). A survey (Zissiadis et al., 2006) consisting of two questionnaires, the Information Satisfaction Questionnaire and the State Trait Anxiety Index, was conducted to establish patient satisfaction with the level of information provision by radiation oncologists at a Western Australian radiation oncology centre. The survey was completed by 120 radiation therapy patients who were currently undergoing treatment. The research team reported that there was a high percentage of patients who were happy with the level of information regarding their disease and treatment but many patients indicated they would have preferred more information about the impact on lifestyle and practical issues such as transport, parking and the costs involved for treatment (Zissiadis et al., 2006). The results of the survey were used to develop an information pamphlet for the centre that incorporated lifestyle and practical issues as well as those that centred on the treatment.

The findings of the survey highlight the importance of attending to the psychosocial needs of individual patients as well as the physical and technical aspects of radiation therapy treatment (Zissiadis et al., 2006). A broad spectrum of needs can arise for radiation therapy patients because of the daily treatment delivery over six to eight weeks. The patients indicated more information prior to the start of radiation therapy about the issues associated with accessing the radiation therapy centre would be beneficial. Information around these issues could assist the patient to be better prepared, for example, with information pertaining to transportation arrangements and reimbursement schemes or arrangement of people to drive for them. Attention to information of these practical issues could relieve some of the anxiety patients experience prior to and throughout the treatment trajectory.

Patient information preferences of 392 individuals who had been treated for either prostate or breast cancer were also explored by a Queensland cancer centre (Sharpley & Christie, 2007). The survey consisted of a demographic questionnaire and two other questionnaires, one to gather preferences on information material and sources, and the other to gather self-reported depression and anxiety of the patients during and post treatment. The study found the patients rated the information provided at the doctor consultation as the most important, followed by the information booklet. More

women than men showed a preference for a guided tour of the facilities prior to treatment, and men were more likely to choose to take home an educational video to watch (Sharpley & Christie, 2007). However, the study was limited to those patients who were receiving treatment for prostate cancer or breast cancer. The authors acknowledge that the differences in preferences reported could be a result of the quality of the information booklets or it could be the result of differences of gender and the site of the disease (i.e. breast or prostate).

Halkett et al. (2011) conducted a longitudinal survey to prioritise the radiation therapy information needs and concerns of 123 patients with breast cancer. The study also aimed to establish the unmet needs and preferred information sources of this cohort of patients and to determine if the provision of information assisted the reduction of anxiety and depression. The survey was conducted in the form of a self-reported questionnaire at four points during the patient's radiation therapy experience; after the first appointment with the radiation oncologist, after the patient had attended the planning appointment, within the first week of the treatment and at the completion of the course of treatment (Halkett et al., 2011). The questionnaire incorporated the radiation therapy (RT) concerns scale and the radiation therapy (RT) information needs scale (both developed and tested by the first two authors). The patients' preferred sources of information were also evaluated using a 9-point Likert scale and the hospital anxiety and depression scale (HADS) was used to determine levels of anxiety and depression.

This recent comprehensive study determined the need for information provision for patients with breast cancer is highest prior to and at the beginning of the radiation therapy treatment trajectory. The study found that at the second and third time points more than 50% of the patients' reported unmet or partially met needs concerning information about the impact of the treatment on their lungs and/or heart and what to expect on completion of treatment. The authors also reported that 20% of the patients at the same time points did not have their information needs met or partially met about what side effects could occur, how the treatment is planned and how much of the breast would be included in the treatment (Halkett et al., 2011).

The study also reported that not all of the patients felt their information needs were met once they had started treatment. This suggests further assessment is required by

radiation therapy centres to ascertain information needs of patients throughout the treatment trajectory to determine that the information they provide meets the needs of the patients. Halkett et al. also suggested a face-to-face session with a radiation therapist prior to the start of treatment could be beneficial in meeting some of the information needs of patients.

The studies of Zissiadis et al. (2006) and Sharpley and Christie (2007) examined patients' preferences of information materials and information sources but, apart from the doctors' consult, there was no discussion of the role others such as nurses and radiation therapists play in information provision in radiation therapy. This is in contrast to the suggestion made by Halkett et al. (2011) that radiation therapists be involved in the information provision prior to the start of treatment. However, Zissiadis et al. in their study highlighted what health professionals perceive as important information for the patients can be different to what patients want in information. The mismatch of perceived information needs was also highlighted in research that compared what information materials and information sources radiation therapists' thought patients needed to what radiation therapy patients perceived they needed.

A survey of 42 radiation therapists and 183 radiation therapy patients was conducted by Bolderston (2008) to ascertain the ratings of preferred informational items. Findings of the study indicated although there was some agreement between the two groups, patients rated information from their GP quite high whereas radiation therapists rated this source extremely low. Patients rated involvement in small patient education groups quite low compared with radiation therapists. These differences demonstrate the importance of radiation therapists' awareness of the needs and preferences of patients. However, understanding the needs of patients requires a multifaceted approach and Bolderston suggests the use of a few key questions such as "what would you like to know about today?" and "what are your concerns at this moment?" (p. 117). These phrases together with a basic check list of essential information could help radiation therapists to tailor the education and information provision to the individual needs of each patient (Bolderston, 2008).

Halkett, Short and Kristjanson (2009) conducted a survey to identify what information is provided and who provides the information to breast cancer patients

about radiation therapy, at what time points is the information given and to ascertain if the information providers and the patients have similar ratings of importance on specific information. Health professionals from 41 radiation therapy departments in Australia and New Zealand participated in the study by completing a self-administered questionnaire. The results from the questionnaire were compared with the results from a previous study investigating patients' information needs that the researchers had conducted. The results confirmed that there was a broad range of information provided with differing levels of importance placed on some radiation therapy related information by health professionals and patients highlighting the need for health professionals to explore further options for tailoring information to the requirements of the individual patient.

2.5.4 Communication between radiation therapists and cancer patients

The radiation therapist's role is both that of technical expert and support person in patient care, which requires a delicate balance of skills (Baume, 2002; Halkett & Kristjanson, 2007; Halkett et al., 2010). Technical expertise and accuracy are of the utmost importance in radiation therapy. It is essential that radiation therapists deliver the prescribed radiation dose to the correct volume because of the potential damage that can occur to other critical organs and body structures. This requires a combination of particular techniques, protocols, and immobilisation devices and relies heavily on the compliance of the patient (Leaver et al., 2004).

A patient's anxiety about treatment procedures can impinge on the accuracy of the treatment delivered. Treatment volumes have small margins allowing for the patient's breathing but not for gross movement. Despite the use of immobilisation devices, if the nervous patient moves involuntarily, for example, shaking, twitching or sudden uncontrolled movements, the delivery of accurate treatment becomes more difficult (Leaver et al., 2004). The patient who is at ease with the procedure will usually find the experience less distressing as this allows the treatment process to be undertaken in a timely manner. Informing the patient of what will take place prior to treatment being delivered can also assist the patient in addressing their fears of the treatment procedures (Halkett & Kristjanson, 2007; K.-L. Martin & Hodgson, 2006; Ross, 2004).

By giving information and developing a rapport with cancer patients, radiation therapists have an opportunity to improve patients' radiation therapy treatment experiences. Daily communication between radiation therapists and cancer patients can provide further information and supportive patient care. Understanding certain cues given by the patient and acting on the information gained through this communication, radiation therapists can assist the cancer patient's treatment compliance and coping strategies (Halkett & Kristjanson, 2007). In many centres much of the information giving in radiation therapy is shared between radiation therapists and nurses (Halkett et al., 2008; Halkett et al., 2010; Halkett et al., 2009). In more recent times, some radiation therapists have implemented informative talks, in particular at the planning appointment and on the first day of treatment to provide details of treatment delivery, preparation requirements for treatment, and possible side effects of treatment (Halkett et al., 2010; Halkett et al., 2009; K.-L. Martin & Hodgson, 2006).

Martin and Hodgson (2006) propose that the role of the radiographer (radiation therapist) on the first day of a patient's radiation treatment is to provide information in a caring way to alleviate any anxiety or fears the patient might be experiencing. They suggest the use of basic counselling skills in combination with good communication skills could enhance the patient care received by the patient. According to Martin and Hodgson good communication skills include careful listening, verbal and non verbal communication, empathy, and self awareness. Careful listening incorporates checking for understanding by summarising or repeating the information provided by the patient, and verbal and non verbal communication is the use of appropriate questions, clarity of speech, and appropriate use of body language to assist the patient to feel a level of comfort. Empathy indicates to the patient active listening and genuineness in the interaction, and the importance of the radiation therapist being self aware and knowing their knowledge limitations assists in the development of respect and trust.

The authors highlight the extra qualities of counselling skills as genuineness, the ability to be non-judgemental, reflective listening, clarifying, and paraphrasing, and supporting or challenging. The authors advocate for these skills to be utilised by radiation therapists to support their patients but they also draw attention to the

difficulties of putting these skills into practice because many radiation therapy centres do not have adequate facilities such as space, staff, time or the training (K.-L. Martin & Hodgson, 2006). The current study will further demonstrate the possible barriers to radiation therapists' use of counselling skills outlined by these authors, by revealing the limitations and inhibitors of effective communication and interaction in the radiation therapy environment.

Several studies (Bolderston, 2008; Halkett et al., 2008; Halkett et al., 2010; Sharpley & Christie, 2007; Zissiadis et al., 2006) exploring radiation therapy patients and information giving have confirmed that such initiatives are an important part of the communication process. Halkett et al. (2008) in their study of early breast cancer patients undergoing radiation therapy investigated the fears and information needs of this group of patients. The researchers determined that there is an opportunity at the planning appointment, and again before the commencement of treatment, for radiation therapists to instigate discussion about patient concerns, to be informative, and to reassure the patient (Halkett et al., 2008).

Radiation therapists are in an ideal position, while engaged in the daily delivery of treatment, to assist patients not only in their need for physical comfort but also in their emotional comfort (Halkett & Kristjanson, 2007; A. M. Williams & Irurita, 2006). There is potential to identify psychosocial cues and give the patient an opportunity to discuss issues or direct the patient to other professionals with the appropriate skills (Halkett & Kristjanson, 2007; Shi et al., 2009).

Over the past four years radiation therapists have started to look at areas of role extension within the patient supportive care realm. A study was undertaken at two public Singapore centres to ascertain if radiation therapists and radiation oncologists thought that radiation therapists could conduct patient treatment reviews, normally one of the tasks of the radiation oncologists (Shi et al., 2009). Shi et al. reported that most of the radiation therapists and radiation oncologists who took part in the questionnaires agreed radiation therapists could give information and answer patients' questions pertaining to treatment, side effects and nutrition, indicating radiation therapist involvement in patient reviews could be beneficial to and improve the care given in attending to the emotional needs of patients but indicated further studies would be required to explore this point. It has also been suggested by Shi et

al. that this development of the radiation therapist role could improve job satisfaction and retention of experienced radiation therapists.

The initiative of an “information and support radiation therapist” in the Cork Radiation Oncology Department, Ireland, was trialled with the introduction of three services: patient information evenings, a telephone follow up clinic and a patient educational DVD. Patient feedback about the patient information evenings was positive and the telephone follow up at the completion of treatment reported similar findings with similar outcomes of improvement in the patient’s overall treatment experience (C. Miller, 2009). This showed the positive impact of improving the patient’s radiation therapy experience with a well balanced and multi-skilled team approach and suggests radiation therapists’ roles can incorporate supportive patient care in more than one dimension (Han et al., 2005; McIllmurray, et al., 2001).

Communication is central to interactions between health professionals and patients, and effective communication that assists health professionals to recognise and meet patients’ needs is deemed best practice. The literature indicates good communication is two way with mutually agreed terms, and each participant will have goals of the meeting. Communication is considered the foundation to quality patient centred care, and in radiation therapy it is important for provision of information and education for the patient. However, good communication can also assist radiation therapy patients to achieve a sense of emotional comfort, foster familiarity with the setting and treatment team, and provide a positive treatment experience.

There is also indication from recent studies for the scope of the role of radiation therapists to extend further into the patient care realm through the conducting of patient review clinics, and in the coordination of informational sessions and materials, and in the implementation of post treatment follow up clinics. An organised approach to coordinate the care of each patient would also assist the development of strategies to enable radiation therapists to engage in effective communication and supportive patient care.

Clinical care pathways have been used by health professionals to establish a plan of anticipated clinical action for a patient with a focus on the patient’s progress through the treatment trajectory (Middleton & Roberts, 2000). Successful use of clinical care

pathways is reported to improve clinical outcomes with the use of milestones to measure the patient's progress. Other benefits of the use of a care pathway include less documentation or collaboration in documentation, the clinical staff involved has an accurate record of the clinical care the patient has received and the pathway is an indication of the appropriateness of the care that has been given (Middleton & Roberts, 2000). Wells and Faithfull (2003) suggest there is a need for research that investigates tracing patient pathways in radiation therapy in order to provide seamless supportive patient care from planning and simulation through to the completion of the treatment. The use of a care pathway in radiation therapy as suggested could also incorporate strategies to structure information and communication processes (Wells & Faithfull, 2003). This notion of the use of patient or clinical care pathways could also assist the development of radiation therapists' role in supportive patient care and provide structure to the proposed areas of advanced practice of radiation therapists in the patient care realm.

The current study will provide a greater understanding of the existing roles of radiation therapists in the delivery of radiation therapy treatment, the role they play in the provision of supportive patient care and the current strategies used to provide patient care.

2.6 Communication skills of health professionals

The literature has shown the importance of communication between health professionals and patients with cancer. Successful supportive patient care requires the communication to be beneficial to both participants, with a primary goal to enhance the experiences of the patient. Feldman-Stewart et al. (2005) developed a framework to assist understanding of the complexities of the communication process and to assist in the identification of possible gaps in various situations. Schofield and Butow (2004) also developed a plan to structure future communication research to assist the rapid development of good communication strategies based on evidence for the cancer setting.

These approaches call for cancer health professionals to embrace communication skills training. There have been several initiatives to introduce skills training in communication for health professionals, in particular those professionals who are

responsible for the management and treatment of patients with cancer. A communication skills training program was developed by Butow et al. (2008) to assist oncologists in the development of eliciting and responding to the emotional cues of their patients because it was found psychological issues in patients with cancer are frequent but often these issues are not identified or treated.

Thirty Australian oncologists participated in the training program which consisted of an intensive face-to-face workshop, a DVD modelling behaviour, and four video-conferences that included role-play. The oncologists were randomised to receive the training program or continue with usual practice. Before the randomisation all oncologists were videotaped in a role play consisting of interaction with an actor as a patient with colorectal cancer. The transcripts of the videotapes were coded into two main categories of “creating an environment where emotion is likely to be expressed” and “responding to specific emotion” with 10 behaviour subscales. Butow and colleagues, in evaluating the impact of the training program, confirmed that the results indicated doctors had problems identifying and responding to emotional cues reflecting the findings of other studies.

It was found, for example, that those in the intervention group showed more of the behaviours that created the opportunity for the patient to disclose emotion and less blocking behaviour when emotion was expressed than the control group. There were 67 % of the oncologists in the intervention group who thought that after the training they were more capable of identifying the emotional cues than they would have prior to the training. However, the researchers acknowledge that although the results were not statistically significant because of the size of the study, it was likely it could still be clinically significant. Butow et al. (2008) also acknowledged the limitations of the evaluation but the indications of the effectiveness of the training program suggest further evaluation and implementation of the training program should be undertaken (Butow et al., 2008).

A study was undertaken in the United Kingdom by Shilling, Jenkins and Fallowfield (2003) to identify factors in the cancer patient-clinician consultation that assist in a level of satisfaction. The study consisted of 160 doctors from 34 cancer centres; half of whom were randomised to take part in a training course. Patients of the clinicians were approached and recruited. Those that participated completed a questionnaire to

measure for psychological morbidity prior to consultation with the doctor. Following the consultation the patients were asked to complete a satisfaction questionnaire and participated in a short exit interview. After the consultation the doctors also completed a questionnaire aimed at rating their satisfaction with the consult. Satisfaction was found to be related to the age of the patient, psychological morbidity and the most significant finding of all, the length of waiting time at the clinic. However, the study did not find any significant impact on the satisfaction of patients or clinicians. The researchers conceded that the measurement of patient satisfaction is difficult because practical issues of overcrowding and waiting times in clinics can overshadow subtleties in the communication process (Shilling et al., 2003).

Despite the statistically insignificant results indicated in the two studies presented any skills for the improvement in the communication between health professionals and patients with cancer, can be of benefit to patients (Butow et al., 2008).

2.7 Summary

The literature highlights the complexities involved in the management of a patient's disease and the multitude of approaches to the care provided. The experience of radiation therapy for an individual following a diagnosis of cancer is physically and psychologically challenging. Patients experience fear and anxiety prior to starting radiation therapy because of preconceived ideas of the treatment and a fear of the unknown. Studies have indicated daily activities of a patient undergoing radiation therapy are disrupted because of physical aspects of the disease and/or the side effects from the treatment impacting on the psychological functioning of the patient. However, there is a lack of research that focuses on the impact of the daily processes and procedures in the radiation therapy environment on the treatment experiences of patients.

Supportive patient care is a broad overarching term that is used to describe the interactions between patients and health professionals that provide the patient with emotional and physical support. The literature indicates good communication is deemed best practice, and is required for the participants engaged in the interaction to establish and meet their goals or reasons for the interaction. Studies indicate good communication skills enable the health professional to elicit emotional cues to

validate the needs of the patient, and to establish and understand the unmet needs of the patient. However, one study suggested the radiation therapy environment is not always conducive to employing appropriate communication skills.

The literature also indicated there are different perceptions of care in health, and that modern day healthcare is complicated with the use of technology. For some health professionals the technology is seen as de-humanising or taking the care out of the giving of treatment but others view it as working alongside human care to provide a greater level of care. The radiation therapy environment is highly technical and this study will assist understanding the impact of technology on the supportive care provided in the radiation therapy setting.

Previous studies indicated radiation therapists have the opportunity to engage in meaningful interactions with their patients to provide the patients with a level of emotional comfort and confidence to enhance the treatment experience. Extension of the role of radiation therapists into supportive patient care has been suggested in several studies. These studies provide evidence of opportunities for radiation therapists to further develop the supportive care aspects of their role. The current research was undertaken to explore the interactions between radiation therapists and cancer patients in order to provide an understanding of the barriers and enablers of the supportive patient care role radiation therapists can undertake.

This chapter has identified several gaps in the literature, indicating that further research is required into: the impact daily processes and structures in radiation therapy have on the patient's treatment experience (physically and psychologically); the lack of effective communication and information delivery in radiation therapy by radiation therapists; and the barriers and enablers of interactions with radiation therapists within the radiation therapy environment. This thesis aims to explore these gaps. The following research questions are asked:

“What are the underlying beliefs, values, practices and systems that form the culture of Australian radiation therapists?”

“How does the culture of radiation therapists impact on the interactions between radiation therapists and cancer patients undergoing radiotherapy?”

3. Traversing the Terrain

Research Positioning

“One does not need to be a mystic to believe that setting out on an important journey is, in some respects, more important than arriving at your destination...”
(Silverman, 2007, p. 147).

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3.1 Introduction

The focus of this study is exploring the interactions of radiation therapists and cancer patients. Such an exploration demands a qualitative research design because qualitative research is an interpretive approach used to address social perceptions of life (Holliday, 2007). The purpose of this chapter is to describe the positioning of the research according to epistemology, the theoretical perspective, the methodology and the methods (Crotty, 2003). This chapter is structured using these four components: the first section outlines the epistemological view and how this view informs the theoretical perspective; the second section presents the theoretical perspective of the researcher; and the following two sections outlines the reasons for the decisions made for both the methodology and the methods adopted for this study. A detailed account of the research process follows in Chapter Four.

3.2 Epistemology

Epistemology concerns the nature of knowledge and the way knowledge is attained (DePoy & Gitlin, 1998, p. 306). In qualitative research the position or way the researcher views the world is taken into consideration. Unlike positivist experimental research designs which are based in attaining knowledge through a deductive process, naturalistic inquiry is based within many epistemologies that involve abductive and inductive processes of human reasoning (DePoy & Gitlin, 1998). A deductive form of reasoning starts with a belief about a general principle to form and test hypotheses in order to explain a specific phenomenon. In contrast, qualitative research starts with a particular situation or observation and looks for patterns to uncover a broader understanding of the phenomenon (DePoy & Gitlin, 1998; May, 2001).

There are a number of epistemologies; the three major ones are objectivism, subjectivism and constructionism (Crotty, 2003). Objectivism is the view that objects have their own meaning within them and that they exist individually without subjective meanings or interpretations. This epistemology informs positivism and underpins the objective, evidence supported knowledge of empirical science. From this view the world is seen as quantifiable and is devoid of the everyday lived experiences of people. This view does not consider the subjective meanings given to

experiences, for example, the interpretation and meaning making of colour, tastes, sounds, and temperature by people. In subjectivism meaning is only created by and exists as the interpretations of individuals. Essentially researchers of this epistemology seek to study the phenomena of everyday experience from the subjects' points of view (Crotty, 2003).

Constructionism underpins this research and follows the belief that human beings construct meaning and their understanding of the world in which they participate. This viewpoint was taken because the constructed meanings of, and how radiation therapists understand, their world is central to understanding the interactions of radiation therapists and patients with cancer, the key focus of the research (Crotty, 2003).

3.2.1 Constructionism

Constructionism takes the viewpoint that meaning is constructed by the interaction between the subject and the object, thus the objective and the subjective are inexplicitly tied together in meaning making (Crotty, 2003). Constructionists propose the cognitive functions of an individual may rely in part on biological factors but they believe human beings are also intensely social and use language, culture, and interaction to construct or make meaning of their world (Berger & Luckmann, 1967).

This constructionist viewpoint is set in an historical and social context and deems that the world human beings enter at birth already holds meaning for them because these meanings are constructed by their culture (Crotty, 2003). Constructionists (for example, see Fishman, 1978 ; Foley, 2005; Goffman, 1959 ; Goffman, 1963; Goffman, 1967 ; Ryen, 2000) record and document the actions of humans because “reality is not automatic, natural, or self-generating: it is created by people’s actions” (Harris, 2010, p. 14). In this way constructionists endeavour to reconstruct the happenings of the everyday world.

Culture impacts on humans in several ways because human beings tend to believe that the meanings they give to phenomena is in fact the way things actually exist and, in turn, this understanding is passed on to others. These meanings or interpretations

become solidified in the process and form the beliefs, values, and attitudes of the culture (Berger & Luckmann, 1967).

Culture uses language and communication consisting of complex systems of signs and symbols to enable human beings to interact with each other and to make meaning and sense of their world (Geertz, 1973). Every generation of a culture learns the complexities of the cultural knowledge and the children are socialised to view their world from the particular perspective of that culture (Spradley & McCurdy, 1972). It is through this prolonged social process that the concepts and behaviours that other members of the culture have used to sustain organisation in daily life are passed on to the younger generations of the group (Spradley & McCurdy, 1972). From this constructionist stance, culture is an important aspect of human existence, particularly in the construction of knowledge and meaning because it is a system of shared beliefs, values, and attitudes that forms and influences perceptions, behaviour, and activities of a particular group of people (DePoy & Gitlin, 1998).

However, these already socially constructed meanings acquired through culture support hegemony, the ability of a single group to dominate or control a society (Crotty, 2003). The inherited meanings limit changes and uphold structures of power and oppression, resistant to obtaining greater equality (Crotty, 2003). This provides a tension that Crotty refers to as “bifurcation” (p. 60), within constructionism and the research resulting from it because of the different viewpoints of those happy with the “status quo” of the culture and those criticalists who are much more suspicious or more questioning of it.

3.2.2 Social construction

The social constructionist view centres on the social courses of action and interactions of people. The interactions of people in day-to-day activities are perceived by social constructionists as the processes where shared meanings are constructed (Burr, 1995). According to Berger and Luckmann (1967) not only the day-to-day social procedures of a group of people constructs meaning but the group will also experience their world as predetermined. In other words, the shared beliefs and values of social practices of a group become “externalised” or expressed, and these expressed ideas then become “objectivised” or objects which in turn through

this process are “internalised” or become part of consciousness (Berger & Luckmann, 1967). This is termed by Berger and Luckmann (1967) as “the social construction of reality” where human beings’ perceptions of meaning and knowledge become rooted in their culture.

Adding to the understanding of the social construction of reality, Thomas (1993) suggests the base of all language and consciousness is ideological and that these ideologies do not preordain our lives. Thomas believes the preference for these ideologies constrict people socially. He adds that it is not the adherence to the ideologies that is the issue but it is to a certain extent the lack of recognition of the misrepresentation of those ideologies on daily life that is the problem (Thomas, 1993).

The misrepresentation of ideologies in daily life that Thomas believes constrains the social activities of people is highlighted by Marx (1818-1883). Crotty (2003) suggests the ideas of Marx centre on the economic structure of a culture and those with material means can be effective in influencing the consciousness of those within that culture. There are differing conditions and hierarchical formations of groups within and between societies (Larkin, 1978) and those in the dominant positions use power to reinforce subordinate behaviours of others using persuasion to act in this way at the same time reinforcing their own interests (Athens, 2010; Street, 1992).

The social aspects of being determine a human’s thoughts and beliefs in turn support dominant beliefs and patterns of social action. This notion provides a view of culture that critical researchers see as a tension between control and resistance (Thomas, 1993). Thomas suggests that critical research can uncover the social imbalances of control and power and determine the symbolic systems that are responsible for certain actions over and above others. In other words exposing the taken for granted ways of a group or society.

3.2.3 Concepts of Foucault

The work of French philosopher, Foucault (1926-1984), is central to issues of cultural and historical studies. There are three overarching themes of Foucault’s work: knowledge, power, and subjectivity. Foucault was interested in uncovering how power is exercised, rather than by whom and why, providing the notion that

knowledge and truth are determined by the way power is implemented in a particular historical period (Danaher, Schirato, & Webb, 2000). To explain these historical periods he used the term “episteme” (Danaher et al.). The episteme is a period of time that can be explained by certain discourses and world views and is symbolised by the rules, knowledge, activities and institutions of the world views of that historical period.

Foucault believed there were three main historical periods (epistemes) in the past 400 years (the Renaissance, the Classical, and the Modern) that were not fixed or unchanging and did not necessarily progress from one to the next but had very different world views (Danaher et al., 2000). According to Danaher et al. Foucault believed people from a certain time period and place possibly perceived life and made sense of the world in a very different way to how we perceive our world. He drew attention to the different epistemes believing the people of the Renaissance period understood their world in an interpretation of the world reflecting God and the divine. In the Classical period he relates the world view of the people aligning with the rise of science and in terms of nature (Danaher et al., 2000). Furthermore, Foucault suggests that in the Modern era neither life reflecting the image of God nor natural science were responsible for knowledge but rather that the way of knowing lies with humans (Danaher et al., 2000).

Foucault’s work emphasises how the practices and processes, ideas and interpretations of medical interventions and health and well being, one hundred years ago, differ from the way health and medicine are viewed today. Similarly, many of the practices and processes that have become embedded in the culture of radiation therapists were formed in the early years of radiation therapy. Foucault’s suggestions about the differing world views of people of each episteme provides a way to understand the tensions created between the culture of radiation therapists, modern radiation therapy and the current view of health and well being.

In his early years the work of Foucault was termed “archaeology” because of his interest in uncovering and exposing the events and the discourses that helped to shape the world views of societies and the explanations given to make sense of the world by the individuals of the societies. In later years Foucault’s research and

writing he termed “genealogy” which involved the exploration and analysing of the histories of truth, knowledge and power (Danaher et al., 2000).

The active use of language referred to as discourses is significant in the work of Foucault because he believed discourses and interactions assist meaning making and shape human beings’ understanding of their world. Individuals and their experiences combine with the setting or particular field within a culture that the individual actively participates in. These fields or settings have sets of regulated procedures, behaviours and positions linked with the activities occurring within them that also shape understanding and world views of the individuals (Danaher et al., 2000).

The regulated procedures of fields or settings is further explained in the fifth principle of Foucault’s (1998, p. 183) concept of heterotopias, “the real places” and “real emplacements” of spaces within society, providing greater understanding of the processes involved with the entrance and exit of spaces that are controlled by a group. The principle outlines the occasion when an individual is restricted in their access to a space and must perform certain rituals or behaviours prior to gaining access.

Foucault, according to Danaher et al., (2000, p. 48), argued that the understandings we have of our lives are determined by the notions, interactions, discourses and institutions that represent our culture. Behind these ideas of Foucault lie the possible reasons to look beyond the obvious and taken for granted ways of radiation therapists’ perceptions of their profession and their daily activities in the radiation therapy environment. Following Foucault, the world views of radiation therapists are shaped by the combination of their experiences and the cultural behaviours, practices and processes in the environment they perform their day-to-day activities.

The interactions between radiation therapists and cancer patients were explored through interpreting the culture of radiation therapists and this cultural framework enabled further interpretations of the interactions that took place. Social constructionism highlights culture as relevant in the way human beings view their world, and in this study provided an opportunity to explore and challenge taken for granted ways of thinking within the radiation therapy culture.

3.3 Theoretical perspective

A theoretical perspective refers to a concept or philosophy used to inform and position the research (Crotty 2003). The current research involved interpreting and making meaning of radiation therapists' culture to explore the constructed meanings of their world and how they have come about. This interpretivist position is recognised as appropriate within the epistemology of social constructionism (Crotty, 2003) and both Crotty and Burr (2003) indicate constructionism evokes an interpretivist position because meaning is constructed from interpreting the world that is the focus of the study (Burr, 2003; Crotty, 2003). This is based on the notion that meaning is constructed, rather than innate with human beings interpreting the events that occur in their world (Harris, 2010).

3.3.1 Tensions within the interpretivist paradigm

However, in taking a critical stance, Thomas (1993) suggests we take “a walk on the wild side” (p. 7) and challenge preconceived ideas and assumed meanings, and reveal the symbols within the culture that restrict alternative meanings. He also argues that there are social ideologies that guide us as researchers. What Thomas infers is that meanings and justifications for actions are pre-constructed, and as researchers we must be aware of these and be prepared to question our own preconceived ideas and actions as well as those of the participants under observation. Thomas's suggestion to look beyond interpretations of the obvious and interpret the meanings of the signs and symbols that restrict equality of the cultural members creates a tension within an interpretivist paradigm.

Weber (1864-1920), who is often associated with interpretivism, stated “interpretive sociology considers the individual and his action as the basic unit...” (Gerth & Mills, 1967). He put forward that in social sciences the main concern is “Verstehen” (understanding) (Crotty, 2003, p. 67), which contrasts with the focus on causality and explanation in natural sciences. It is important to understand the full extent of what the participants perceive their world to be and also to look beyond this and simultaneously gather understanding of hidden ideologies through interpretations of how the participants see themselves.

The current research draws on the definition Weber (1963) provides of sociology as “a science which attempts the interpretive understanding of social action in order thereby to arrive at a causal explanation of its course and effects” (p. 3), rather than, according to Crotty (2003), the views of Silverman who argues that interpretivism denies the understanding of culture in causal terms. This tension is further elaborated upon by Thomas (1993). He suggests critical research is both understanding and emancipatory, and seeks to expose the distorted meanings of a group to prevent misunderstanding, and simultaneously loosen the restraints on our “perceptions, interpretation, discourse and action” (p. 5).

The complexities of social constructionism are also central to the recent work of (Harris, 2010) who poses the argument that there are two types of social constructionism, interpretive and objective. He believes objective social constructionism (OSC) does not have its main attention on the creation of meaning unlike that of interpretive social constructionism (ISC) but instead OSC builds analyses on “real states of affairs” (p. 5). According to Harris this is achieved without any great attention to the meanings the participants attach to things. He adds, “Culture and interpretation may play a role in an OSC analysis but only in so far as these issues can be put to use in a more standard sociological account of what is really going on and why it is happening” (Harris, 2010, p. 5).

Despite the tensions and ambiguity that surround interpretivism, both interpretive and objective social constructionism are incorporated within this research and underpin symbolic interactionism, the theoretical perspective underlying this project. Symbolic interactionism was adopted as it provides an appropriate vehicle for exploring the interactions of radiation therapists and cancer patients in this study. Symbolic interactionism, as a theoretical perspective, is based on human beings making sense of their world with language, actions, interactions, communication, signs, symbols, attitudes and societal values (Crotty, 2003). The interactions of radiation therapists and patients are best explained within a symbolic interactionist paradigm as the central focus of the study is on interaction and communication.

3.3.2 Symbolic interactionism

Symbolic interactionism is based on ideas about the nature of human groups, human actions and interactions between people (Blumer, 1969). The term “symbolic interactionism” was coined by Herbert Blumer in 1937 (Blumer, 1969, p. 1) and has its roots in pragmatism, the philosophical stance first taken by Charles Pierce (1839-1914), and later by John Dewey (1859-1952), Charles Cooley (1864-1929), George Herbert Mead (1863-1931), and William James (1842-1910) at the Chicago University School of Social Psychology during the early 20th century (Hammersley, 1989).

Early last century Blumer was a student and research assistant of George Herbert Mead at the Chicago University’s School of Social Psychology and it is from these beginnings that Blumer modelled much of his work (Hammersley, 1989). Mead discussed the use of symbols in human communication and argued that the use of significant symbols is unique to human communication. These symbols, he stated, are used to express meaning with deliberate consciousness (Hammersley, 1989). According to Spradley (1979) any entity, item or occasion are symbols and in any human communication presentation of the individual and how they are dressed, body and facial expressions, and the words that are used in the interaction are all symbols.

According to Blumer (1969) symbolic interactionism is built on three principles. The first of these principles regards the actions human beings take towards things or circumstances depend on the meanings they have of those things or circumstances. The second principle takes the view that the meanings human beings attach to things or circumstances occurs as a result of the social interaction between each other. The final principle implies human beings, in their actions towards objects or circumstances, use an interpretive method to understand and adapt meaning to them. Hammersley (1989, p. 193) summarises these premises in this statement “Symbolic interactionism portrays the social world as generated by social interaction among people; interaction that itself produces, and is shaped by, participants’ interpretations of the world” .

3.3.3 Dramaturgical perspective

Erving Goffman (1922-1982), who attended the Chicago University School of Social Psychology in the 1950's, used a dramaturgical perspective to describe the social world and social interaction. It was during his years at the university that Goffman was influenced by Blumer and the work of Mead, and the interactionist perspective in sociology. Much of Goffman's work was based on the interactions of people and a variety of different communities using participant observation. Many of his discussions centre on the organisation of society and the organisation of institutions such as asylums (hospitals for people with mental illnesses).

Goffman introduced the study of face-to-face interaction and he used theatrical concepts such as actors and audience, roles and performances, props and back stage/front stage to articulate his ideas. He also proposed that, with the overt and covert nature of habits and rituals in everyday life, people act differently in different settings (Goffman, 1959). The roles individuals play in a setting Goffman named "front" and refers to it as a performance and suggests that the individual acts a part to convince the audience the act is real, and indeed the individual performing can also believe in his/her own act.

The differing roles people play, will depend on the setting and who the interaction is with or who observes the role being acted out (Goffman 1959). Goffman refers to the setting as "front stage" and the acted role can be either intentional or unintentional. The stage or setting where the performance takes place is usually static. For example, a hospital is geographically situated and the performers, health professionals, clerical staff and patients come to this place to enter into a daily performance. The performance comes to an end once the performers leave the building. There are exceptions to the static nature of the stage; one example is mobile blood donor clinics that travel around to different sites. However, despite the outer changing geographical location the workings and settings within these mobile clinics still support particular performances of the participants. Goffman uses the procession as an example of individuals engaging in a performance where the setting is not static. The recent English royal wedding of Prince William and Kate Middleton on April 29, 2011 is an exaggerated example of the fronts, pageantry and theatrical similarities that occur in daily life in a non-static setting.

In the current research the use of Goffman's theatrical concepts assisted in understanding the rituals and performances of the radiation therapists, and the interactions between radiation therapists and their patients. Goffman's work also led to the use of theatrical thematic names and subthemes presented in Chapter Seven. The use of theatrical concepts to describe and discuss the setting, the participants, and the performance captures the complexities of the radiation therapy stage, the radiation therapists and patients acting out their roles, and the importance of the scripts and cues that are used throughout the performance.

Goffman (1959) describes the idea of teams and performances; the performance can be given by one or more performers. Members of a team performance rely on one another for the performance to be acted out without disruption, and Goffman indicates that in this situation there is a "bond of reciprocal dependence linking teammates together". He also points out that this bond between team members allows the members to see a different front behind the scenes and a connection develops between the team players through this collaborative process (Goffman 1959, p. 89). Goffman's concepts enabled a deeper understanding of the intricacies of the teams and teamwork of radiation therapists in the daily activities within the radiation therapy setting and the impact of this on their daily interactions with patients.

The dramaturgical approach to research identifies roles and rituals in social life and endeavours to construct meanings from them. The theatrical explanations of Goffman are most suited to ethnographic studies and provide concepts that assisted this research in gaining an understanding of the face-to-face interactions of radiation therapists and their patients, the teamwork of radiation therapists, and the importance of the setting where the interactions occurred.

3.3.4 Symbolic interactionism and "tools" from Foucault

Symbolic interactionism is largely perceived as focusing on the micro aspects of social life and not positioned to deal with the macro-level of societal structure. This could be one reason why in recent years many nursing studies have turned to Foucault for direction to understand concepts of power/knowledge and time and space (Gastaldo & Holmes, 1999). Manias & Street (2000) suggest the use of a "toolbox approach" to address some of the challenges presented in a research

approach adopting both Foucault and critical social theory philosophical frameworks. The current research has taken up this notion and adopted Foucauldian concepts in conjunction with symbolic interactionism to understand some aspects around power and space issues of the observed phenomena.

Dennis & Martin (2005) argue that the criticisms made by some social researchers are wrong. They contest that symbolic interactionism has been wrongfully cast as unable to show concepts of power and inequality because of perceived limitations to the “micro aspects of social organization” (p. 191). They argue that symbolic interactionism has not neglected concepts of power within societies but has focused on power and the actions of people that uphold authority and control. The authors suggest the pragmatic roots of symbolic interactionism imply “that there is no such thing or entity as ‘power’ in a universal, transcendental, sense; moreover (and as Foucault concurs) all social relationships can be described in terms of their ‘power’ dimensions” (Dennis, 2005, p. 208).

In consideration of the argument put forward by Dennis and Martin (2005), the critical stance in this research used symbolic interactionism to gather a detailed understanding of the radiation therapist culture and daily activities with reference to Foucault in order to understand the relevance of time and space on hidden power relations of radiation therapists. Foucault (1995) discusses the relevance of the use of space and the partitioning of space in power relations in social circumstances. Foucault (1998) also draws attention to the rituals or procedures required to gain entry to a space controlled by a group of people. He suggests a group is defined by the space in which they are located and in being defined by the space a group can exercise power with controlled access to resources and knowledge (Foucault, 1995, 1998).

Foucault (1975) also provided an understanding of the biomedical model through his concept of the “medical gaze” (p. 10). The “medical gaze” is the term Foucault gave to the phenomenon where the focus of the medical profession becomes the medical condition or disease rather than the person with the medical condition. This is reflected in a similar manner by radiation therapists who focus their attention on the delivery of radiation treatment to the specific disease of cancer, and in doing so continue to embrace a biomedical model of health.

This thesis has adopted concepts of Foucault and Goffman because both of these theorists are concerned with institutions and the work and interactions that takes place within institutions; Foucault on a macro-social level and Goffman on a micro-social level (Hacking, 2004). Hacking (2004) points out that the theorists' concepts put forward about people, their actions and the space where the actions occur are not opposite but rather they complement each other. The two theorists provide a complete account of "making up people" according to Hacking (2004, p. 287). In his discussion about the complementary nature of the concepts of these two theorists, Hacking outlines how Foucault put forward ideas of actions and interactions explicitly linked to the constructs of institutions, referring to Foucault's perspective "from the top down". This perspective is complemented, according to Hacking (p. 288), by Goffman's perspective of "from the bottom up", referring to the approach Goffman used in his analysis of face-to-face interactions.

Hacking seeks to understand people from a sociological and an archaeological approach and draws on both Goffman and Foucault. The researcher has borrowed the approach taken by Hacking (2004) to understand the current research undertaken within radiation therapy settings. The concepts of both Goffman and Foucault are deemed appropriate because the study centres on radiation therapists and their agency including culture, work, and interactions that take place within radiation therapy.

3.4 Methodology

Methodology is the process and design underlying the methods chosen for a particular study, and it focuses on the most appropriate way of acquiring knowledge of the world (Denzin & Lincoln, 2005). The methodology is informed by a specific theoretical stance that situates and grounds the process. The theoretical stance of symbolic interactionism underpins many social research methodologies such as ethnography, grounded theory, phenomenology and historical research (Crotty, 2003).

Ethnography is used as a methodology in the study of cultures, and ethnographic principles have been, and continue to be, used to gain understanding in a variety of

health care and health service settings. Ethnography used to explore patients' perspectives and experiences of these services can provide valuable insight that may not be possible with other modes of research (DePoy & Gitlin, 1998; Savage, 2000).

The methodology of ethnography was the most fitting to answer the research questions of this study because ethnography is a methodology that is concerned with social life and the perceptions and meaning making of participants within a society. The ethnographic approach employs the researcher as the main research instrument who engages in fieldwork to collect data. The methods employed in ethnography enabled the collection of rich data about the culture of radiation therapists and the day-to-day activities within the radiation therapy environment.

Ethnography is often referred to as both a methodology and a method because of the iterative nature of the data collection and data analysis process (Brewer, 2000). The iterative nature of the ethnographic process also enables the researcher to gain a deeper level of understanding of a culture. Other qualitative methodologies would not enable the same depth of exploration of the culture nor provide an understanding of the interactions of radiation therapists in the same way. Ethnography necessitated the researcher to become immersed in the culture being studied and participate in social activities of the group to gain a deeper level of understanding of the culture. This required the researcher to undertake an extended period of fieldwork over seven months.

Hence, ethnography provided a fitting methodology to explore the culture of radiation therapists, and to discover the impact of the culture on the daily interactions radiation therapists enter into with patients and between themselves. The methodology of the current research is presented in this section with discussion of ethnography as the methodology informing this study, and the critical stance taken within the ethnographic approach.

3.4.1 Ethnography

Ethnography is a qualitative research methodology requiring the researcher to become immersed in the culture being studied. Hammersley (2007) describes ethnography as the study of the behaviour of people in natural circumstances with participant observation as the main method of data collection but there is flexibility

in the way the data is collected. An ethnographic study is generally focused on a small group of human beings and attempts to understand and construct meanings of the human actions and behaviour of the group.

Ethnography originated from classical social anthropology used to study culture and human behaviour with its roots closely tied to British colonialism and the need for Britain to understand the cultures of the people they conquered (Brewer, 2000). It has been used more recently in studies conducted in both health and education with considerable success. Ethnography in healthcare, particularly involving patients and clinicians, has encouraged the investigation of a variety of issues normally beyond the scope of other research approaches (see for example, Heslop, 2001; Manias & Street, 2001; Ogle, 2004; Penney, 2005; Street, 1992; Wellard & Street, 1999).

Ethnography is a methodology that can assist in the understanding of patients' and clinicians' experiences in the context that they occur, often in greater detail than is obtainable through other qualitative research methodologies or surveys and questionnaires (Savage, 2000). Recent doctoral studies have also successfully used ethnography to answer questions in a variety of areas of nursing including renal nursing, palliative care, intellectual disability and haemodialysis (Bennett, 2009; Greaves, 2005; Hardcastle, 2004; Paech, 2007).

Greaves (2005) explored the culture of three Australian palliative care settings to gather an understanding of palliative care. Conducting an ethnographic study, using observations and interviews, enabled an extensive descriptive account of the diversity and understandings of palliative care in Australia. Bennett (2009) used a critical ethnographic approach to explore the culture of a satellite renal unit and to investigate the perceptions of quality care of renal nurses within the unit. The study identified constraints in the nursing practice of this group of nurses, and revealed power and oppression embedded within the culture of the unit.

Despite the successful use of ethnography in healthcare, there is a lack of documented evidence of ethnography used in studies in radiation therapy. Ethnography was used for this research because it enabled in-depth observations of the interactions of the participants, and allowed the researcher to view the participants' world from the participants' perspectives. It provided the researcher

with a way of peeling back the layers of practices, places, people, and settings to reveal the underlying aspects of the culture that have sculpted the attitudes, beliefs, rules, and systems of the radiation therapists. This offered the researcher an opportunity to explore the historical and cultural influences that have impacted on the participants' interactions and perspectives to achieve a deeper level of understanding of the observations, and to challenge current practices and processes embedded in the culture.

3.4.2 Critical ethnography

Ethnography can be further distinguished as conventional or critical, with the latter being a specific analytical approach within conventional ethnography (Thomas, 1993). According to Thomas both these approaches share basic characteristics of the ethnographic method and analysis, the symbolic interactionist perspective and rely on a qualitative approach in the understanding and interpretation of the data. The distinguishing differences between the two lies in conventional ethnography describing “what is”, while critical ethnography goes further and questions “what could be” (p. 4).

According to Thomas (1993) although critical ethnography relies on adherence to a symbolic interactionist paradigm it also involves reflective processes involving value-laden judgements of the meanings to challenge taken for granted ways. The critical approach in ethnography is taken by those researchers, who by studying culture, wish to understand and change it. The critical ethnographer aims to create change by raising awareness and speaking out to others in an attempt to empower the participants. In this way the critical ethnographer attempts to use knowledge for social awareness and social modification or change (Thomas, 1993). Carspecken (1996) supports Thomas by stating, “those of us who openly call ourselves ‘criticalists’ definitely share a value orientation. We are all concerned about social inequalities, and we direct our work toward positive social change” (p. 3). However, despite stating all social research should be critical, the dilemma of value orientations in critical social research must also be considered according to Hammersley (1999).

The portrayal of doing or being critical in ethnography is in both action and principle, implying, as social action, the rethinking and recognition of taken for

granted ways of thinking (Thomas, 1993). Critical thought challenges the taken for granted ways, structures and circumstances that have not been created by the participants but have been given meaning to the participants through the culture of the participants (Thomas, 1993).

For example, Street (1992) used critical ethnography to explore and analyse the experiences of clinical nurses, providing insights into the daily realities faced by these nurses and making it possible for her to challenge the “power/knowledge” relationships within clinical settings. She identified the oral culture of the nurses and their use of practical knowledge in their daily work and the hierarchical power that undervalued these clinical practices. Another example is the work of Wellard and Street (1999) who explored and identified the issues families faced in the home-based dialysis care of chronically ill family members. A critical ethnographic approach using interviews and observations enabled the authors to understand the participants’ views within the context of the participants’ family culture; inclusive of the setting, the behaviours, social networks and individual strategies employed in adapting to home-based care. The study identified important issues of home-based care that included a lack of effective support from healthcare services, the assumed role of caregiver by the wives and partners of men requiring dialysis, and the lack of acknowledgement by the health care workers of the active involvement of wives and partners in daily management of treatment.

Critical ethnographers can embrace a number of different theoretical and epistemological perspectives but they all have a similar goal, which is to challenge predictable social ideas and situations (Thomas, 1993). In recent years ethnography has become an important methodology in health care both in its conventional form and in the use of a critical research approach. It was appropriate for this study to use a critical ethnographic approach that incorporated Foucauldian concepts to provide an understanding of the culture of radiation therapists, to explore interactions between radiation therapists and cancer patients, and to look at ways of improving and changing practice.

A critical ethnographic approach afforded the opportunity and the freedom to investigate other meanings to answer “what could be” (Thomas, 1993, p. 4). The approach, employed in this study, enabled the researcher to understand the impact of

aspects of the radiation therapists' culture on the interactions of radiation therapists with their patients. The knowledge gained from this study can be used to inform the profession and provide awareness for social change.

3.5 Method

Method refers to the procedures and processes used to collect and analyse the data of a research study. In ethnographic work a combination of participant observation and interviews are the methods most often used. Participant observation is a research method that refers to obtaining "first hand" understanding of the everyday activities of a group of people with the researcher being actively involved in these activities over a period of time. An outline of the methods used in ethnography follows and a detailed description of the methods employed in the current research is provided in the following chapter.

3.5.1 Participant observation

Research of a culturally distinctive group of human beings using participant observation is the "signature of ethnography" (Brink & Edgecombe, 2003, p. 1029). Participant observation refers to a method that requires the researcher as observer to participate in the daily happenings of those being studied. The reason for such closeness is for the researcher to not only observe what is going on but to experience and share in the daily practices of the people.

The challenge for the researcher using this method is being able to balance closeness to the people of the study while maintaining a certain distance that enables observation and data collection (Brewer, 2000). The ethnographic researcher carrying out studies within his/her own culture is often referred to as the insider/outsider dichotomy. This is based on how the researcher attempts to understand the natives' perspectives, as a participant observer, while not being a part of that culture (Bonner & Tolhurst, 2002; Gerrish, 1997; Hammersley & Atkinson, 1995).

Ethnographic research requires that the analysis is an ongoing process undertaken throughout data collection. The data collection and analysis is inclusive of human actions and behaviours so the actions of the researcher, as a participant observer, also

contribute to the research (Brewer, 2000; Hammersley & Atkinson, 2007). It is also important for the relationship between the participants and the researcher to foster feelings of ease, to ensure trust and rapport for the observations of the daily happenings to be as close to the truth as possible rather than the performances of the participants being heavily distorted by the presence of the researcher (Brewer, 2000; May, 2001).

3.5.2 Types of participation

There are many social circumstances where human beings are “ordinary participants” (Spradley, 1980, p. 53) taking part in activities that are familiar and require little thought or attention to the details of the doing of the activities. However, as the participant observer, the researcher intends to be involved in the activities as an ordinary participant. During the period of involvement in these activities the researcher also intends to observe and take note of what happens in these activities, who participates in these activities and the setting where these activities occur.

Spradley (1980) divided participation into five groups that created a broad array of the degree of participation by the researcher at any given time. These types of participation cover the level of involvement of the researcher and were labelled by Spradley (p. 58) as “complete”, “active”, “moderate”, “passive”, and “nonparticipation”. Complete participation is a level of participation that the researcher would achieve in a setting that they are already an ordinary participant and the extreme opposite to this would be the nonparticipant who does not actively engage with the participants of the activities being researched but, instead, observes from a distance.

Moderate participation is achieved when the researcher can uphold a level of participation and observation to balance the insider/outsider perspectives and this was the position the researcher of this study strove to maintain throughout the research. There was some temptation for the researcher to revert to being a radiation therapist in thought and action during this research, but this was balanced with the necessity to revert to being an outsider who could question the data (Gerrish, 1997). However, being a “marginal native” (Gerrish, p. 29), it was necessary to acknowledge the limitations it placed on the neutrality of the researcher’s observations and explanations, and it was also necessary for the researcher to

acknowledge that familiarity with the subculture assisted the establishment of rapport and trust with the members of the culture (Atkinson, 1994; Brewer, 2000; Crotty, 2003; May, 2001).

The perspectives of participants and informants can influence the positioning of the researcher (Rudge, 2002). In particular, the establishment of a close rapport with the participants can influence the researcher's interpretations of observations and discussions in the field. In order to reduce these effects, the researcher sought to gather more than one perspective and clarify what occurred during her observations with several key informants. These discussions with key informants changed the observations of the researcher into interpretations of the observations during documentation, reflecting similar experiences of Rudge (2002) in her ethnographic work.

3.5.3 Supplementary methods

Participant observation is central to the method used in ethnography and relies heavily on documenting observations with the use of field notes. However, the use of other methods to support and enhance data collection, are commonly employed. Some studies use interviews as the main source of data collection and observations are used to confirm and consolidate the interview data (Bennett, 2009). In the current thesis interviews with participants were used to add to the data, clarify observations and to test the validity of the data (Rice & Ezzy, 1999). The interviews used in ethnographic research tend to be semi-structured because the questions guiding the interviews depend on what is observed and the need for clarification of the observed events, activities and the meanings attached to them.

Some participants may also be informants providing additional insight by engaging with the researcher during the periods of observation, clarifying events and confirming interpretations. Other supplementary methods often used include non interactive sources such as the reading of documentation of rules, protocols, and procedures (Brewer, 2000). Photographs, posters and greeting cards, can also become invaluable supplementary sources that further support the data collection (Silverman, 2005).

3.5.4 Reflective practices

The nature of ethnographic work, no matter how the data are collected, requires involvement of the researcher with the participants on a personal level. Repeated thinking about the research and the researcher's involvement within the setting is another feature of ethnographic work. It is essential in "critical reflexivity" (Thomas, 1993, p. 46) to look at our own ideologies and the influence of these on our research, and to be mindful of the way the results of the study are presented because of the possible social implications the findings of the research might present.

Thomas (1993) highlights the use of a reflective journal as an important part of the research process. In addition, the recordings of a researcher's reflections are necessary because the nature of the data collection and analysis process of ethnography is iterative and fieldwork is usually conducted over extended periods of time. The continual thinking and rethinking during this study often compounded with the "untidiness" of the data collection and analysis and therefore recording the reflective process in a reflective journal became an important part of the research methods employed in this research.

3.6 Summary

The position of this research has been outlined to enable the reader to have a clear picture of how the current research was undertaken and why the research stance was taken. Ethnography has been presented as an appropriate way to study the culture of a group of people and ethnographic approaches have been used increasingly in health and education research in the past two decades. The sequence of the decisions made has been outlined using the four basic elements of research (Crotty, 2003): world view of constructionism, the interpretive theoretical perspective of symbolic interactionism, the methodology of critical ethnography, and the main method of participant observation.

Critical ethnography was chosen because it provided a way of exploring and examining cultural aspects of the radiation therapists' work settings and interactions and to understand and reveal the hidden taken for granted ways of their daily practices and processes. A variety of research methods are used in critical ethnography to address the issues of a critical approach; this ethnographic research

used symbolic interactionism to explore the interactions of radiation therapists and looked to Foucault to understand power and space phenomena. This chapter outlined the main methods associated with ethnography that are espoused by Spradley (1980), which were employed in this research. A detailed description of the methods used for this research is provided in Chapter Four. The research process is outlined and details of the setting, the participants, ethical considerations, data collection, data analysis, and rigour are given. The chapter concludes with reflections of the researcher.

4. Tackling the Terrain

Research Process

“As researchers, we have to devise for ourselves a research process that serves our purposes best, one that helps us more than any other to answer our research question” (Crotty, 2003, p. 216).

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4.1 Introduction

The previous chapter gave an overview of the positioning of this research using Crotty's (2003) four categories of: the epistemology, the theoretical perspective, the methodology, and the methods used. These were outlined to provide clarity for the reader and reasons were given for using a critical ethnographic approach to gain an understanding of the culture of radiation therapists and to explore the interactions of radiation therapists and cancer patients.

This chapter presents the procedures involved in the research process and gives an overview of the study design and setting and a detailed account of the participants. Ethical considerations are also discussed followed by the processes put in place for data collection and data analysis, and details of rigour consistent with the research approach taken are given. The chapter concludes with reflections of the researcher and an account of her role as the research instrument.

4.1.1 Overview of study design

A critical ethnographic study design was chosen to gain an understanding of the culture of radiation therapists (RTs) and the radiation therapy environment, and to explore the interactions between radiation therapists and patients with cancer. Fieldwork was limited to the treatment areas of each setting. The interaction between radiation therapists and patients happens on a daily basis in the treatment areas so it was deemed appropriate to focus on observations in this area.

Settings:

- Radiation Therapy treatment area (Lower Level Two), Peter MacCallum Cancer Centre, East Melbourne, Victoria.
- Radiation Therapy treatment area (FS Hone Wing), Royal Adelaide Hospital, Adelaide, South Australia.

Participants:

- Patients with cancer undergoing radiation therapy treatment at PMac or the RAH
- Radiation therapists
- Senior nurses & administration staff

Methods:

- Participant observation (fieldwork)
- Interviews to inform observations
- Supplementary sources (e.g. document reading, meeting attendance)
- Reflective journaling
- Group interviews

Data were collected over a period of seven months of fieldwork; this included six months at the Peter MacCallum Cancer Centre (PMac) and one month at the Royal Adelaide Hospital (RAH) in 2009. In addition to the fieldwork, four group interviews were conducted at the completion of the fieldwork in the period April-June 2010. The diagram in Figure 2 outlines the sources of data that were used for data collection and analysis with the number of participants indicated in parentheses.

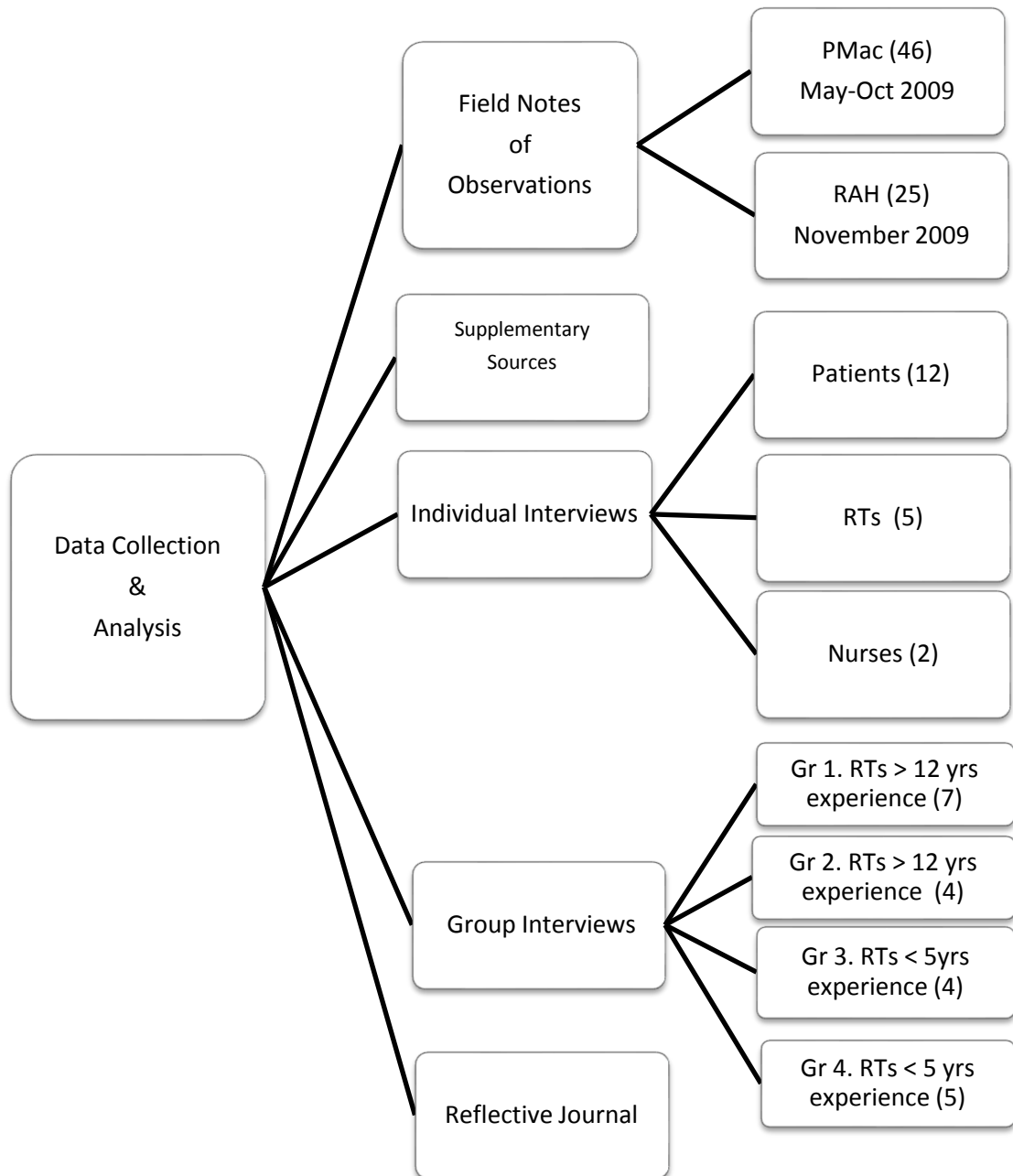


Figure 2 Sources of data collected and analysed
(The number of participants is indicated in parentheses)

4.2 The setting

This study was undertaken in the treatment areas of two large public metropolitan radiation therapy centres in Australia. The first site was Peter MacCallum Cancer

Centre (PMac) East Melbourne, Victoria, a specialised centre in the treatment of cancer that offers a range of services including radiation therapy. The radiation therapy department of PMac is on several levels of the building. The treatment areas consist of six treatment units (each unit equipped with a treatment machine called a linear accelerator) on one level two floors beneath the ground level.

A second site was chosen to enable clarification of the cultural aspects of radiation therapists and to distinguish these aspects from the inherent cultural aspects of the PMac setting. The second site used in this study was the Royal Adelaide Hospital (RAH) radiation therapy department located in the north east corner of the RAH North Terrace campus, Adelaide, South Australia. The radiation therapy treatment area is a single story building attached to the East Wing and is home to five treatment units (each one equipped with a linear accelerator) and a brachytherapy room.

Both departments were open Monday to Friday between 8:00 a.m. and 6:00 p.m. and PMac also provided some Saturday treatments. The majority of patients attending each centre were outpatients with a small number of inpatients also receiving treatment. Each treatment unit (linear accelerator) had an average of between eighteen and thirty patients scheduled for treatment on any given day (on days when more than 30 patients were scheduled the department's opening hours were extended) and each treatment unit was staffed with a minimum of four radiation therapists of various levels and years of experience.

These settings are discussed in greater detail in Chapter Five where the context of the study is given.

4.2.1 Entering the field

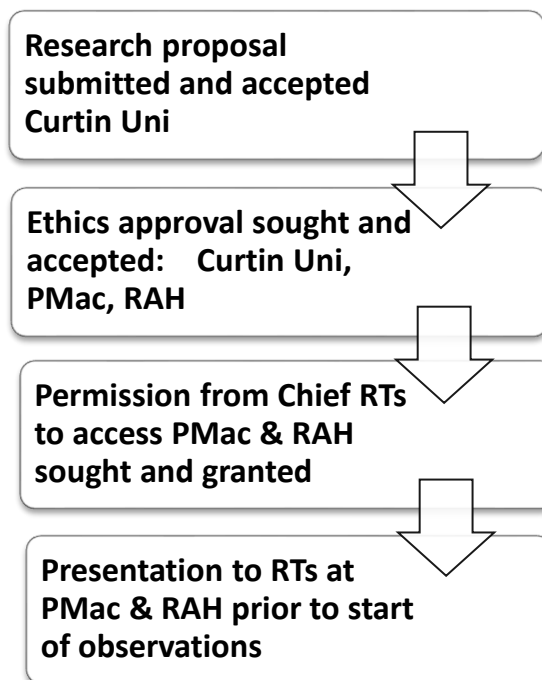


Figure 3 The process of gaining access to the field

Before gaining access and entering the field, I applied for approval from the Curtin University Human Research ethics committee, the Peter MacCallum Expedited Review Committee (sub-committee of Peter MacCallum Ethics Committee) and the RAH Research Ethics Committee (see section 4.4). Prior to, and after ethics approval was granted by the hospital ethics committees, I telephoned, emailed, and met with the chief radiation therapist of each site to discuss my research intentions and to gain their support.

One requirement of each site was the appointment of a senior staff member to act as a clinical mentor to me because I was not an employee. Another requirement was the presentation of the proposed research to the radiation therapists of each site prior to entering the field. An orientation tour of each site was also arranged with the selected clinical mentor prior to my entrance into the field (Merchant, Halkett, & O'Connor, 2011).

4.3 Participants

4.3.1 Selection criteria

4.3.1.1 Observations: radiation therapists.

Radiation therapists working on treatment units M3, M5, and M6, (PMac) and TS1 and TS3 (RAH) during the seven month period of fieldwork were purposively selected to participate in the study. Decisions to observe the day-to-day activities on these particular treatment units were based on discussions and negotiation with the researcher's appointed clinical mentor at each site. All consented radiation therapists were observed and took part in informal talks.

4.3.1.2 Observations: patients.

Patients undergoing radiation therapy on the treatment units (M3, M5, M6, and TS1 and TS3) were selected according to the ethics approved criteria of undergoing a course of radiation therapy, to be over 18 years of age and have a good understanding of English with no obvious cognitive impairment. The treating team of radiation therapists also guided the selection process by indicating the patients who were not suitable to participate (e.g. patients in severe pain).

4.3.1.3 Individual interviews: radiation therapists.

Four PMac radiation therapists and one RAH radiation therapist participated in semi-structured formal interviews. These radiation therapists were selected because they were working on the treatment units under observation during the period of fieldwork and provided a range of perspectives about the day-to-day activities (e.g. part-time/full-time, male/female, newly qualified/many years of experience).

4.3.1.4 Individual interviews: patients.

Thirteen of the patients who consented to participate in observations were invited to participate in interviews. These patients were selected because they could provide a range of perspectives about the treatment experience of radiation therapy. One patient initially consented but later withdrew. Four of the remaining 12 participated in informal interviews because side effects of the treatment severely challenged their ability to speak for long periods of time. The remaining eight patients, including the wife of one patient participated in formal semi-structured digitally recorded interviews.

4.3.1.5 Other healthcare team members.

Two senior nurses and two administration staff, based in the radiation therapy treatment areas, were selected during fieldwork because they provided valuable data, such as their perceptions of the work and the interactions that involve radiation therapists, through informal talks, and interviews.

4.3.1.6 Group Interviews: radiation therapists.

Purposeful sampling was used to select radiation therapists in Victoria and South Australia to participate in four group interviews between April and June 2010 after the completion of fieldwork. Selection for participation was based on willingness to participate, and the participant having either more than 12 years of radiation therapy clinical experience or less than five years radiation therapy clinical experience. These interviews were conducted to ascertain a range of perspectives about the culture; including the history of radiation therapy, previous roles of radiation therapists, current practices and future aspirations of radiation therapists.

4.3.2 Recruitment

4.3.2.1 Radiation therapists.

Letters of invitation and participation information sheets (Appendices E & I) were given to each radiation therapist working on the selected treatment units. I discussed the study with each radiation therapist individually, returning a few days later to confirm and collect written consent from those willing to participate (Appendices G & K).

4.3.2.2 Patients.

Strategies used for recruitment of patient participants were the same at each field site. The radiation therapists were asked to assist in recruitment by informing the patients of my presence within the department prior to the distribution of the participant information sheets. Direction from the treatment unit radiation therapists was sought to indicate those patients who were not suitable to invite to participate (e.g. patients in pain, with breathing difficulties, with a high level of anxiety). Although a call back system was clearly explained on the information sheet the distribution of the information was followed up by the researcher in person.

Collection of the consent forms was also completed by the researcher with no assistance from the radiation therapists or other staff. This strategy was employed to lessen any impact on the daily activities and work load of staff. This strategy was also used to ensure patients were happy to participate and so that it was not seen by the patients as a necessity to participate.

The patients invited to participate were given an information sheet (Appendices F & J) explaining the details of the study with emphasis on the voluntary nature of the participation. A separate consent form (Appendices H & L) was used to obtain written consent prior to observing their treatment and before the researcher entered the treatment room.

4.3.2.3 Members of the healthcare team.

During the period of fieldwork some aspects of the role of nursing in radiation therapy required further investigation because the relationships between the nurses and the radiation therapists were not clear and nor were the roles of the nurses within the treatment areas. One senior nurse at each site was invited to participate in an interview. Two administration staff were also recruited and invited to participate in the observations as informants because they provided insight into the appointment systems used, in particular the appointment making process and the importance of time management within the radiation therapy department (Information sheets and consent forms are shown in Appendices E, G, I and K).

4.3.2.4 Radiation therapist groups.

Recruitment for the group interviews consisted of individual invitations by telephone call or email extended to radiation therapists, known of or known by the researcher and principle supervisor, through professional connections within radiation therapy and the Australian Institute of Radiography (AIR). (Information and consent forms are shown in Appendix M).

4.4 Ethical Considerations

4.4.1 Ethics approval

Prior to commencing the research, approval was sought and received from the Human Research Ethics Committee at Curtin University [HR 164/2008] (Appendix

A) and the Ethics Committees of the Peter MacCallum Cancer Centre [E 08-09] (Appendix B) and the Royal Adelaide Hospital [protocol no: 090905] (Appendix C) in accordance with the National Statement on Ethical Conduct in Human Research of the Australian National Health and Medical Research Council (NHMRC) (National Health and Medical Research Council, 2007). Ethics approval was given by the Human Research Ethics Committee at Curtin University [RD-13-10] (Appendix D) for the group interviews held between April and June 2010.

See Appendices E to M for copies of all invitations to participate, information sheets and consent forms.

4.4.2 Risk management of participants

Confidentiality and anonymity issues were discussed with all participants prior to observations and interviews taking place. All participants were informed that the storage of the data would be held in a password protected file on the personal computer of the researcher and paperwork kept in a locked filing cabinet away from the radiation therapy centre with all participants de-identified.

All patient participants were advised to contact the researcher or their radiation oncologist if they had any questions about the study, if they felt uncomfortable or if they became distressed as a result of the study. Radiation therapist participants and other healthcare team participants were made aware of available services should the study result in distress at any stage.

Throughout the observation periods vulnerability of the participants was of utmost concern. Attendance of the researcher within the treatment room, in the presence of both radiation therapists and patients, was indicative of those who had consented to participate. Participant confidentiality was kept as best was possible under these circumstances. Both pseudonyms and alpha numerical coding were used in field notes and transcriptions to conceal identities of all participants so identities would remain anonymous despite identification of the centres and the treatment units. It was anticipated that no individual would experience harm or discomfort as a result of this research. There were no ethical deviations and all participants were comfortable with procedures.

4.4.3 Data storage

Throughout the study participant data was kept by the researcher; the hard copy data in a locked filing cabinet and any electronic data in a password protected file on a personal computer and personal external hard drive. On the completion of the study all data were moved to the WA Centre for Cancer and Palliative Care at Curtin University, Shenton Park campus to be securely stored for a period of not less than five years.

4.5 Data collection

The main mode of data collection consisted of field notes and was supplemented with individual formal semi-structured interviews, informal talks, key informant information and supplementary sources such as documents of protocols and team meetings. After fieldwork was completed four group interviews were held to confirm and add to the data.

4.5.1 Field notes

Field notes of observations of radiation therapists' daily activities were taken over a period of six months at PMac and one month at the RAH (a total of 266 hours of fieldwork). Descriptions and condensed notes of observations, taken while in the field, were recorded noting exact phrases and words used. Small notebooks were used to keep this record and entries made often throughout the day (Spradley, 1980). As it was not always practical to take extensive notes at the time of observation, specific descriptive words and diagrams were used to prompt recall of the observed happenings (Emerson, Fretz, & Shaw, 2001; Rice & Ezzy, 1999). This is a common practice in ethnographic studies (Spradley, 1980). Fieldwork generated large volumes of field notes and these notes assisted in the accurate reconstruction of the observations away from the field. The notes were expanded as soon after the observations as possible either in the evening or on the following day of observation (Emerson et al., 2001; Spradley, 1980).

4.5.2 Interviews

Interviews were conducted to provide greater understanding of observations, to confirm actions and happenings, and to answer questions arising from observations

of specific situations. Interviews with patients, radiation therapists and other healthcare team members provided a number of different perspectives to assist in interpreting the observations. Interview guides composed of questions that arose from the observations were used (see Appendices N, O and P for more detail).

Both informal and formal interviews were conducted in this research. Informal interviews occurred throughout the periods of observation when the researcher found an opportunity to ask questions while engaged in conversation with one or more participants. For example, during observations the researcher noticed the glass doors of M5 remained closed throughout the day but on M3 one remained open. To understand what was behind the different positioning of the doors the researcher raised questions during a conversation with one radiation therapist.

In contrast, formal semi-structured interviews, using an interview guide based on observations, were conducted at predetermined times with selected participants. These interviews were conducted in a quiet room away from the treatment units and other patients.

4.5.2.1 Radiation therapists and members of the healthcare team.

Consenting radiation therapists and two senior nurses who were formally interviewed were given the option of being digitally recorded. The interview guide used is provided in Appendix N. For those who preferred the interview not to be digitally recorded written notes were taken and transcribed immediately after the interview took place. A copy of the transcript was provided to each health professional participant to confirm the content of the interview. The digitally recorded interviews were transcribed verbatim by a professional transcriber. Alpha numerical coding was used initially and later changed to pseudonyms to de-identify the interviewees.

4.5.2.2 Patients.

A sample of patients who consented to be observed was asked to also consider participating in an interview. The interview process was discussed in person and prior to the interview informed written consent was gained in addition to the written consent previously given for participation in observations.

All patient interviews were digitally recorded unless the patient requested otherwise. I did not actively seek to provide transcripts to the participants but I discussed this with each patient and verbally acknowledged that any request for transcripts would be honoured and negotiated with the individual participant. Interviews were led by an interview guide (Appendix O) that resulted from the observations. However, the interviews were also inclusive of the patients' experiences and their personal stories which provided a large amount of data. Pseudonyms were given to maintain confidentiality of the interviewees.

4.5.2.3 Group Interviews.

Interview guides, resulting from both the observations and the data analysis, were used by the researcher to direct the group interviews (Appendices Q, R and S). Group interviews were digitally recorded and transcribed verbatim by a professional transcriber. At each interview notes were also taken by an independent radiation therapist to ensure all details were captured. Participants were given pseudonyms to ensure confidentiality was maintained.

4.5.3 Informal talks

During my visits I often had informal talks with the radiation therapists, consented patients, nurses and administration staff. Informal talks with observed participants are considered a usual part of the participant observation role of the researcher (DePoy & Gitlin, 1998, p. 212). The contents of these conversations were written down from memory and from impressions as field notes in a note book as soon as it was practical. These talks provided greater understanding of observed phenomena and assisted the continual refining and readjustment of the focus of the study.

4.5.4 Key informants

Informants in this context were people who actively informed the researcher about the context and the cultural roles of radiation therapists (DePoy & Gitlin, 1998). There were five PMac radiation therapists and four RAH radiation therapists who acted as informants and assisted greater understanding of what was happening in certain circumstances throughout the observation period. These informants provided information to the researcher of particular observed processes and practices, and

answered questions about a variety of daily activities to confirm the observations, enabling the occurrences to be viewed in a less individually subjective way (Spradley, 1980). These informants engaged in informal talks with the researcher, which added to and queried conclusions of the data that had been collected through the observations.

Two administration staff also acted as informants and provided information of the appointment systems and other processes involved in the daily activities of the setting.

4.5.5 Supplementary sources

Supplementary data sources in ethnographic research are sources of data such as documents, posters, flyers, minutes of meetings, photos or any other source that can assist in greater understanding of the culture (Hammersley & Atkinson, 1995). Access to a variety of documents such as meeting minutes and documentation of practice regulations was readily available for analysis. Some of these documents were familiar to me as an affiliated employee of PMac with weekly newsletters and updates emailed to me regularly. I made note of relevant information from documents within the field notes or within my reflective journal. In this study, greeting cards conveying thank you messages from past patients also supplemented the data.

4.5.6 Reflective practices

An observational researcher can benefit from keeping a record of feelings, opinions, and ideas that occur throughout the length of the research to enable clarity of thoughts and to exercise critical thinking and reasoning skills (Rice & Ezzy, 1999). Reflective practice is important because ethnography requires the researcher to be involved with the culture or group being researched, and reflexivity and reflection assists the ongoing data analysis, particularly the contribution that comes from the presence of the researcher within the field (Thomas, 1993). The use of reflection provides an avenue for repeated thinking about the research and through this process the researcher can develop a greater awareness of how knowledge is created (Thomas, 1993).

Keeping a reflective journal provided an avenue to vent, to discuss relationships, and offer reflection of what was actually occurring and what was not happening as anticipated (Malacrida, 2007). In the unique position of marginal native, feelings, in particular those of discomfort, were also noted because of the potential to contribute to the interpretations of what was observed (Gerrish, 1997). According to Brewer (2000) “reflexivity” is an important element and that “in the absence of reflexivity, the strengths of the data are exaggerated and/or the weaknesses underemphasized” (p. 43) which highlights how the importance of keeping a record of these reflections is a significant aspect of the research process.

The reflective journal assisted the researcher in the reconstruction of the field experiences and helped in making meaning of the research in its entirety. As distance did not allow for frequent face-to-face consultations with my supervisors, journaling, in particular, was of great benefit for reflexivity and provided a structured record of my part within the research process and assisted ongoing critical analysis of the study (Malacrida, 2007; Merchant et al 2011).

4.5.7 Leaving the field

Leaving the field incorporates two actions of “closure”; the physical removal of the researcher from the field and the emotional detachment from the bonds formed with the participants (Brewer, 2000). Withdrawal from the field at PMac was not difficult because of my employment at an affiliated site. I provided morning tea for the radiation therapists and presented my initial findings at an early morning meeting to thank the participants and mark my exit from the site.

My withdrawal from the RAH was accomplished in a similar manner with morning tea provided for the radiation therapists and a presentation given of the initial findings at the radiation therapists’ staff meeting. This was followed by a short debrief of my time at the RAH with the chief radiation therapist.

4.6 Data analysis

The nature of participant observation requires ongoing analysis throughout the data collection phase (Spradley, 1980). This analysis assisted the focus of the

observations and enabled the development of questions and further probing. It stimulated the researcher to re-enter the field to seek further clarification.

Data analysis started from the first entrance into the field. It set in motion a cyclical pattern (Spradley, 1980) of immersion into the culture then withdrawal to transcribe followed by further observation and again withdrawal to transcribe, collate and analyse the data; a natural development of this type of research (DePoy & Gitlin, 1998). The process ensured that the focus of the observations to narrow and change and provided confirmation of the emergent themes.

The three stages of raw data familiarisation, theme charting and data interpretation are depicted in Figure 4. This process was repeated throughout the period of fieldwork and again after the group interviews.

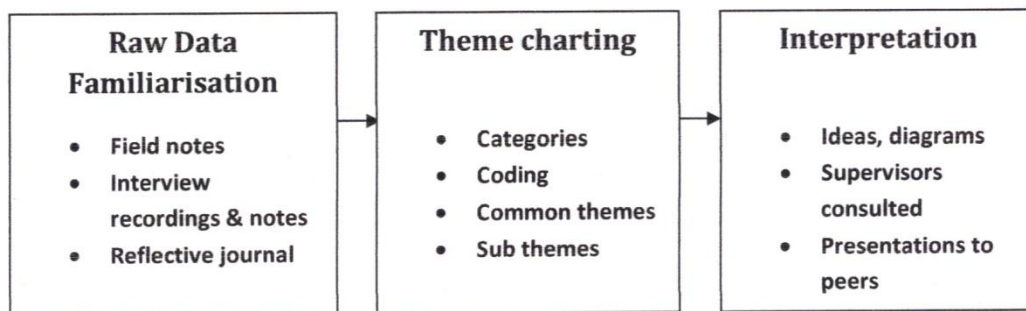


Figure 4 Stages of raw data familiarisation, theme charting and interpretation

Once the data collection phase was completed data analysis was required to continue to further sort, refine and make sense of the raw data (Holliday, 2007). Construction of an analysis framework with the three main steps of familiarisation of the raw data, theme charting, coding, and identifying subthemes, and interpretation was used to analyse the data (Emerson et al., 2001; Holliday, 2007; Thomas, 1993).

4.6.1 Familiarisation

Many hours spent in the field provided an opportunity to become very familiar with the setting, participants and the daily life of the radiation therapists. The documenting of observations and impressions after each visit also assisted familiarity and the ability to recognise recurring themes. Observations began with the overall

setting but as the weeks passed different events changed the focus of the observations from wider, broader observations to that of a more focused, narrower view.

Each visit the focus of the observations would depend on the previous visit and subsequent field notes and documentation. The process of documenting the observations was in itself a form of analysis because it set the path for the next visit; the process that Spradley (Spradley, 1980) refers to as the ethnographic research cycle.

Reading and rereading of the notes and transcripts of field notes and interviews assisted familiarisation with the raw data. This step in the process also assisted the preliminary analysis of the data and the narrowing of the focus of each subsequent visit.

4.6.2 Theme charting

Broad themes emerged as a result of the ongoing process of data collection and analysis in conjunction with entrance into and out of the field. These themes guided further observations at each visit and were identified by similar actions, events and interactions. These themes also guided the questions used in the interviews, and further clarification which was sought through informants and informal talks with participants.

The broad themes identified during the data collection phase of the study provided a starting point to look for subthemes (Emerson et al., 2001). In an attempt to make sense of the data, charts were drawn to understand and interpret much of the field notes and transcriptions. Categories were first identified by searching for common themes among different events and experiences and required associating specific happenings to more general groupings and issues (DePoy & Gitlin, 1998; Emerson et al., 2001).

Different pieces of text were recorded on a large drawing pad within a number of columns. This process became cumbersome and inefficient so an electronic version of a cut and paste method was adopted to place the data into categories. Rather than printing many copies of the documented data a copy and paste system was used on a personal computer (DePoy & Gitlin, 1998). This allowed large sections of written

material to be handled and also enabled the process to be repeated to create categories and subthemes.

Sorting through the data pasted under each theme enabled rethinking and reshuffling of the data into the subthemes of disease, technology, teams, tasks, time/space, and interaction/communication. This phase of the data analysis was completed in a similar fashion to the previous phase with highlighting, cutting and pasting, and the merging of pieces of data. Line numbers and alpha codes were given to field note documentation and transcriptions of interviews to assist sorting into groups of relevant material (Emerson et al., 2001).

Throughout this process notes were made of any thoughts and ideas that came as a result of the data sorting. Reflective journal entries were also continued to capture new thoughts, ideas and to assist critical reasoning. Weekly telephone meetings with supervisors incorporated discussions about the data in this stage of analysis and added different perspectives for further thought and deliberation. This process also provided an audit trail.

4.6.3 Interpretation

The final step in the analysis process required becoming defamiliarised with the data to critically interpret the data (Thomas, 1993). Defamiliarisation is the processes of amending what the researcher has perceived and to discover different ways of interpreting or making sense of the data. The defamiliarisation process involved stepping back from the taken for granted aspects and generalisations, and looking at the data through a critical lens to explore and question at a deeper level (Thomas, 1993).

Once data collection was completed, reading and rereading of field notes and transcriptions was undertaken (Emerson et al., 2001). Reading through the raw data in its entirety provided an opportunity to see the data from a different perspective, enabling de-familiarisation to gain a more critical approach to the data analysis.

Throughout the research process I had regular meetings with my supervisors (a senior research fellow who is also a qualified radiation therapist; a senior research fellow with a background in psychology; and an experienced ethnographer with a

nursing background) to discuss my analysis and interpretations. They provided feedback on my ideas, diagrams and perspectives further adding to the analysis process and the critical focus. Valuable feedback and debate was also provided by peers and colleagues.

4.7 Rigour

Rigour is a combination of strategies used to ensure the strength of the study. Qualitative research adopts the concept of trustworthiness in contrast to the traditional approach of reliability and validity that is used in quantitative research (DePoy & Gitlin, 1998; Guba & Lincoln, 1989; Lincoln & Guba, 1985; Murphy & Yelder, 2010; Whitemore, Chase, & Mandle, 2001). Lincoln and Guba (1985) suggest that the concept of trustworthiness is established by means of “credibility, transferability, dependability and confirmability”. There were several processes incorporated within this research to ensure the establishment of trustworthiness of the study and are explained using the four parts that combine to form the concept of trustworthiness.

4.7.1 Credibility

Credibility of the data was established by asking informants to verify observations and descriptions (Fetterman, 1989; Rice & Ezzy, 1999; Spradley, 1980). Continual consultation with supervisors, and feedback from presentations given to colleagues, peers, and academics at a number of conferences and meetings provided valuable peer debriefing and added to the credibility of the study (Murphy & Yelder, 2010).

The iterative nature of the ethnographic process itself also added to the credibility of the study (Greaves, 2005). It is also important for the researcher to recognise the effect they have on the analysis and the presentation of the data. I kept a record of feelings and attitudes in a reflective journal throughout the course of the study because reflection around the social procedures that imposed upon and influenced data is part of the reflexive practice undertaken as an ethnographer (Brewer, 2000). Reflective journaling provided an audit trail because it enabled the process to be transparent with any influence that I had on the study being documented and included as part of the research outcome.

Triangulation involves verifying data by using more than one source (Farmer, Robinson, Elliott, & Eyles, 2006; Mathison, 1988). The use of interviews, informants and reading material provided several sources to verify the observational data obtained. Triangulation is described by DePoy and Gitlin (1998, p. 313) as “use of multiple strategies or methods as a means to strengthen the credibility of an investigator’s findings related to the phenomenon under study”.

In addition to the methods outlined, a strategy was employed to use a second radiation therapy site to confirm the emergent radiation therapy/therapist cultural themes to further strengthen the credibility of the study. This strategy provided the opportunity to distinguish the differences, through comparison with the RAH, of the culture of PMac, and the culture of radiation therapists in a radiation therapy centre.

4.7.2 Transferability

Transferability of the study refers to the findings of the research continuing to have the same meaning when applied to a new but similar context. The setting, methods and sources of data collection and the data analysis of this study have been clearly described. The focus of the research was based on two radiation therapy settings. However, clear description of the research process will enable other researchers to make their own decisions on the transferability of the results and generalisation of the study findings. Documentation of each decision and detail that contributed to the “doing” of the research further supports transferability and adds to the trustworthiness of the study (Murphy & Yelder, 2010).

4.7.3 Dependability

Dependability is similar to the concept of reliability in quantitative studies. Dependability of this study has been established because a clear and logical outline of the theoretical perspectives and strategies, used in the research process, has been given enabling other researchers to follow the process and arrive at similar conclusions (DePoy & Gitlin, 1998). A clear audit trail was achieved through documentation and record keeping of all forms of data, notes, and reflective journaling.

4.7.4 Confirmability

Confirmability was accomplished through the clear description of the research positioning and process used in this study. The interpretation of the data was also consistent with the participants' perspectives, achieved by involving participants, peers and colleagues in the interpretations of the data and the data analysis. Both the dependability and confirmability of a study is achieved with a high degree of auditability. A documented decision trail was kept to indicate the stability of the data over time and the consistency of the methods and procedures drawn on to assure the dependability and confirmability of the study (Lincoln & Guba, 1985, 1986; Roberts & Taylor, 2002). However, it is likely other researchers will provide an alternative interpretation based on different critical points of view because of the critical nature of the study.

4.8 Researcher reflections

The key research instrument in ethnography is the researcher (Brown, 1983; May, 2001). This qualitative research approach requires the researcher to become immersed in the culture being studied. Ethnographers collect data by actively participating in the social environment that others have already made sense of and understand (May, 2001). As such the researcher is an active participant of the culture of interest, observing the everyday happenings and experiences of that culture, while remaining transparent in relating how this participation affects and is affected by the presence of the researcher (Hammersley & Atkinson, 2007).

As the main research instrument, the perspectives of the researcher are an important consideration within the study. According to learning theorists such as Mezirow and Cranton, (Cranton, 1994; Mezirow & Associates, 2000) self as an influencing component depends upon a unique combination of family and culture, religious/spiritual beliefs, education and professional training, friends and social environment, as well as previous knowledge in the area. A prologue is included at the beginning of this thesis clearly outlining the perspectives that have influenced and shaped the researcher's (my) world view. The intention is to inform the reader from the outset of the biases of the researcher and to give the reader an opportunity to understand how the study has been situated.

4.8.1 Marginal native

Observations at the principle site took place over prolonged periods of time (181 hours) so the setting became very familiar and I often grappled with the insider/outsider dichotomy. During the weeks spent observing and talking with the staff it became harder to feel an outsider because I spent considerable amounts of time over coffee with radiation therapists away from the treatment area. This usually occurred during the scheduled breaks of the radiation therapists but I was also given several invitations to lunches and other social gatherings.

These events provided further insight into the everyday world of the participants but my attendance also strengthened the temptation to become totally immersed in the natives' world. However, the ethnographic process is a series of immersions into the field and then leaving it to analyse the data, with the intention of refining the focus, so it is important the researcher strives to maintain a balance between these two worlds (Brewer, 2000; Gerrish, 1997). The process of immersion into and leaving the field combined with reflective practices assisted me in maintaining a balance between the insider/outsider positioning throughout the research process.

4.8.2 Building rapport

At the start of my entrance into the field I felt apprehension from the treatment teams I was observing but as I got to know each individual radiation therapist, the barriers lifted (Brewer, 2000). I intentionally dressed in similar coloured clothing as the uniforms worn by the radiation therapists and wore my university ID on a lanyard in a similar way to how ID badges were worn by the radiation therapists.

This strategy helped to assimilate me with the environment and become less obvious as an outsider (Brewer, 2000; Holliday, 2007). I introduced myself to each individual radiation therapist when they appeared to be unoccupied with work, briefly explaining my presence and the study. I also made a point of remembering each person's name to further encourage good rapport.

While undertaking this initial stage I was acutely aware of the importance of my decision making. The way rapport was established was a major factor that could

influence the doing of the project (Holliday, 2007). One strategy I undertook was taking time to build rapport with the radiation therapists by spending some time away from the treatment area with them having coffee and chatting about our personal lives.

I was eventually allowed access to the treatment units at any time, validating the strategy of taking time to build a solid rapport, and indicating that this approach had worked. I was aware that this could also have been partly due to being a radiation therapist rather than someone from an unrelated healthcare background. The interactions I had with the participants were also documented because I was the research instrument and in this position I could also impact on the outcomes of the observations. Patient participants often chose to talk with me and, although I had made it clear from the start that I was a radiation therapist, I was aware that they viewed me as different to the other radiation therapists. This made me aware that the insider/outsider stance of the researcher can further impact on the observations and colour the researcher's lens through which the observations take place (Bonner & Tolhurst, 2002; Gerrish, 1997; Smith, 1999; Rudge, 2002).

It was also important for time taken away from the field to reflect on the observations and conversations. This was something that was not always easy to manage. I felt sure that as soon as I walked away I would miss something "remarkable" or noteworthy (Silverman, 2007, p. 16). However, breaks from the field were a necessary part of the ethnographic process to enable reflection and further refining of the research process.

4.9 Summary

The research design was discussed in Chapters Three and Four with the positioning of the research established in Chapter Three using the framework suggested by Crotty (2003). This detailed the epistemology, theoretical stance, methodology and methods of this study.

This chapter provided details of the setting, the participants and descriptions of the selection process. This was followed by the processes of data collection, ethical considerations, data analysis, and rigour. Included was a short account of reflective

practices incorporated in the research process. The chapter concluded with some reflections of the researcher about the researcher position as the observer, the insider/outsider, and building rapport with the participants.

The roles modern radiation therapists carry out in the clinical setting are built on longstanding activities and ways of doing that required a critical ethnographic approach to recognise and challenge the taken for granted ways of thinking. Using a critical ethnographic approach, as previously discussed in Chapter Three, provided the opportunity to look beyond the obvious and question what was actually occurring. This method was used to open up new ways of understanding to approach issues that were thought to be too hard or insurmountable to change (Thomas, 1993).

The subsequent Chapters Five, Six and Seven detail the findings that answer the research questions. The following chapter presents the context of the setting by introducing the reader to the place, the people and the practices of radiation therapy.

5. Territory, Tribes, Travellers and Trade

Context Setting

If we are to understand people's responses to places and their action within them, it is necessary to understand what (and how) they think... This is not to dismiss the great importance of the actions of others in influencing the course of our lives. (Canter, 1977, p. 1)

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5.1 Introduction

This chapter sets the context of the study with descriptions and discussion of the place, the people and the practices of radiation therapy. Descriptions are given of the two radiation therapy centres where observations were undertaken for the purpose of this research. The intention is to provide the reader with a clear picture of each setting with particular emphasis on the treatment areas where the majority of the fieldwork was carried out. It is for this reason a description of the planning and consulting areas is not provided.

The subsequent sections discuss the participants, the practices, and the processes within the settings. The descriptive details of the treatment areas, the people using the treatment areas, and the daily activities carried out in the treatment areas are interspersed with impressions and thoughts from recorded field notes and the comments recorded in interviews with patients and radiation therapists (RTs).

5.2 The Territory: Radiation therapy centres

Australian radiation therapy centres usually consist of a combination of consulting clinics, reception desk and clerical offices, waiting areas, change rooms, initial treatment preparation machines, treatment computer planning rooms and treatment machine bunkers (International Atomic Energy Agency, 2008). The physical layout is not prescriptive and it is usually tailored to suit the building and the hospital's needs.

Traditionally radiation therapy services were situated in the basement or at the extreme end of a hospital campus because the housing of radiation producing equipment and radioisotopes must ensure adequate shielding for the protection of the public and surrounding environment (Ross, 2004). The treatment machines most commonly used in Australia are called linear accelerators (linacs). These treatment machines deliver high energy x-ray beams and are housed in purpose built large rooms commonly referred to as bunkers because they have thick walls with no windows to ensure there is no radiation leakage beyond the room (R. M. Harrison & Lambert, 2002).

A lack of natural light, particularly in older centres, is quite common because of the building requirements (Ayteo, 2008). However, despite the lack of natural light modern treatment rooms are generally more attractive because attention to patient physical and emotional comfort has increased. Advances in technology have changed the presentation of the machinery and modern equipment tends to be sleek and less cumbersome in appearance than earlier models of radiation therapy machines.

5.2.1 Radiation Therapy Services: Peter MacCallum Cancer Centre, Melbourne, Victoria

5.2.1.1 Overview.

Radiation therapy services are part of the specialised cancer care services of Peter MacCallum Cancer Centre (PMac). The current site of the East Melbourne PMac was built in 1994 (Sandeman, 2008) and is located on the eastern edge of the city of Melbourne adjacent to Fitzroy Gardens. The cancer centre was named after Professor Peter MacCallum who had worked tirelessly to get the Institute, as it was first known, started in the late 1940s (Sandeman, 2008). There are a further five PMac satellite radiation therapy centres in Victoria but they were not included in this study.

At the East Melbourne campus the radiation therapy services are spread over several floors creating a vertical separation of the treatment planning areas and the treatment delivery areas. The treatment planning and initial workup areas are located one floor above the main street level entrance and the treatment machines are located two levels below the main entrance. There are lifts situated in the main foyer of the building which provided access to all floors.

During the period of fieldwork, there were a total of six treatment units being utilised (five full time and one used occasionally for specialised treatments or in the case of machine breakdowns), between four and seven radiation therapists on each unit in full time operation, and between 18 and 30 patients scheduled per treatment unit per day. A summary of PMac radiation therapy services at East Melbourne during the period of fieldwork undertaken from May until October 2009 is provided in Table 1.

**Table 1 Summary of PMac East Melbourne radiation therapy services
(pertaining to treatment delivery)**

Peter MacCallum Cancer Centre – Radiation Therapy Services

| Physical Location | Trt & Plan division | Trt Unit location | No. of bunkers | RTs per unit | Patients per unit | Satellite RT sites |
|---|---------------------|----------------------------|----------------|--------------|-------------------|--|
| City precinct East Melbourne (Parkville 2015) | Vertical Separation | Basement (Lower Level Two) | 6 | 4-7 | 18-30+ | Bendigo Moorabbin Box Hill Sunshine Richmond- (Epworth) |

5.2.1.2 Lower Level Two: PMac radiation therapy treatment areas.

The treatment areas, home to the treatment bunkers housing the linear accelerators, were accessed by descending two levels in one of the lifts located in the main foyer:

The descent summoned initial thoughts of medieval dungeons and the damp depths of old buildings. I wondered if patients would have similar thoughts on their first journey into the lower levels of the building. FN 21/5/09

A reconstructed outline (not to scale) in Figure 5 shows the general lay out of the treatment area of Lower Level Two (LL2) and the position of the treatment bunkers in relation to waiting areas, reception, and the entrance to the level via the lifts.

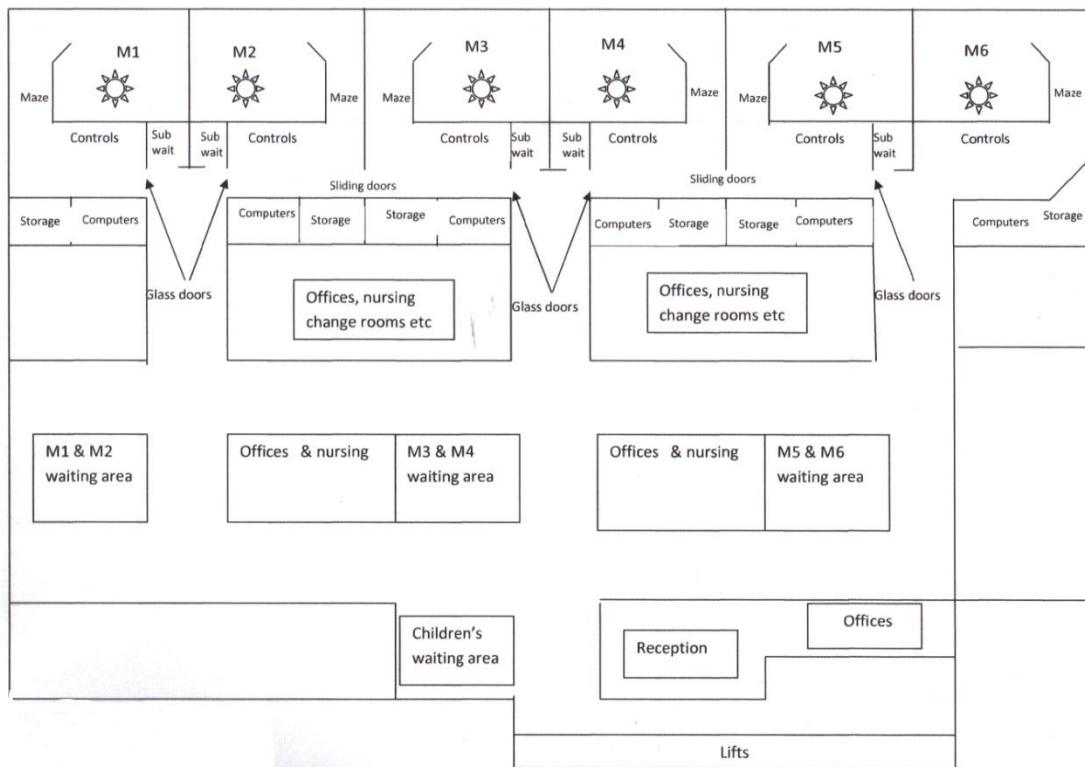


Figure 5 Reconstructed line drawing of the Lower Level 2, PMac (not to scale)

The reception desk was positioned immediately in front of the doors of the lifts and patients and visitors were required to check in with the receptionists prior to entering the waiting areas. The reception staff provided welcoming cheery faces in a calm atmosphere. A first impression was the lack of natural light and general sombre appearance of the area. The area was clean and neat but some of the rooms had odd pieces of furniture and disused equipment:

There were several quiet review rooms but a miss match of chairs and equipment.

Overall there is a clean and neat appearance of all areas. FN 19/5/09

However, as throughout all floors that I accessed in PMac, there were many pieces of original art donated by the artists which were a distinct contrast to the overall décor. These artworks were gifts from appreciative patients, their families or their friends and displayed small dedication plaques.

There were three waiting areas with each one adjacent to two treatment units. A fourth waiting area for child patients was equipped with games and seating for families. Each of the waiting rooms was carpeted and had rows of vinyl chairs. There

was also a television, magazines and several posters on the walls of each waiting area:

Waiting areas are carpeted areas with comfy vinyl chairs. Also there are flyers on one pillar and above the TV: "We are concerned about you waiting" and "return to reception after 30 minutes". Another by water fountain: "Please do not wash cups or spit in this water fountain. It is a health hazard". FN 18/6/09

The six treatment units, M1-M6, were located side by side in a line along the far end of Lower Level Two. Each treatment unit was separated by a subwait area and/or connected by sliding doors (as depicted in Figure 5) and consisted of a control room, two or more computer and storage rooms, a maze (the corridor access to treatment room), and a treatment room complete with a linear accelerator.

The subwait alcove, a small waiting area for patients when they were prepared and waiting for treatment, was located next to the entrance of each treatment unit and it had a glass partition positioned to screen a waiting patient from the corridor:

One of the RT's told me a patient walked into the glass panel last week so now they have put the letters M5 on them. Previously these panels weren't there according to the RTs but they have been put up for patient privacy. FN 5/6/09

Large clear glass doors separated the control area of all treatment control rooms, with the exception of M6, from the patient subwait alcove and these doors remained closed almost all of the time:

The large glass doors with "Authorised access only" were closed throughout the day until about 4.45pm when one was left open. FN 5/6/09

M6 was the only treatment unit that did not have glass doors separating the treatment control area from the corridor or subwait. It was also the only treatment unit that did not always work on a full time schedule. This machine was utilised when there was a machine service or break down, and, at times for treating specialised cases that required a lengthy set up process or infection control clean up procedures. However, in the latter part of the period of fieldwork at PMac M6 became fully operational because M2 was decommissioned and a new linear accelerator was in the process of being installed.

The glass doors made a finite division between the areas of general access and those that required authorised access. In light of this, I asked one of the radiation therapists, who I had observed working on both M5 and M6 what was the main reason for the doors on the treatment units:

They [glass doors] are good for confidentiality when RTs discuss patient issues, because patients waiting in the subwait cannot hear. We RTs forget sometimes that the patients are close by. Dee G5.3 #71

In each treatment area there was a treatment control room with access to the treatment bunker and also several rooms off to one side housing computers and storage for personalised equipment such as head and neck casts, electron cut-outs and build-up material (bolus) necessary for treatment delivery. In addition to the equipment one treatment unit had Christmas decorations stored in a corner of the storage room:

All six bunkers are alike. There is plenty of space around the console/control area with several offices off of this area. One is used for custom made treatment criteria such as bolus and casts. In M3 they have a large Father Christmas and a tree which is used at Christmas for the kids being treated on there. FN 5/6/09

One of these rooms also offered an area for quiet work, treatment team discussions, and private talks:

The side room off of the treatment control area of M3 is utilised frequently. It has two computers both in use for much of the afternoon. This room has a whiteboard, and other pinup boards that have a variety of information written or pinned to them. Other RTs were visiting throughout the afternoon. They seemed to migrate there for a number of reasons, one being the basket of chocolates on the counter. FN 5/6/09

The small side room is the meeting point whenever an issue or private conversation is entered into. FN 10/6/09

Entrance to the treatment machine bunker was on the opposite side to the entrance to the control area, forcing patients to walk past the machine controls and monitors. This sometimes distracted the radiation therapists when they were sitting at the

console reviewing digital x-ray images or discussing the treatment of a previous patient.

There was a sign in each treatment unit control room that hung from the ceiling with a request for the radiation therapists operating the machine not to be disturbed. Most patients who moved through this area did respect this request. However, sometimes there was a greeting made but radiation therapists from other areas seemed to ignore it and talk with the operators of the machine:

The RTs had a team meeting this afternoon. Distractions at the console were discussed. FN 25/8/09

The M2 and M3, and the M4 and M5 treatment control rooms were linked to one another by a sliding door on the opposite wall to the glass door entrance (see Figure 5), which created a backdoor alternative and thoroughfare for staff. This was used by many of the radiation therapists because it was a quicker route than walking along the corridor and past the waiting rooms, and there was less likelihood of becoming engaged in conversation with patients or other staff:

Most of the time the RTs use the sliding doors access to all the other machines rather than the longer way around past the waiting areas and nursing clinics. FN 13/7/09

The sliding doors between M2 and M3 remained open for most of the day showing the mess of empty boxes and packing materials and the coming and going of many physics staff. FN 18/7/09

This behaviour is indicative of Goffman's (1959) backstage and front stage concepts and how people shape their performances or the faces they use to suit the environment where they are performing. The fronts that radiation therapists act out between themselves are different to those they put on in the presence of patients. Goffman explains that this is like the actors of a stage performance where the performers act out their roles in front of the audience but when they retreat to the backstage amongst fellow cast members they change their act. According to Goffman the team of actors rely upon each other to uphold the performance in front of the audience, and this situation assists a rapport between the actors to develop out of the reciprocal dependence upon one another.

Access to the bunker was a corridor purposely designed to reduce the risk of scattered radiation (R. M. Harrison & Lambert, 2002). Each treatment bunker was installed with a treatment machine called a linear accelerator which was positioned towards the back wall in the centre of the room. The treatment rooms were similar in set up with a special treatment couch, a linen trolley, a chair on which the patient could place personal belongings, and a hand basin in the corner where the maze connected with the room.

Patient treatment details were projected onto the far wall of the treatment bunker from a computer to assist the radiation therapists' view of the patient treatment set up details. Privacy of a patient's details was assured because patients only entered the room in the presence of the treating radiation therapists. Access to this room was normally restricted to radiation therapists, engineers, and physicists, and this was displayed on a sign next to the entrance to the maze which clearly stated the treatment room was controlled by the radiation therapy staff:

I also noted the sign at the entrance to the maze: This machine is available for patient treatment and is under the control of the radiation therapy staff.

FN 10/6/09

For each pair of treatment units there were six change cubicles. Each patient was allocated a gown, a plastic bag for the gown, and a space within the adjacent cupboard where the gown was kept between visits:

Change rooms are small but there are six in total for these two machines (M5 and M6). There are cupboards where the patients keep their gowns. The gowns are kept in individual plastic bags. FN 18/6/09

Other rooms along the corridors, adjacent to the waiting areas, were used by nursing staff for patient consults and administrative duties. A couple of rooms were also available for use by radiation therapists for interviews and information giving to patients, and for a patient requiring a quiet place to wait. One of these rooms was made available for me to use for patient interviews but I did not find it a welcoming space because it was cluttered with disused furniture. Although there seemed to be many rooms that were underutilised there was not a common staff room for use on

this level. However, a general staff area was available three floors above and there was a café on the ground level that also catered for the general public.

Despite the number of patients and staff moving in and out of the area there was a prevailing quiet and calm ambience. Occasionally I observed some rushed activities around the treatment units but this was not a regular occurrence. Throughout the period of fieldwork this did not change. The overall impression was a radiation therapy treatment area that was extremely quiet and efficient in contrast to the busy, noisy environment of many general public hospitals. However, comparison is difficult because the treatment area at PMac was separated from the busy and often crowded clinics, and the transport service areas on the ground floor.

5.2.2 RAH Cancer Centre: The Royal Adelaide Hospital, Adelaide, South Australia

5.2.2.1 Overview.

The Royal Adelaide Hospital (RAH) is a large public hospital located next to the Royal Botanic Gardens within the city of Adelaide. It is one of two radiation therapy service providers in South Australia. Recently a RAH satellite centre with one treatment machine was established at the Lyell McEwin Hospital in the northern suburbs of Adelaide.

The radiation therapy services at the RAH were located in the FS Hone Wing and the first two levels of the East Wing creating a horizontal division of the treatment planning areas from the treatment delivery areas. The FS Hone Wing, a section of a large building at the east end of the hospital campus was constructed in 1956 and named after an honorary physician and past chairman of the then Anti Cancer committee (Hughes, 1982). The treatment bunkers were situated in this wing extending north easterly away from the main areas of the hospital. The position was typical of the traditional isolation of radiation therapy departments from the rest of the hospital environment (Ross, 2004):

The radiation therapy department is spread over two main areas on the same level, one within the main east wing building and the other as an added wing (although this was added more than fifty years ago). FN 4/11/09

Throughout the period of fieldwork in November 2009, four of the five linear accelerators were utilised in a full time capacity. There was an average of 25 to 30 patients scheduled for treatment on each linear accelerator and between three and five radiation therapists per treatment unit. The radiation therapy service details are summarised in Table 2.

**Table 2 Summary of RAH Cancer Centre radiation therapy services
(pertaining to treatment delivery)**

Royal Adelaide Hospital –RAH Cancer Centre

| Physical Location | Trt & Plan division | Trt Unit location | No. of bunkers | RTs per unit | Patients per unit | Satellite RT sites |
|---|-----------------------|----------------------------------|----------------|--------------|-------------------|--------------------|
| City precinct North Tce, Adelaide (new site North Tce 2016) | Horizontal separation | FS Hone wing NE corner of campus | 5 | 3-5 | 25-30+ | Lyell MacEwin |

5.2.2.2 FS Hone Wing: RAH radiation therapy treatment areas.

There were several ways to access the treatment areas in the FS Hone Wing. The main entrance was located at the junction of the East Wing and the FS Hone Wing but there was also a back door entrance at the far end of the wing, and access through the East Wing was also possible.

The main entrance led from a small parking bay for transport vehicles with a pergola, picnic style table and seating. Although it was a familiar sight because of my previous years employed there, from a visitor's perspective it could appear informal and out of character with the rest of the hospital. It was not obvious it was the main entrance to the radiation therapy treatment facilities because there was a lack of large signs or other indicators to suggest it was the main entrance.

The main doors opened onto a designated transport waiting area and reception. The reception area was not a desk but two small windows where patients checked in prior to entering the corridor that led to the treatment units. The treatment bunkers were in a linear set up along the wing with a long corridor connecting the area with the rest of the building. Planning, physics workshops, and a number of offices were located within the East Wing building. A reconstructed line drawing (Figure 6) provides an approximation of the floor plan of the FS Hone Wing.



Figure 6 Reconstructed line drawing of the FS Hone Wing, RAH (not to scale)

The physical separation of the treatment planning areas from the treatment delivery areas was similar to PMac, although not a vertical separation in this instance but a horizontal one. Unlike the set up at PMac the control areas of the treatment units were not all alike. The control areas were much smaller than those of the PMac, a product of changes and additions over many years to the FS Hone Wing. However, both centres had multiple bunkers that housed a range of linear accelerators, and both centres had patient waiting areas that were shared by two treatment units.

There were no subwait partitioned areas at the RAH but instead a single chair was placed adjacent to the treatment bunker entrance. Also, there were no glass doors separating the treatment control rooms from the corridors and the waiting areas. Some of the control rooms had normal room doors but these were seldom shut at any time during the period of observation:

The design means patients do not enter or pass the console areas just the doorway/entrance to console area. The door from the console remained open because it was the only way to the treatment bunker. This is in contrast to the glass doors at PMac. FN 4/11/09

Because none of the control rooms were connected, the main corridor was the only route from one treatment unit to another treatment unit. This was dissimilar to the PMac design.

The storage of equipment used for immobilisation and set up of patients such as casts, and build up was located inside each treatment room. Other differences between the two centres included natural light in some areas of the RAH with windows on the eastern side of the wing where several clinic rooms and nursing offices were located. A large tearoom located on the western side of the corridor between two of the bunkers (see Figure 6) also had windows allowing some natural light to filter into it:

The staff room is tucked away behind the waiting area of treatment suites 1 and 2 and to access to it you must walk past the entrance to treatment suite 1 treatment room. It is not really the ideal location as it is not away from the work area, provides a large traffic flow past treatment suite 1 and little privacy for those patients waiting for treatment but on the other hand despite the somewhat

awkward position it has windows which is always an advantage in a radiation therapy department! FN 4/11/09

The reception area of the RAH was found to be very different to the Lower Level Two PMac reception area and it was found to be less inviting because it consisted of a small window where each patient was required to check in with the receptionist and receive their ID wrist bracelet before proceeding to the treatment units' waiting rooms. The issuing of ID bracelets was also unique to the RAH and was in compliance with the safety protocols practised throughout the hospital at that time.

The atmosphere of the RAH was noisier and the department appeared more active than PMac but the RAH radiation therapy treatment area also had a brachytherapy suite and some doctor review clinics, which added to the activities and to the subsequent bustle of the place. At PMac the review clinics, brachytherapy suites, and other services such as transport were located on different levels.

An overview of the radiation therapy treatment areas of PMac and the RAH has provided the context of the settings used in this study. The similarities and differences of each centre were highlighted to understand the impact of the setting on the people, and the practices within the individual centres.

5.3 The Tribes: Radiation therapy personnel

This study found radiation therapy services relied on a variety of skilled personnel to ensure the delivery of quality treatment and care. In addition, the services of other skilled professionals outside of the radiation therapy centre were important for the well being of each patient (Colyer, 2003). This section provides description of those people involved in the day to day activities within PMac and the RAH radiation therapy centres.

5.3.1 The radiation therapy multidisciplinary team

This study found four important overlapping professional disciplines that form the multidisciplinary team of radiation therapy. There were two contrasting roles of caring and technology within each of the disciplines. A visual representation of this is presented in Figure 7 with the dashed line indicating the division of the two roles with the caring role above the line and the technology role below the line. It shows

the caring role as a major objective of nurses and the technology role as a major objective of the physicists and engineers. Both the radiation therapists' roles and the radiation oncologists' roles are indicated as an equal balance of both caring and technology.

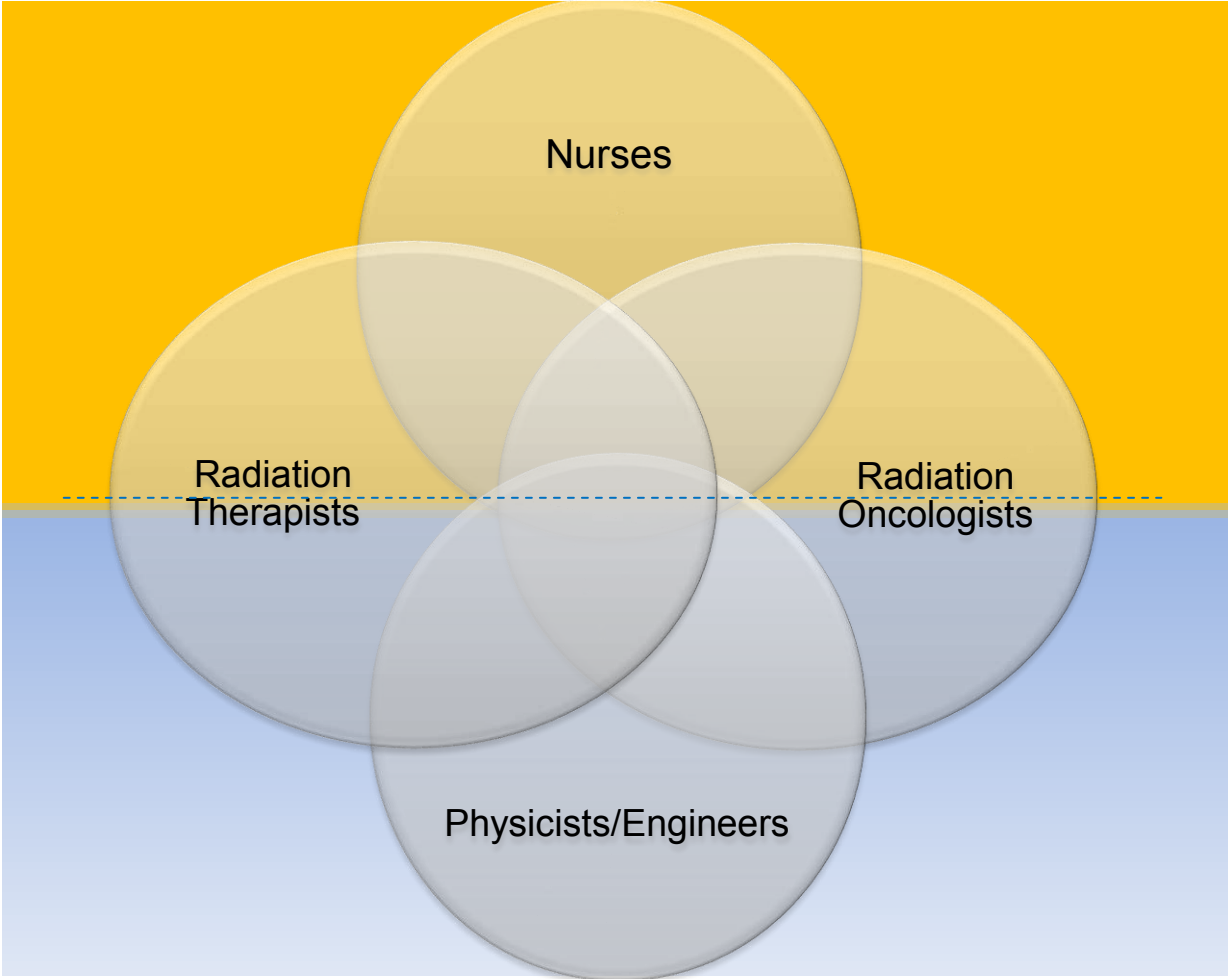


Figure 7 A visual representation of the overlapping relationships between Radiation Therapists, Radiation Oncologists, Nurses, Physicists & Engineers

The dashed line dividing the diagram into two parts indicates the two contrasting roles of caring (above the line) and technology (below the line) in radiation therapy and the division of these roles in the multidisciplinary team.

Specialist doctors, called radiation oncologists (RO), were responsible for the prescribing of radiation therapy for the treatment of cancer. Patients were referred to the RO for radiation therapy treatment once a diagnosis of cancer was confirmed through diagnostic tests. The RO determined the area to be treated and, if deemed appropriate, prescribed a course of radiation therapy treatment. The RO then liaised with the radiation therapists who planned and delivered the radiation treatment in accordance with the prescription provided by the RO.

Medical physicists and engineers provided expertise in all technical and scientific areas related to the equipment, dosimetry and radiation protection in radiation therapy (Colyer, 2003). The physicists took responsibility for the linear accelerators delivery of correct dosages by ensuring the machines were calibrated in accordance with required specifications (R. M. Harrison & Lambert, 2002). Engineers were responsible for the mechanics of the linear accelerators and the treatment couches. Both PMac and the RAH had a number of dedicated physicists and engineers located close at hand unlike some rural and country satellite sites which rely on metropolitan based services:

Engineers were required to fix a loose panel on the machine. This took approximately seven minutes. This did not seem to be a great disruption to the workload. FN 23/6/09

Nurses were found to be an important part of the team at both PMac and the RAH, assisting patients with supportive patient care, delivery of information, and practical assistance with the management and treatment of radiation therapy side effects. Nurses took on the responsibility of managing patients' side effects with advice, referral to other health professionals, such as dieticians, and the administration of medication to relieve symptoms of pain and nausea. The main side effects of radiation therapy include skin reactions, nausea, bowel issues, and loss of weight, fatigue, and pain (Faithfull, 2003). However, some of the nursing staff also extended their care to the patients by being available to listen to and empathise with them about their condition:

...you can ask and the nurse is wonderful. When I was talking to the nurse the other day, I just couldn't stop crying. For no reason at all except that she was being nice. Denise 6.5 #110

Information was provided by nurses at both centres but the delivery of the information was performed differently. The nurses at the RAH provided information to the patients at the planning appointment and again on the first day of treatment. This contrasted with the nurses at PMac who provided information about side effects of treatment and other practical information such as relaxation techniques, skin care, and dietary advice after the first treatment was given:

The procedure for the 1st day of treatment (PMac) for a patient is the 1st day chat given by an RT prior to the patient starting treatment. The nurse normally will have a talk with the patient after the 1st treatment is completed. FN 29/6/09

Interactions on 1st day (RAH): Patient sees nurse 1st for a chat about side effects etc., then the RT checks ID and has a short chat on the way into the treatment room about what to expect and so on. FN 10/11/09

5.3.2 Radiation therapists

The radiation therapists employed at both PMac and the RAH were university educated professionals who specialised in radiation treatment for cancer. The role of radiation therapists in these centres was to plan and deliver radiation therapy as prescribed by the radiation oncologists. National Radiographers and Radiation Therapists Week coincided with my observations at the RAH and some of the treatment teams entered into the spirit of the theme and made posters that were displayed in the adjacent waiting area to their treatment suite. The photograph (Figure 8) of one poster created by some of the radiation therapists provided a radiation therapist's perspective of what defines a radiation therapist.

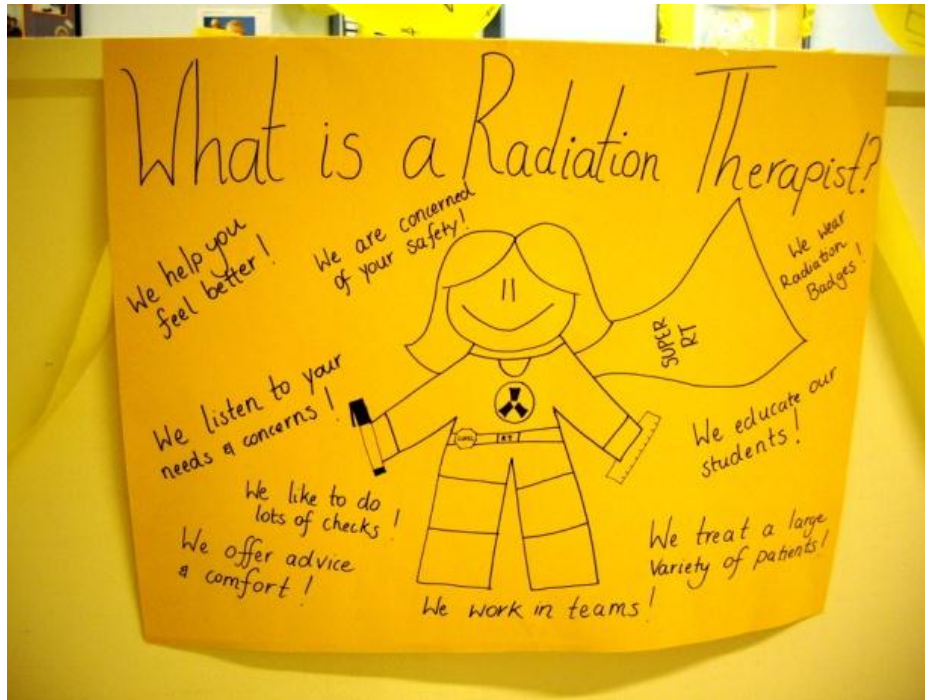


Figure 8 **Photograph of a poster created by a group of RAH radiation therapists for National Radiographer and Radiation Therapist Week, November 2009**

The equipment radiation therapists used for their work was found to be sophisticated and complex and the continual changes in the technology used added to the complexities and challenges faced by radiation therapists (Sale, 2011). Equipment used included radiation producing treatment machines (linear accelerators), computed tomography scanners (CT), computers enabling digital imaging, electronic record and verify systems, patient electronic data recording systems, and electronic appointment booking systems:

Electronic treatment sheets not fully embraced here at RAH unlike PMac. However, RTs have increased responsibilities with cone beam/obi imaging etc. They record and assess images on and off line which has increased the amount of checks and rechecking done. This is similar to their PMac counterparts.
 FN 12/11/09

Not only did radiation therapists require skills in the use of computers and electronic equipment for the planning and implementation of radiation therapy treatment but

they also required communication skills for information and instruction giving to patients, and to enable efficient and safe team work practices:

Staff numbered seven in total today on M3 and all areas including computers were being utilised. There were teams of two or three for setting up the patient. Charge RT was able to attend to emails and other official duties for some of the time. FN 9/6/09

Teamwork was fundamental in the way radiation therapists perform their daily work. Although there were some tasks undertaken individually most still required a second person to check what the first radiation therapist had done. It was essential for the safety of the patient and accurate delivery of treatment for radiation therapists to work together to cross check with each other all set up details and the prescribed dose to be given prior to delivering the radiation to a patient:

It was interesting to note that the RTs work in pairs and tend to have 5 or 6 rostered to each machine usually (minimum seen is 4 and the maximum 7 so far). FN 5/6/09

Each treatment unit at both PMac and the RAH had a treatment team of radiation therapists led by a manager called a charge radiation therapist. These individual treatment teams made up the larger treatment team headed by the treatment manager. In the planning areas radiation therapists also formed a team headed by the planning managers. Some radiation therapy centres may also have other recognised teams who provide and conduct education and research as in the case of PMac. However, at the time of fieldwork the RAH did not have dedicated research and education sections of the centre but there were radiation therapists involved in education and research interest groups.

5.3.3 Other personnel

Administration personnel were required to undertake large amounts of documentation and appointment bookings, and to provide a welcoming reception for patients on their arrival at the centres. There were other people who were not directly involved in the delivery of radiation therapy treatment but were observed as important participants in the larger team. Patient services assistants (P.S.A's) were part of the larger support team at both centres and attended to a variety of tasks such

as transporting patients to and from the wards, cleaning, and linen pickup and delivery:

P.S.A-assistants used to bring patients from wards and they also deal with the linen bags left lying on the floor. FN 21/5/09

The expertise of dieticians, social workers and psychologists based outside of the radiation therapy centres, but usually within the PMac centre or the RAH provided additional support for the patients undergoing radiation therapy. The services of these professionals were suggested or recommended by the radiation oncologists, radiation therapists or nurses:

If there is a particular medication then I would ask advice of the nurse or refer onto nursing and as I mentioned before I would refer anyone having other difficulties to the social worker and so on. Tom B5.2 #35

In addition to those employed in radiation therapy there were volunteers at both PMac and the RAH who provided food, beverages, and other items for sale to patients and staff. Radiation therapy students on clinical placements were also present at various time points during the periods of fieldwork.

5.4 The Travellers: Radiation therapy patients

The majority of patients who received a course of radiation therapy treatment had cancer. Courses of radiation treatment for cancer varied according to the prognosis of a person's disease and the dose prescribed. Treatment was divided roughly into two categories of either radical or palliative intent (Colyer, 2003). Radical courses of treatment to the prostate for prostate cancer, for example, consisted of daily treatment over six to eight weeks, and for treatment to the breast for breast cancer the course was normally five to six weeks of daily treatment.

Patients may have a course of radiation therapy at any point along the treatment trajectory depending on their diagnosis and the other treatment options or combinations of treatments considered by the oncology team (Delaney et al., 2005). Palliative treatments were given, for example, to relieve pain in patients with advanced disease. These courses of treatment were normally over a shorter period of

time, from a single treatment up to 10 or 12 daily treatments depending on the individual patient.

5.4.1 Patients

It was found patients presented for radiation therapy treatment at varying stages of coping with the diagnosis of cancer and this could impact on the patient's management of side effects. Jackie had just completed chemotherapy and she said she did not want to start radiation therapy:

I hated radiotherapy – I didn't want to do it. I was dreading it more than almost chemotherapy. Don't know why. Jackie 6.3 #46

One PMac patient, Denise, had returned after a number of years for treatment to her other breast. She described the first time she had treatment as more of a shock than the second time:

It will be seven years, yes seven years in December... so this was a tremendous shock. It's all a bit hazy of course because it was much more of a shock the first time... Denise 6.5#18

This research found patients often sought supportive care for their physical condition and some patients also sought help for psychological issues. Denise, spoke of her experience with a nurse at PMac:

Some form of depression has just set in. When I was talking to the nurse the other day, I just couldn't stop crying. For no reason at all except that she was being nice. Denise 6.5 #114

Side effects varied from patient to patient because radiation therapy commonly affects the area of the body that receives the radiation (Faithfull, 2003). The majority of patients suffering from side effects were generally well managed by the nursing teams at both PMac and the RAH. One radiation therapist at PMac described the procedure in place for a patient to consult with a nurse:

The nurse reviews are booked weekly and the nurse can be booked for any other issues in between. Sometimes RTs go to the nurse and talk face-to-face about an issue a patient has presented with. Dee G5.3 #30

John, a patient at PMac, told of his experiences of waiting for a nurse and how he was offered help from one of the senior nurses:

I waited one day for the nurse for more than half an hour so I walked up and down the corridor watching the goings on. Then a bloke came along and asked could he help me. I said I was looking for a nurse. He replied I am a nurse. Then I said well I'll take you thanks. John 5.2 #258

The patients treated at PMac and the RAH came from a wide variety of backgrounds and age groups. The majority of patients were over 40 years old and the number of children being treated during the period of fieldwork at PMac fluctuated between three and six and at the RAH there were three children undergoing treatment. However, observations were not carried out on treatment units M3 (PMac) and TS5 (RAH) during scheduled visits of any person under the age of eighteen because this was an ethical requirement of the study.

The findings of this study indicated that many patients enjoyed the rapport that developed with the treatment radiation therapists, a result of daily visits and interaction on the same treatment unit. A few of the patients interviewed spoke of their experiences when it had been necessary to receive treatment on a different treatment unit:

Because I mean I had one session on, I think it was M3 and it felt different. I mean the guys were great. There was nothing wrong with them, they were just as friendly and that but it felt different kind of thing. It was, it was kind of like, oh you know, you're going to see another GP instead of your regular GP that you've been seeing, sort of thing. Jackie 6.3 #187

I've been in M3 pretty well the whole time. Occasionally I went up to M4 but I noticed in the last week they've changed me to M5 which I haven't been to at all which means I'm going, for the last week.... You know, I would have, probably ...much rather have stayed with the people that I knew even though a couple of those that I started off with six weeks ago have shifted now and there's a new team there this morning actually. Oh there are still a couple of the girls there that I know. But then next week I go to somewhere into the unknown again. Alan 3.2.1 #123

But going from one treatment unit to the next, like going down to the other end, you sort of felt, "Oh," you know? You're out of your comfort zone a little bit ...
Kathy 6.1 # 498

These patients indicated that the level of emotional comfort they had experienced or received was challenged when their treatment was delivered on a different treatment unit by a different team. This highlighted the notion of a level of emotional comfort being provided by radiation therapists and is reflected in the literature that suggested radiation therapists are able to assist a patient undergoing daily radiation therapy treatment to achieve a level of emotional comfort during their prescribed course of treatment (Halkett & Kristjanson, 2007).

5.4.2 Practical issues of patients

There are many other factors that affect the patient while undergoing radiation therapy treatment. South Australian rural patients must travel to the city for radiation therapy treatment and some Victorian country patients who do not have access to radiation therapy services in their area must travel to a regional or city radiation therapy service. Sometimes, as Alan reported, a patient chose to relocate to the city for the period of the course of treatment:

Yes, so and that helps a heck of a lot rather than be hassled by driving up and trying to find a – I could have been treated in Geelong, which is an hour from our home.....which would have meant that I would have had to drive up to Geelong every day and that's an hour up and an hour back and because I have a daughter here in Melbourne well it's a lot easier for me to come here and come in here rather than do that. Alan 3.2.1 #387

It is for these reasons distance to travel for treatment is an issue for some patients with long daily journeys to and from the facilities while others relocate for the duration of the treatment course. A study undertaken on patients' experiences of travel to access radiation therapy treatment was found to affect patients in the following ways: the travel was challenging, the patient was removed from the support of family and friends, it was a financial strain, and living in a temporary arrangement was unsettling (Hegney, Pearce, Rogers-Clark, Martin-McDonald, & Buikstra, 2005). It was suggested these factors provided additional stress for patients

and their families from rural areas and recommended additional supportive measures should be arranged for rural patients.

Other issues such as management of side effects and coping with complications of treatment and the disease also affected the patient's travelling as one patient's wife pointed out in an interview:

You know it's a shame because if they've got to travel, they're very self conscious. I mean physically outwardly, he's, we're fine. It's just that we have to make sure we know where the little loos are. Ken's wife #1170-1172 (9/9/09)

Another patient told me that she was tired from the long days because she had to travel for more than an hour each way from her home to treatment and back:

I managed to have a few minutes chatting with one patient, Jenni. She travels on transport and she reported that the days were long and tiring. FN 10/7/09

It was not unusual during the course of treatment for some patients to require hospitalisation for side effect management or pain control:

Another patient finishing has had treatment before and he said he was familiar with the radiotherapy process. He also became an IP [in-patient] during his latest course of radiation therapy. He was from rural Victoria and had suffered other complications... FN 24/7/09

Issues of parking, transport, fitting around other specialist appointments and employment were some of the aspects many patients had to contend with throughout their course of treatment. Parking and getting to the centre was one topic that was talked about in a patient interview with Kathy at PMac:

...it's also good when you can come in and park underneath that is fantastic. Because the stress of coming into, I mean I work quite locally but for a lot of people to come in here they really stress about trying to park or use public transport. Kathy 6.1 #950

Arthur, a PMac patient, suggested it was not his choice to travel to the city each day but a decision made for him on the recommendation, by his doctor, of the radiation oncologist best suited to prescribe treatment for him:

I come in the morning and if the trains late, [there is a]bit of joking about the train because one radiation therapist lives in Altona too...Originally, I wanted to go to Footscray because we live in Altona, a lot easier to get there but my doctor in Geelong wanted me to come and see a doctor here. Arthur 3.2.3 #252

As suggested in the literature many patients were suffering levels of physical and psychological stress impacted further by practical issues they often faced in accessing radiation therapy facilities(Hahn & Kruskemper, 2007; Hegney et al., 2005; Thorne et al., 2005a; Wells, 2003).

5.5 The Trade: Daily treatment activities

Radiation therapists perform a variety of duties and tasks in their daily work. For the purpose of this research only those tasks and duties of the treatment radiation therapist team will be discussed in this section.

5.5.1 Duties and tasks of radiation therapists

Much of the daily work of radiation therapists was completed as part of a team or as part of a pair. Radiation therapists ensured correct accessories were used for each patient, the accuracy of treatment details, and crosschecked the downloaded details of each patient. These checks were done by two radiation therapists to minimise errors and to ensure the safety of the patient:

The checking process seems to be a collaborative one. While Dee and Anna were engaged in treating the patient the other RTs were attending to emails and checking of images taken the previous day. FN 29/6/09

Image review, the assessment of digital images of the treated area of the patient, was carried out before the patient's next appointment or in many cases it was done on-line, while the patient was in the set up position, prior to the treatment being delivered. This task varied depending on the treatment being delivered and the complexities of the technique and the equipment being employed:

Mike and Dee went through the set up procedures and confirmed all details were correct, and prior to leaving the treatment room ensured the patient was aware that they were leaving and that the time would be a little longer as extra images were required today. FN 13/7/09

The condition of the treatment room was the responsibility of the treatment team. Radiation therapists attended to the cleaning of the treatment couch and equipment used for setting up each patient for treatment. They also ensured the linen was changed regularly. However, after a patient with an infectious disease was treated at PMac a P.S.A. would clean the room before the treatment team recommenced treating other patients. The RAH had a similar system with a dedicated team of cleaners who would be called to clean the treatment room:

Those patients infected with VRE (Vancomycin Resistant Enterococi) treated at the end of the day with time allocated for cleaning for VRE by hospital cleaners. FN 11/11/09

The warm up (also known as beam check) of the linear accelerators each morning was completed by one of the radiation therapists rostered on each of the treatment units. This task was completed in a similar manner at both PMac and the RAH. The warm up was essential to ensure the machine was performing within its correct specifications and it was also crucial for safety and quality assurance (Thwaites, Mijnheer, & Mills, 2005).

Skills also required by the radiation therapists included the understanding and use of an electronic booking system. Although the scheduled patient appointment bookings were not done by the radiation therapists on the treatment units the daily appointments were constantly accessed by the radiation therapists to view the arrival of the patients:

Occasionally the patient asks for an appointment change or clarification of another appointment say with the nurse or doctor... FN 31/7/09

In the case of a breakdown of the machine the radiation therapists had to reschedule patients' times and relocate the patient to another treatment unit:

The machine breakdown required some of the M5 treatment team to reschedule patients to a different treatment unit with revised times. FN 29/7/09

Both electronic and paperwork details for new cases and restart cases were thoroughly checked by the treatment team. The radiation therapists communicated with the larger multidisciplinary team about patient details either by electronic means

or face to face and ensured the delivery of appropriate paperwork to the nurses or to the radiation oncologists when the patient had a review appointment:

There were many searches for treatment sheets because so many patients were transferred between machines and others were on chart round. FN 13/7/09

...paperwork continues to be chased up and that seems to take up a lot of time and is inefficient. FN 24/7/09

Radiation therapists worked in a changing environment where learning and developing skill sets required embracing a variety of activities to enhance continuing professional development. Both PMac and the RAH encouraged attendance at meetings and in-services for this reason:

Today I attended the in-service at 8am. This was a presentation by the Head of Education. It was entitled: "Taming the email Tiger". I was surprised to see so many at the in-service given the early hour of the day. FN 10/6/09

Communicating with patients was found to be a necessary procedure for radiation therapists and it could be considered both a task and a skill. Radiation therapists provided the patients with information about their treatment and instructed the patients in the requirements for accurate delivery of treatment. Communication between radiation therapists was also found to be important for the daily tasks and teamwork that comprised much of the role of radiation therapists. The findings of the interactions between radiation therapists and patients and the interactions between radiation therapists are discussed in detail in Chapter Seven.

5.5.2 Delivery of treatment: a radiation therapist perspective

5.5.2.1 The treatment unit.

Each morning a radiation therapist arrived before the rest of the team to perform the machine warm up. This involved checking a number of gauges and read outs of the machine to ensure it would work correctly. The radiation therapist was also required to turn the machine on and perform checks on the output of the machine (Thwaites et al., 2005).

A daily appointment list was accessed electronically by the radiation therapists. The list was updated at reception as patients arrived for treatment. This allowed the treating team to know when a patient had arrived and to be prepared for each individual patient prior to getting them from the waiting room and escorting them into the treatment room.

5.5.2.2 The treatment team.

At PMac the treatment team on a machine would usually break up into two smaller teams of two or occasionally more if a student or inexperienced radiation therapist was rostered to the treatment unit. Mary, one of the PMac patients commented on the students being present during her treatment:

... There's been students a couple of times and they were introduced and explained that they were there as students and did I mind having them observing, which I don't. They've got to learn somewhere. Mary 6.4 #146

Dee, one of the radiation therapists on M5, explained the system that was generally used at PMac and by the team on M5:

We use the in/out system where the early shift will work until a certain time then the late shift log in. Those on the early shift tend to do more if those on the late shift are slow or late in logging on. Dee G5.3 #14

One team treated patients for an hour or more and then swapped with the other team. Those radiation therapists not treating patients would get the next patient prepared, review images, organise paperwork, and collect equipment:

While Dee and Anna were engaged in treating, the other RTs were attending to emails and the checking of images taken the previous day. This was within the side room. FN 29/6/09

The treating radiation therapists at the RAH would also break into pairs with one pair treating a patient while the other pair prepared for the next patient. These radiation therapists preferred to work with a different in and out system where one pair treated a patient followed by the next pair treating the next patient. At times, both places had more than two radiation therapists in the treatment room, for example, when students were present on a clinical placement or if the set up was complex and senior staff

were required to assist in decision making about the patient's treatment or set up procedures:

Student from RMIT is also rostered on this machine. The other RTs allow him to set up the room and they show him how to do various setting up procedures. FN 22/6/09

The radiation therapists downloaded the patient's individual treatment details to the treatment machine via a computer prior to the patient entering the treatment room. Any particular devices or equipment required were prepared by one radiation therapist while the other escorted the patient into the treatment room:

The patient is called from the waiting room, changes and waits in the subwait area. RTs greet and call the patient to come with them into the treatment room. Usually patient walks in with one of the RTs or is asked to go ahead and enter the treatment room. Some RTs chat with the patient and some others don't. FN 13/7/09

Once the patient was inside the treatment room it was mandatory that the patient's ID was checked by the radiation therapists:

On getting onto the couch the patient is asked for their full name and date of birth (this is PMac protocol). FN 25/8/09

The ID checks carried out by the RT staff (RAH) prior to treating are: patient wearing wristband, name, date of birth, address and area to be treated are all verbalised by patient then before leaving the room the UR (unit record number) is checked on wristband against the patient's downloaded treatment field data. FN 4/11/09

The ID details given by the patient were checked with the downloaded treatment details inside the treatment room at PMac and on the treatment sheet and console screen at the RAH. The patient was assisted onto the treatment couch and the radiation therapists set up the patient according to the directions on the treatment record. The radiation therapists performed a cross check of the correct positioning and patient details when the patient was in the correct set up position. Once these were established as correct the radiation therapists left the room, activating the

interlocks of the access area so the machine would turn off if anyone attempted to enter the room.

Outside of the treatment room the radiation therapists checked that all parameters and the dose were correct before turning the machine on. At times this also involved the capture and assessment of digital images of the treatment area. This required additional decision making and collaboration between the treating radiation therapists prior to delivering the treatment. Once the treatment was delivered one of the radiation therapists entered the room and assisted the patient from the treatment couch while the other radiation therapist completed the recording and closure of the treatment record:

The usual /most common observation is that of the patient saying goodbye to the RT that goes into the treatment room and gets them off of the treatment couch. (Other RT finishes off the treatment log at the console and downloads the next patient's details). FN 31/8/09

5.5.3 Delivery of treatment: a patient perspective

5.5.3.1 Reception.

Patients attending PMac for radiation therapy entered the treatment area via the lifts from the main entrance at ground level or from the car park lift. Patients were required to check in at the reception desk prior to proceeding to the appropriate waiting area. The receptionists recorded the patient's arrival on the electronic bookings system. This placed the patient in an electronic queue and notified the treating radiation therapists of the patient's arrival. During patient interviews at PMac several of the patients commented on the reception staff:

...the girls on the reception desk here at the [LL2] they're fantastic, you know. They're really... I don't think you could get two more friendly girls than those two. Alan 3.2.1 #89

They [receptionists], they seem to memorise names and stuff. Everything... Oh they've got it in front, absolutely perfect... Ken 3.2.4 #767

These ladies[receptionists], if there's a couple of people waiting, they'll make eye contact with me, even if you're like three people behind, just to let you know

that, you know, like that sort of thing, just so you know that – they make you feel like they know that you're waiting, and "Sorry but..." Jackie 6.3 #525

At the RAH patients accessed the treatment area via several ways, either via the main doors from outside, via the East Wing building or via the back entrance at the far end of the treatment wing. However, prior to entering a waiting area, patients were instructed to report to the receptionist to be electronically checked in, in a similar system to PMac patients. In addition to this each patient had a wrist band placed around their wrist with identification details. The wrist band was sighted by the treatment radiation therapists prior to the patient being set up for treatment. After treatment it was removed by the treating radiation therapists. This was a mandatory daily requirement of all patients undergoing treatment at the RAH:

Patients report to the reception window to get their wristband which has their ID details before proceeding to the waiting areas of the machines. No treatment is delivered until the patient has the wristband attached to their wrist. (This is something different to any other place I have worked or observed and apparently it has been only recently implemented as part of the SA protocols). FN 4/11/09

5.5.3.2 Preparation.

Patients attending either centre underwent a similar procedure of waiting in an area close to the treatment machine. After being called by the treating radiation therapist, unless they were having an area treated that did not require removal of clothing, the patient collected an allocated gown and changed into it in a change cubicle. The patient then proceeded to the subwait area adjacent to the entrance of the treatment bunker. This was the same procedure at PMac and the RAH with the exception on TS1 at the RAH where many of the patients did not change into a gown but changed inside the treatment room. The radiation therapists on TS1 at the time of fieldwork were dissatisfied with the quality of the gowns and had decided to boycott the use of them in protest:

On TS1 they have not been changing patients as the gowns are really substandard. The gowns used are hospital gowns with the plastic studs at the shoulders and many of these do not work. FN 9/11/09

5.5.3.3 Treatment Delivery.

Once the treatment room was vacated by the previous patient the next patient was invited by the radiation therapist to enter the treatment room where the patient disrobed and positioned themselves on the treatment couch. The patient gave their ID details and at the RAH the wristband was read by the radiation therapists before they began to position the patient. Once the correct set up was achieved the radiation therapists left the room and the patient was alone until the treatment was given. The experience of being left alone was touched on by Alan and Kathy:

... I have a chat to them you know, and then they disappear while you're being zapped... Alan 3.2.1 #236

...obviously when you have an x-ray, they all leave the room. When you have this sort of thing, they leave the room and shut the door and have a light flashing so you sort of think, "Ohhh." Kathy 6.1 #150

The treatment experience varied between patients. There were many factors that affected the experiences of the patients such as the personalities and dynamics of the treatment team, the treatment side effects and stage of disease, the management of physical and psychological levels of stress, and the level of comfort the patient achieved during their course of treatment.

5.6 Summary

The place, the people, the practices and processes have been provided in this chapter to set the context of the research. Radiation therapy services of PMac and the RAH were discussed and the various roles of the radiation therapy personnel were outlined. A brief overview of the patients and some of the issues that arose were also provided. The complexities of the radiation therapy environment and the practices and processes were summarised to assist in setting the scene and provide the key findings related to the current spatial use of the environment.

This chapter sets the context for the findings in the following Chapters Six and Seven. Chapter Six provides the findings of four cultural concepts of radiation therapists. Chapter Seven discusses the findings of the types of interactions that

occur between radiation therapists and their patients and the interactions between radiation therapists.

6. Tribal Traditions

Culture and Customs

...settings are not naturally occurring phenomena, they are constituted and maintained through cultural definition and social strategies. Their boundaries are not fixed but shift across occasions, to one degree or another, through processes of redefinition and negotiation. (Hammersley & Atkinson, 2007, p. 3)

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6.1 Introduction

In order to answer the first research question “What are the underlying beliefs, values, practices and systems that form the culture of Australian radiation therapists?” the cultural concepts of radiation therapists are discussed in this chapter. Culture is defined as the “Explicit and tacit rules, symbols, and rituals that guide patterns of human behaviour within a group” (DePoy & Gitlin, 1998, p. 305). In this study culture refers to the beliefs, values, practices and systems shared by Australian radiation therapists.

This study found that the cultural aspects of radiation therapists were comprised of the four concepts: focus, motivator, behaviour and awareness. A guide to the structure of the chapter is provided in Table 3 which illustrates these concepts and the corresponding themes and subthemes.

Table 3 Cultural aspects of radiation therapists: concepts, themes and subthemes.

| CONCEPTS | THEMES | SUBTHEMES |
|-----------|-------------------------------------|--|
| Focus | Disease/diseased organ or body part | “Do as I say not as I do” “Talking the talk” “A change of focus” |
| Motivator | Technology | “Hope, faith and clarity” “The show must go on” |
| Behaviour | Tasks & teams | “Wiseman vs. Riskman” “Automaticity” “Uniform (ity)” “Teams of teams” “Treats for treat(ment)” |
| Awareness | Time & space | “Real Time” “Virtual reality” “To be, or not to be” |

The first section of this chapter discusses the disease focus of radiation therapists and the contributing subthemes of this concept. The next section provides the findings of technology as the motivator of radiation therapists' work. The subsequent sections of this chapter centre on the findings of the cultural concepts of task and teamwork behaviour, and radiation therapists' awareness of time and space.

6.2 Focus: Disease / diseased body part

This study found the cultural concepts and themes of radiation therapists were entrenched in the historical underpinnings of the profession and the biomedical model of health (Engel, 1977). In the early days, in the role of assistants to the doctors, radiation therapists embraced the biomedical model of health in a similar manner to that of their supervising radiation oncologists. The historical development of radiation therapy, outlined in Chapter One, was of particular importance in reference to the evolving role of the radiation therapist and the subordinate nature of the role (Sim & Radloff, 2009).

6.2.1 Do as I say, not as I do

6.2.1.1 Treatment decision making.

The responsibility for decisions involving the patient's disease and management were found to predominantly rest with the radiation oncologist who was responsible for the radiation therapy treatment. The decisions around treatment delivery were shared between radiation oncologists and radiation therapists but with the ultimate responsibility residing with the radiation oncologist. One afternoon during observations on PMac treatment unit M5 I witnessed this first hand:

Also some discussion took place about one ward patient who had uncontrollable vomiting. The nurse had sent this patient back to the ward and was cancelling treatment but one RT told them that they couldn't actually cancel treatment until the radiation oncologist had made a decision. Then it was a wait and see game played out and there was no phone call from any doctor when I left and there was only ¼ hr left in the day. FN 24/6/09

On another occasion, during a morning spent on M6, the radiation therapists encountered problems in establishing the correct treatment set up position for a

patient because the area to be treated had become swollen overnight. The treating radiation therapists consulted the charge radiation therapist and another radiation therapist who had treated the patient previously. The radiation therapists were deep in discussion while making several trips in and out of the treatment room until they all agreed the radiation oncologist should be called to look at the treatment area and make the decision on what the best plan of action was required:

On one patient this morning the RTs had some bother with the field coverage as his arm was more swollen than previously. After consultation with each other and all 4 RTs involved, the RO was called and he came down to look at the patient's arm. During this time the patient was lying on the treatment couch, with an RT in the room, being made aware of what was happening. FN 25/8/09

The findings of this study indicated the nature of the work undertaken by radiation therapists was accompanied by an understanding that the patient being treated was “owned” by the radiation oncologist (Lewis, Heard, Robinson, White, & Poulos, 2008, p. 91). This adherence to the medical model of health by radiation therapists, which reflected the approach taken by the radiation oncologists, and the understanding of the radiation oncologist’s ultimate ownership of the patient is reflected in the literature that suggests it is not unusual for the behaviours of subordinates to be closely modelled on those of their superiors (Weiss, 1977).

The medical model endows physicians with power and presents the team as a hierarchical structure (Larkin, 1978). Supervisory positions are associated with status, respect and high esteem, while the individuals in the roles being supervised often link these qualities to a higher level of achievement and aspirations of improvement, and self development (Weiss, 1977). However, the similarity in behaviour can also be associated with the power of control those in supervisory positions have over those in the assistant roles. The patriarchal dominance over some roles can dictate how the role is undertaken with those carrying out the role often replicating behaviours and terminology of the controlling party (Athens, 2010; Weiss, 1977).

Not only does the supervisor create the tasks and manage the people undertaking them but he/she also possesses the authority to ensure the workers carry out the tasks

and obey the set rules (Athens, 2010). This reflects the need for efficacy of the procedures undertaken according to the needs of the supervisor and was logical when radiation therapy first started because the doctors treating patients had work they wished to complete but found it difficult to achieve without someone to assist them in their endeavours (Larkin, 1978; Witz, 1992).

6.2.1.2 Patient information provision.

My interest in radiation therapy communication and information provision was often an opening for discussion with radiation therapists during my visits to PMac and the RAH. Two radiation therapist participants who willingly shared information with me about the work on M5 and M6 discussed their concerns over the lack of printed information about side effects of treatment available for patients in the radiation therapy centre despite the enormous amount of general information available through cancer services and the Internet:

I had quite an in-depth discussion about information sheets and how the chair of an RT supportive patient care committee was not encouraging them to go down this path. The ROs all differ in their opinions of what information should be given and besides (they said) the nurses give out information...all verbal, nothing printed. FN 4/9/09

Madge, a radiation therapist with more than 25 years experience in radiation therapy, reflected on the information process and shared her thoughts in a group interview:

But I think patient information is a lot better and, well, I, you know, I mean, I think part of that is because there has been, there was a huge gap between what patients were or weren't told by the RO. And what were and weren't told by the nurses. Madge Gr2#475

The reasons behind the perceived reluctance for treating radiation therapists to produce specific printed information sheets on side effects stemmed from the individual preferences of the radiation oncologists for dealing with side effects. Production of specific side effects information sheets was seen by the radiation therapists as hard to work out and better left alone, leaving the final responsibility with the radiation oncologists and most of the verbal information given by nurses. The individual preferences of the radiation oncologists in meeting information needs

of the patients was a possible barrier in achieving standardisation within a radiation therapy centre because the patient is the responsibility of the radiation oncologist and both radiation therapists and nurses are guided by or under the instruction of the radiation oncologist and his/her preferences in information giving (D'Haese et al., 2005).

Information for patients, provided by the radiation oncologists, radiation therapists and nurses in radiation therapy, varied between PMac and the RAH in the timing of when the information was given, the amount of information given, and how the information was given. The lack of standardisation of information giving within Australian and New Zealand radiation therapy centres is clearly demonstrated in research undertaken by Halkett et al. (2009). Although this research reported that information of radiation therapy specific information was given at four main time points: the time of the first consult, the planning appointment, on the first day of treatment, and during the treatment phase, it also highlighted a lack of standardisation in the process of information provision.

Not playing an integral part of the patient information giving, and the decision making surrounding information provision, could also contribute to the cultural focus of radiation therapists on the disease and the diseased body part because it discouraged radiation therapists involvement in other aspects of the treatment that affected the patient and narrowed the association of the radiation therapist with the patient.

6.2.1.3 Naming the disease.

Despite the radiation therapists' focus on the specific disease of cancer, this study found several decades of radiation therapy had passed before the word cancer was openly mentioned by radiation therapists beyond the privacy of a staffroom or other patient free environment. Several older radiation therapists involved in the group interviews remarked on the enforced omission of the word cancer in the early years of their careers:

Do you know? I think one of the, the biggest changes that probably Beth and I saw – do you remember when we, for years, one could never actually say the word cancer to a patient? And then they (patient) say to us, “Have I, have I got

cancer?” And we, we couldn’t say yes, no or anything like that. Edwina Gr1 #1264

And often the doctors made the decision that they felt the, psychologically the patient wasn’t capable of handling it. So they actually made the decision whether the patient was told that they had cancer. And so they had no opportunity to set their house in order or do whatever one should do. It was appalling. Beth Gr1 #1281

Like, you know, you’re not to tell him he’s got cancer, you know. We weren’t allowed to say cancer when we first started. And it was a tumour or a lesion. And really a lot of patients didn’t know. Angie Gr2 #482

The notion of not being “allowed” (Freidson, 1970, p. 141) to say the word cancer illustrated the radiation oncologist’s control of the patient’s treatment. This included giving directives for any interaction with others involved in the delivery of treatment to that patient. In general, it was actively discouraged by radiation oncologists because the patients belonged to the radiation oncologists and it was up to them if they deemed the patient was able to cope with the diagnosis of cancer, which was usually at that time associated with death (Bourne, 1995; Munro, 2003). Although this situation has changed because of legal requirements for patients to be correctly informed (Bourne, 1995) it highlighted the impact the early development of the radiation therapist role continued to have on present day workplace practices and the limitations on the scope of practice within the workplace including communication and information provision.

6.2.1.4 Following instructions.

The findings of this study indicated radiation therapists were also expected to follow instructions from radiation oncologists in other areas not directly related to specific patient treatment prescription details. During fieldwork at the RAH I had a conversation with one of the radiation therapists, which shed some light on the inner workings of the billing system and accounts. The radiation therapist worked in a position that required negotiations with the radiation oncologists about their billing arrangements. She also indicated the patriarchal tendencies of the doctors and how everyone (radiation therapists) seemed to let them (radiation oncologists) do as they wish. This was highlighted by the handling of accounts and the doctors’ decisions in

billing of some patients but not billing others, and not using the prescribed or recognised forms making it a difficult and time consuming workload. This revelation assisted in consolidating the findings of the radiation oncologists' attitude of "do as I say, not as I do" towards radiation therapists.

During an interview with a group of experienced radiation therapists the discussion centred on the radiation oncologists and the expectations placed on radiation therapists in their early years as student radiation therapists. Seb, a radiation therapist with nearly 30 years experience, spoke of her time as a young student and the instructions she was expected to follow to ensure the radiation oncologist was not disturbed or inconvenienced:

...I can remember as a student being told, if you go to Doctor So and So's office, look through the keyhole before you knock on the door because you mustn't disturb him if he's (a) on the telephone (b) having a cup of coffee. If he's not doing either of those things you can knock. But now, you, there's no way you'd go creeping looking through keyholes. Seb Gr1 #1557

Some of the other radiation therapists in the group shared their personal experiences of radiation oncologist behaviour and the demands they had made further highlighting the subordinate nature of the radiation therapist role. Seb stated the radiation oncologists had tantrums:

*Mind you the doctors used to have tantrums too. Spectacular tantrums...
Seb Gr1 #1471*

Beth also spoke about one of her memories of an incident early in her career as a radiation therapist involving one of the radiation oncologists:

Oh his (RO) stool...I gave that to a patient one day that came down, and the patient had relatives with her, so I took her the stool out and sat it there next to her.... And he said he wouldn't come back until he got his stool. Oh he was so, he was arrogant. Beth Gr1 #1492

6.2.1.5 Specialised areas of treatment.

This study found many radiation oncologists were specialists in particular types of cancer and the areas of the body that these diseases occur reflecting a biomedical

model of health. For example, some radiation oncologists specialised in breast cancer, others specialised in head and neck tumours, and others in abdominal and pelvic disease. This focus emphasised disease and body parts, and also determined a biomedical focus of radiation therapists during the planning phase of the treatment. Splitting the requests for patients' treatment planning into categories, largely determined by the type of cancer, was a structured process at PMac but, interestingly, the RAH did not do the same.

The RAH did not divide up the work by the diseased area, rather each radiation oncologist had one or more planning radiation therapists allocated to do the radiation treatment planning for the radiation oncologist's patients. This tended to have a similar effect to using the diseased organ terminology to divide the planning work because each radiation oncologist specialised in a particular area of the body and the planning radiation therapist became proficient in planning treatment for a particular diseased area such as the breast or lung.

However, it was also possible it was a strategy borne from an imperative for efficiency and timeliness in completing the individual planning requirements necessary to treat the patient because the requests made by the radiation oncologists for the provision of radiation treatment were often categorised as urgent or asap (as soon as possible). This placed emphasis not only on a biomedical approach to the work and also emphasised factors that reinforced task behaviour and time awareness of the radiation therapists.

6.2.2 Talking the talk

The division of patients according to their body area affected by the disease was also evident in the treatment area of PMac and the RAH with most of the treatment machines dedicated to treating a majority of the one particular disease type or body area such as the breast or the prostate.

6.2.2.1 Terminology.

The brief rationale in the following picture (Figure 9) sketched for me by my clinical mentor highlights the body area terminology and the importance placed on this within the radiation therapy culture. It was first suggested by my PMac clinical mentor to concentrate my observations around "breasts on the workhorse machine"

and the “prostates on the high tech equipment (machine)”. At the time I did not question this terminology but it prompted me to delve deeper when I entered the field.

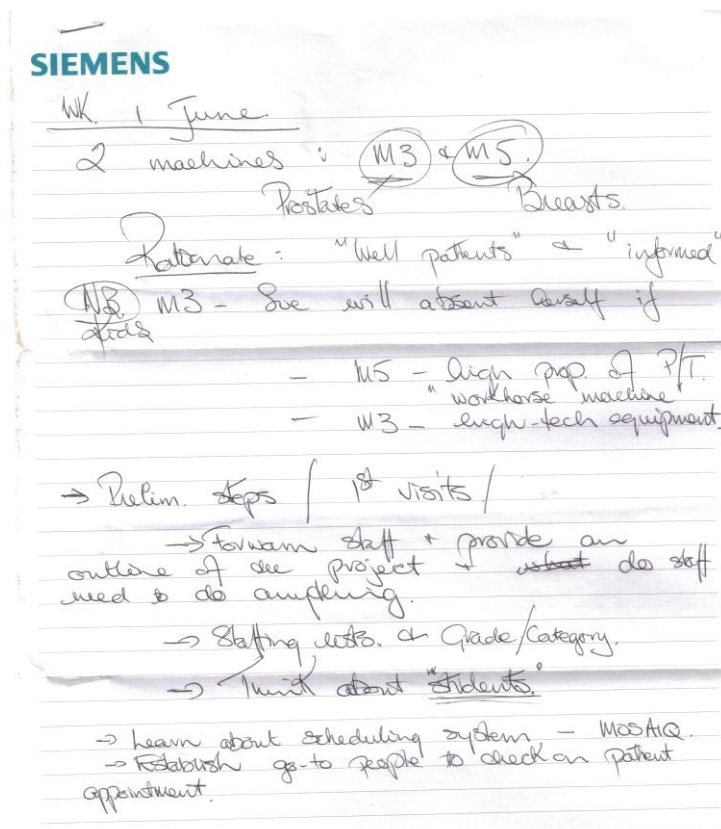


Figure 9 **The rationale for fieldwork in treatment areas of PMac**
Discussed with my clinical mentor (PMac) May 2009

This study found the combination of available imaging devices, radiation energies, and equipment required for particular setup of patients over others often predicted the treatment unit a patient would be appointed to for treatment. As mentioned earlier, it was not unusual for a treatment unit to specialise in the treatment of one particular area or type of cancer, for example, breast cancer or prostate cancer. On a number of occasions the treating radiation therapists would also discuss the appointment bookings in terms of the treatment area of the patients. On one of my visits to M3 I asked the radiation therapists how many patients were to be treated for the morning and the response was “five prostates and two children”. This reflects

what Foucault (1975) refers to as the “medical gaze” where the focus becomes the medical condition or disease rather than the person with the medical condition.

This was also briefly discussed in a group interview and Lena, a radiation therapist educator, talked about a radiation therapist using this terminology to protect oneself from becoming too emotionally involved giving another perspective to this common occurrence:

Because you don't want to be hurt, you might depersonalise and you might start talking about the prostate and the breast... Lena Gr1#2827

It is possible that the use of this terminology depersonalised the work involved in radiation therapy and it was an unconscious shield some radiation therapists used because of the physical demands and emotional challenges of the work that contributed to burnout. This notion is supported by current literature that highlights depersonalisation, emotional fatigue, and feelings of failure as three components of occupational burn out (Zellars, Perrewé, & Hochwarter, 2000). It also reflects findings in a recent PhD thesis where workloads of radiation therapists, based on throughput, were found to increase burnout and reduce the radiation therapists' involvement with patients and patient care (Ayteo, 2008).

6.2.2.2 Contrasting views.

The habit of using the affected body part to refer to patients was also affirmed in discussion with my supervisor, also a radiation therapist. Radiation therapists quite often, amongst themselves, referred to the patient by the name of the area the patient was having treated. It was a short time after my observations were over that I realised the focus in radiation therapy and consequently the culture of radiation therapists was not always patient centred as I had expected. It was not something that sat well with me and this realisation is recorded in my reflective journal at the time:

I realise that it is the RT culture that is not patient centred but rather disease focused. Finally, I realised that this fits exactly with the biomedical model of health. It certainly isn't rocket science but it has really messed with my head this week until I woke this morning and realised. RJ 13/12/09

However, several scenarios occurred during fieldwork that confirmed some individual radiation therapists did have a patient centred approach despite the overarching disease focus of radiation therapists that had emerged from the analysis.

One particular afternoon in the console area of M5, Mark, charge radiation therapist of M5, announced that one of the other treatment machines was having some technical difficulties and the treatment team would be transferring some of their patients to M5:

One patient from another machine came for treatment and, as she is frail and did not know where she was going, she was escorted into the room by Mark who put his arm through her arm and led her down the maze. The patient was heard to say “this is like walking down the aisle” She also told Mark on exiting the treatment room that she “loved him” which was later recalled and all the RTs had a chuckle about it. FN 14/7/09

This small personalised interaction welcomed by the patient was in sharp contrast to the cold clinical environment and the air of inconvenience activated by having extra patients to treat which had begun to permeate the treatment unit.

On another occasion several radiation therapists engaged with a young patient’s mother and there was obvious priority given to ensuring she was familiar and comfortable with the equipment provided for her to view the child during the delivery of the treatment. Angie, an older experienced radiation therapist, talked with the mother throughout the treatment keeping her engaged and adding a personal touch to what can only be described as a traumatic experience as a parent:

There was little to no small talk at the control panel when treating the child. Efficient/swift/prompt described the team work at this time. Angie engaged with the child’s mum. Later Angie mentioned to me “mum seemed to take it all in her stride”. FN 19/6/09

This also suggested that individual radiation therapists took time to provide personal attention to patients and their families. Both PMac and the RAH had a dedicated radiation therapist to assist parents or guardians and the child throughout the treatment process. However, the radiation therapist in this role was not always available and assistance was often left up to the treatment team.

This study found radiation therapists had individual ways of approaching the patients and asking the patient to get ready for treatment. On one occasion an elderly woman, who had difficulty in understanding the preparation procedures, was slowly escorted out to the waiting area and shown where to sit. The radiation therapist then knelt down and made eye contact and carefully and clearly explained what was going to happen after she had changed:

I observed one patient with English her 2nd language being escorted out to the waiting area and being carefully and clearly given an explanation about seeing the doctor in the clinic after she had changed. FN 21/8/09

This was another individual radiation therapist who demonstrated a patient centred approach which confirmed the patient centred focus at an individual level despite the widespread cultural disease focus.

A different situation occurred when a patient had been called to change but by the time she had stood up and started walking the radiation therapist had disappeared. I was positioned at the time where the patient could see me so she approached me and told me she was lost:

She said she needed a road map as she was unsure where she was meant to be. FN 8/9/09

Several days later I was on my way out of the treatment area when I saw the same patient and I overheard her say to one of the radiation therapists exactly the same thing:

As I was going I saw the same lady who on Tuesday had said she needed a road map, as she said it again to one of the RTs when she wandered into the control area obviously not remembering where she had to go. I thought that she was exhibiting signs of dementia particularly as she did the same as the previous time. It is these times that I believe the RTs need to be aware how important it is not to call and run but to escort these patients to the change room and wait for them so that they can escort them to the sub wait area. FN 10/9/09

This incident was one of several similar scenarios I observed that illustrated the focused attention to the diseased area of the patient might inhibit a radiation therapist from seeing and reacting to other aspects of the individual patient such as dementia,

deafness or lack of mobility. The literature suggests it is necessary to provide appropriate information and opportunities for those patients with other medical conditions to be well informed, enabling them the choice to consent to, and to undertake treatment (Long, 2001; Mowbray & Mowbray, 2010). Studies on eliciting and responding to cues from patients by health professionals involved in treating patients with cancer (Butow et al., 2008; Duric et al., 2003) indicated appropriate skills training of health professionals can enhance the treatment experience of the patient.

6.2.3 A change of focus

Conversations with some of the older radiation therapists at PMac and in a group interview centred on changing and challenging aspects of the role of radiation therapists and the early days before a degree course was introduced. The education in radiation therapy for radiation therapists prior to a degree course involved full time clinical work and most lectures were held after hours. Before being accepted into the course many applicants were interviewed to determine their suitability for the work:

Also when we applied to do radiation therapy we had to go for an interview but this is not as much the emphasis as once was. Tom B5.2 #31

And, and really I guess the, you know, I mean the, most of that sort of education was the hands on education, the other part was the technical physics ... And I suppose we didn't do all those subjects they do these days. All the psychology and...Yes, so some of that I mean that wasn't formal education was it? But it's learned, some of the psychology type stuff, we just learned. But because we were students for three years and we were working there the whole time – Madge Gr2 #116

Several radiation therapists with less than five years clinical experience agreed to discuss aspects of their experiences in a group interview. I was interested to know their reasons for choosing medical radiations to study at university. The reason behind this was to gain an understanding of what radiation therapists wanted or thought they would achieve from their work and if the task and protocol driven clinical setting was part of the goal for the newer generations of radiation therapists:

I hated pharmacy. I knew I wanted to be in the health industry but I wanted more patient contact. Lee Gr3 #330

... I looked at all the courses in medical radiations and, yes I think that definitely patient care side of things and after doing a bit of sort of researching into the roles, sort of the idea of being our own, take an image, give them a bill and saying see you later. It didn't really appeal to me. Whereas sort of having the patient there, you actually sort of build a rapport and you actually care. And with and also the, I suppose the other thing as well, when, when I found it was treating cancer patients..., because my old man had cancer a few years ago as well. So I think that sort of swayed me as well. Brett Gr3 #437

And I was going to do Nuc Med (nuclear medicine) and I changed at the end of the year because I went on and, you know, I can't even remember – was it a clinical placement or something in first year and thought, yes that's really cool. But you know, because you, you really do get to meet the patients and talk to them and there were all these thank you cards everywhere and ...you know it just seemed really nice. John Gr3 #337

The reluctance of some radiation therapists to be involved in the non technical aspects of radiation therapy were reflected in the comment made by Joyce, a UK educated radiation therapist:

I had some Australian trained RTs that turned to me and said you are UK trained so you know so you can explain when we needed to explain skin care to a head and neck patient. I know that they also had it in their training as I worked at the uni for awhile. They seem reluctant to talk about side effects. Joyce G3.2 #21

Each radiation therapist mentioned patient contact and caring as important factors in their decision making but this contrasted with the performance of many radiation therapists that were observed in the workplace. This reflects the findings of a recent study that identified three main factors in the medical radiation professions; of helping people, becoming involved in healthcare, and the use of technology that contributed to students choosing to study a medical radiation science (Bamba et al., 2008).

The current university courses, despite some coursework covering patient care, communication and psychology, centre on the specialised area of medical radiations and the particular disease of cancer (RMIT, 2011; University of Newcastle, 2011; University of South Australia, 2011). This concentrated field of learning could result in placing the patient alongside rather than central to the focus of the student radiation therapist.

6.3 Motivator: Technology

The findings of this study indicated the impact of technology on radiation therapy has been twofold, firstly through equipment and communication and secondly through the indirect route of heightened public awareness and demand. Research coupled with advances in technology has contributed to increased public awareness of cancer and as a result screening has been one contribution to earlier disease presentation and more radical radiation therapy treatments with improved outcomes and survival rates.

Although breast screening and pap smears have been in use for some time, a national campaign in Australia in the early 1990s contributed to earlier detection of cancer in many more women (Australian Government, 2010). The Prostate Specific Antigen (PSA) screening, although not supported on the same scale nationally, has increased the number of men presenting with early stage prostate cancer (Australian Government, 2010). In the last few years screening tests have also been developed for early detection of bowel cancer with the potential to increase the numbers of people recommended for radiation therapy.

6.3.1 Hope, faith and clarity

6.3.1.1 Patient care and patient outcomes.

It was found that clinical and technical advances were central to improving patient outcomes, terminology often used at both PMac and the RAH but it was a term that was also used in conjunction with patient care. I accompanied Penny, one of the radiation therapists with whom I had become quite friendly, to the PMac café for coffee in her tea break and we talked about some of the recent changes and implementations around one particular technique for treating bladder cancer. Penny referred to the new technique as one embraced by the treatment team because of the

reduction of dose to critical organs and therefore it produced fewer side effects and this is what was thought to be good patient care:

“Improving patient outcomes is good patient care. Well that’s what many of them (RTs) think” Penny said to me. FN 8/9/09

Improving patient outcomes was also mentioned in a conversation I had with one of the supervisory staff at the RAH after a meeting of doctors and radiation therapists. The meeting included a presentation about the use of a rectal balloon to assist in reducing dose to the rectum in some patients with the results from preliminary research undertaken in Europe promising a reduction in long term toxicities. Some members of the radiation therapists’ treatment teams were vocally opposed to such a device, claiming it would impact on the time taken to deliver treatment.

Questions were raised by the radiation therapists about who would be responsible for the insertion of the device and concerns about the discomfort for the patient. However, the supervisor discussed this concept of patient outcomes in terms of post treatment quality of life and this she insisted was good patient care.

A group interview on the topic of follow up of patients was discussed, fitting with the concept of patient outcomes and good patient care. One of the members of the group talked about the general lack of involvement of radiation therapists in following long term patient outcomes and proceeded to relate her experiences at a conference and on returning to her former workplace:

I went to an RT conference once, [where] this was clear. You can go out and say, “You know we’re getting patients come back with long term bowel bleeds, it’s really sad, it’s really awful. Do you have that?” “No we don’t get it.” You think, “Oh, what are we doing wrong?” You’re not doing anything wrong. Yes. But it was, it was endemic so that information wasn’t being fed back to the RTs and ... Horrifying I must admit sometimes but you know we don’t even follow our own patients, or given the opportunity to be able to follow it. But you can do if, if you’ve got that interest. And there doesn’t seem to be any interest there, you know, I sort of, I don’t know. ... I just feel even if there, if there’s a certain technique that I’m, it’s fairly new then I want to be involved in the follow up because what is happening? I don’t know. And we can do it but rarely does anyone do it. Ginny Gr2 #1616

“Patient outcomes” is a term radiation therapists use to cover both the completion of a course of radiation therapy and the long term toxicities as a result of the radiation therapy treatment. Ginny indicated some individual radiation therapists were concerned with the long term outcomes but the majority of radiation therapists did not see this as part of the radiation therapist role. She stated that follow up clinics did not encourage radiation therapists’ interest because they were normally conducted by the radiation oncologists and nurses with little or no input from radiation therapists unless a patient required further treatment. This reflected the radiation oncologist’s patient ownership and the demarcation of professional boundary setting by the radiation oncologists (Sim & Radloff, 2009).

The radiation therapists’ lack of involvement in the follow up of the patient after being responsible for delivering a course of radiation therapy could be a contributing factor to a non-patient centred focus. Several studies have explored the concept of radiation therapist led review clinics suggesting radiation therapists might be willing to undertake roles with a greater patient focus. In the United Kingdom experienced radiation therapists have undergone skills training for an advanced role of review radiation therapist (Shi, 2009; Colyer, 2004). This approach utilises and extends the skills of the radiation therapist to review the patient and is reported to improve the patient’s overall treatment experience. Further, C. Miller (2009) investigated the initiative of a support radiographer in an Irish hospital and reported findings with similar outcomes.

6.3.1.2 Critical thinking.

Critical thinking and reasoning as a professional, in particular about the appropriate use of technical equipment and the possible effect on a patient, was also indicated in the group discussion:

But I think it’s really important that, that, that as us as a profession, look at what’s coming back and why it, you know, like it, as I was saying, you know, you don’t, and, and I, I still question things. For instance, you know, somebody is giving micro-enemas for planning CT on rectums for two weeks and that ...and I’m sitting there thinking, well jeez wouldn’t that be irritating their bowels? Ginny Gr2 #1673

The points raised by Ginny in the discussion highlighted the reliance by radiation therapists on highly technical equipment, and a perceived lack of concern or awareness of the possible consequences for the patient, particularly at a team level. The literature implies critical clinical thinking and reasoning and the use of reflective practices are essential elements required in clinical practice (Higgs & Jones, 2000). The literature also suggests that reflective behaviour as a professional is important and a work environment that prohibits critical thinking and reflective practices does not support improvements and changes in practice (Sim & Radloff, 2009).

Jimmy, a radiation therapist at the RAH, suggested it was while attending university the team approach was reinforced rather than individual thinking and problem solving:

The reason is because we were trained when we went through university, we were, it was drummed into our mind that this is not a, a job that we can actually do by ourselves or you know, rely on ourselves, our own thinking to get the task done. It was, the job was mainly a, a team, teamwork, mainly involved teamwork and so when we actually went outside and worked as a qualified RT we were, you know, we, we had that in our minds that this how we go about doing things... Jimmy AB1.3 #157

Sim and Radloff (2009) suggest the task oriented and protocol driven workplace of medical radiation practitioners does not nurture reflective thinking but is resonant of “a do as I say not as I do” or “follow the leader” culture. Jimmy’s comments require further exploration because of the possible link with the number of radiation therapists involved in the delivery of university education in radiation therapy and how their perspectives of the work environment influence the learning of students. However, this could further complicate the issues implied by Sim and Radloff (2009) who suggested the demarcated role of the radiation therapist and lack of autonomy acts as a suppressant on the development of critical thinking and reasoning in radiation therapy with the restrictive workplace task and protocol oriented behaviour contributing to the majority of radiographers and radiation therapists’ belief that clinical competence is the most important criteria of a practitioner.

6.3.2 The show must go on

Technology has been instrumental in almost every aspect of the development of radiation therapy. It has impacted through the introduction, changes and improvements of the radiation producing equipment, delivery of treatment, radiation monitoring apparatus, computers in the planning of treatment, image capture, patient stabilisation devices, systems to record and verify patient treatments, and electronic appointment booking systems. This study found the treatment areas of both PMac and the RAH have an assortment of electronic equipment and gadgetry that were a visual confirmation of the importance placed on technology in radiation therapy.

6.3.2.1 Equipment and directives.

On entering the M3 treatment control room through the large glass doors with authorised access only printed on them the impression was one of a space station with the amount of electronic equipment on display. There was a central console area with four screens, control panel and several chairs to accommodate those treating. Another computer sits on a slightly higher desk away from the controls and is used for accessing appointment schedules, the music selection and patient information. The telephone was close by along with a number of folders and other papers. Above the console a sign hung from the ceiling “Please do not disturb the operators” adding a serious and important air to the scene.

The month prior to my access to the treatment areas a policy was distributed by the Radiation Therapy Services called “Distractions at the Consoles & Patient/Family/Carer Communication – April 2009”. This document was created to address a problem identified from reported incidents and provided the terminology and exact wording for radiation therapists to use in the case of possible distraction during the operation of the treatment equipment. The sign hanging above the console was part of the initiative to increase the awareness of the importance for concentration and attention to safety while the treatment equipment was in operation. It cautioned most visitors to the console area I observed but it did not always deter other radiation therapists from interacting with the radiation therapists operating the equipment.

The nature of the document was in keeping with several other documents I viewed at PMac and appeared to be prescriptive. Structured guidelines such as these could have an impact on the development of critical thinking and reasoning skills of the radiation therapists. Ginny indicated she believed that at times radiation therapists have a lack of concern for the consequences of some actions on the patient but it could be argued that this perceived lack of concern is fostered from suppressing individuals scope of practice particularly in developing decision making skills and accepting greater responsibility for the work undertaken (Sim et al., 2003).

One afternoon there was a problem with the imaging device used on the linear accelerator on M3 and Angie called the engineer. The patient laid waiting on the treatment couch while the radiation therapists waited outside the treatment room at the console for the engineer to arrive. He came quite promptly accompanied by two other engineers. It was a technical problem fixable at the control panel but it took several minutes to complete. The treating radiation therapists did not move from the control panel and did not tell the patient of the delay. It seemed the patient had become invisible to the radiation therapists and was not considered central to the task at hand but this did not appear to be a conscious action undertaken by any of the treating team.

I received a phone call one morning from one of the PMac radiation therapists who mentioned that he had been talking with another radiation therapist about my project and he wanted to share with me the thoughts of the other radiation therapist about the workplace and the impact of technology:

John spoke with me on the phone today about how his colleague thought that now there is so much more technically driven work for RTs such as on line images and correcting on line that the patients spend more time in the room and there is less over all interaction with the patient. FN 7/10/09

In an interview with Joyce, one of the M3 radiation therapists' treatment team, I asked for her thoughts on the technical aspects of the work and any impact on the patient. She indicated that the work was very involved and to provide the patient with more attention would involve another team member:

With such things as cone beam the focus is definitely more on the technical and less on the patient. If it isn't working properly the patient is lying in the room while the RTs pay attention to getting the technical stuff working and there is less focus on the actual patient. There seems no way around this unless a third person is there. Joyce14/10/09 #56-59

6.3.2.2 Conferences.

I found that attending conferences in 2008, 2009, 2010 and 2011, during the period of this research, the conferences were another verification of technology and its motivation within radiation therapy. The ASMMIRT (Annual Scientific Meeting of Medical Imaging and Radiation Therapy) is the official title given to the AIR (Australian Institute of Radiography) conferences held annually at a different location each year. Each conference boasted a trade hall where companies set up booths displaying new equipment, machines and associated gadgetry which provided a perfect avenue to encourage the providers of treatment to embrace the newest and most appealing technology and products.

The push toward newer equipment, coupled with the radiation oncologist push to try new techniques, promoted a highly technological motivating force within the radiation therapy profession. Generally the majority of presentations at these meetings centred on new techniques and the use of new equipment with patient care viewed as the “softer side” of radiation therapy. It was quite common for the companies to provide awards and financial assistance in some areas of research usually associated with the use of their products.

In 2009 the conference was a combined scientific meeting of RANZCR (Royal Australian and New Zealand College of Radiologists), AIR and ACPSEM (Australasian College of Physical Scientists and Engineers in Medicine). This incorporated the domains of specialist doctors (radiation oncologists and radiologists), radiation therapists, radiographers, physicists and engineers. Unfortunately nurses, although an integral part of most medical radiations multidisciplinary teams, were not regarded as part of such a meeting and as a result there were no nursing representatives to uphold the patient care involvement within medical radiations. This highlighted the continued importance placed on technology and the biomedical model of health within medical radiations.

After the conference I considered what this might mean from a radiation therapist perspective and decided that it is possible that not all radiation therapists are motivated by technology alone and the technology focus of the conference might not appeal to or be attended by those radiation therapists who embrace a patient centred approach:

However, I did realise just how 'scientific' [traditional biomedical quantitative are words that come to mind to describe medical radiations compared to other health sciences] the majority of the conference was. There has to be a balance, after all the patient is the centre of all and requires being thought of as a whole not a particular body part. After the meeting I reflected on this 'scientific' slant and now I believe that many of those attending would be there precisely due to their 'bent' on the technical whereas many that do not or cannot attend perhaps these people are the ones at the front who do care about supportive patient care
RJ 1/11/09

The combined meeting reflected the importance placed on technology and techniques by the medical radiations specialists and it also highlighted how many radiation therapists willingly embrace the technology and new techniques in a similar manner rather than areas of patient care. In a group discussion I asked if technology was seen as becoming more important to the profession. The response by Seb, an older radiation therapist employed at RAH, caught my attention because the AIR was named as a possible force propelling radiation therapists into a technology driven profession:

...and I think that's partly perhaps even AIR driven. That there, there's a lot of emphasis on the technical side of things rather than of the caring side of things and if you want a career, you want to drive yourself forward, you don't drive yourself forward as a carer, you drive yourself forward as a technician.
Seb Gr1 #2339

This resounded with both the historical underpinnings of the AIR and the modelling of the AIR on the medical practitioners and their associations, also fitting with the technology theme of the conferences.

The refining and updating of equipment enhances opportunities to advance treatment methods but often the time allocated to radiation therapists' research and input in this

is often limited because of staffing levels and the pressure to have equipment in clinical use and not lying idle while research is undertaken. In a group discussion involving several experienced radiation therapists, Madge and Ginny discussed their thoughts on this aspect of radiation therapy and the part radiation therapists play with the continual updates and changes that occur:

I tend to think with the introduction of, you know, new technology, I think Australia actually is wonderful, quickly putting new technology into the clinical setting and making use of it whereas a lot of centres, say in America will have researchers that, that produce all these papers but it's not that they do it in the clinical practice. Madge Gr2 #558

I actually think that we introduce new technology. And you know, take radiotherapy for example. We introduce new technology into radiotherapy. At no point do we very, or very few times, do we actually sit down and say okay let's take time. We're getting a new machine. What is it able to do? What are we going to be able to improve on our techniques - and how can we change the technique and use everything that's on that new machine to be able to do it.

All we do is we adapt our current techniques to fit that machine. Or that machine to fit our current techniques. And then you have a fight on your hands too, with the rest of the multidisciplinary team to be able to change things. Or it's political because you've got a machine; the government wants it to open or whatever. Ginny Gr2 #590

Despite the radiation oncologists striving for improvements and changes to treatment regimes there are constraints placed on the radiation therapists involvement in the research process Ginny has suggested. This mirrors the findings of Ayteo (2008) where a shortage of radiation therapists was used as a reason by some radiation therapist managers to stifle further development and research opportunities of radiation therapists because throughput of patients was the primary concern.

6.4 Behaviour: Tasks and teams

6.4.1 Wiseman vs. Riskman

Most of the work involved in the daily delivery of radiation treatment was carried out by teams of radiation therapists. Throughout fieldwork on any given day a treatment

unit with an average of 20-30 patients to treat normally had a minimum of four radiation therapists rostered to work but the number fluctuated because of sickness, students on practicals, part-time staff and staff involvement in extra work activities such as research, education and committee meetings. One day due to shortage of staff on M5 I helped the team over the lunch breaks answering the telephone and with patient transfers from a barouche to the treatment couch and back again.

6.4.1.1 Structured work.

This study found the daily workload of the radiation therapists on a treatment machine consisted of many tasks normally completed with other members of the team simultaneously or one by one followed by another team member. The majority of the work was scripted with protocols for almost all of the tasks at PMac and many of the tasks at the RAH. There was very little flexibility in how the tasks were completed and virtually no room for negotiating a different approach. The following document (Figure 10) clearly depicts one structured protocol used at PMac to ensure the correct delivery of treatment.

Ensuring Correct Patient, Correct Site, Correct Procedure Radiation Therapy Treatment (All Treatments/All Modalities)

Days to hours before a radiotherapy procedure

Step 1: Consent form & procedure request form receipt

The consent & request form must include:

- Patient's full name
- Diagnosis & Prescription
- Treatment site/laterality
- Ready for care date

Step 2: Consult the patient electronic and hardcopy files for details on

- Current management details
- Previous treatment details
- Any relevant other details such as chemotherapy, implanted pacemakers and contraindications to RT

Do not proceed if details remain unknown

Just before setting the patient up in the treatment position

Step 3: Patient identification

Staff must ask the patient or delegate to state (NOT confirm):

- Their full name
- Date of birth
- Address
- Treatment site including laterality (note: if the patient provides a diagnosis/procedure, please validate site of treatment – i.e Left Chest)

Check responses against the details contained and displayed in the radiotherapy electronic treatment chart (where available)

Immediately prior to commencing radiation therapy

Step 4: "Team time out"

Prior to leaving the treatment room to deliver the treatment, staff must **verbally confirm** through a "Stop and Confirm (Team time out) Process" with the lead radiation therapist verbalizing:

- The correct patient is on the table
- The correct site has been marked and set up
- Any accessories & special requirements are in place (shielding, bite block, bolus, strapping, packing)
- Correlation of prescription and treatment intent to set up – Final OK

Step 5: Post Procedure

On completion of each treatment, verify

- All fields in the sequence have been delivered
- Correct recording of delivered parameters & dose & imaging
- Capture of primary & secondary logins
- Code capture completed
- Next appointment checked & discussed

Poster adapted from: Australian Commission on Safety and Quality in Healthcare, Ensuring Correct Patient, Correct Site, Correct Procedure Protocol 2009
Author: A.Rolfo/ Date: 20th October 2009/References: QMS 10.9.2 & 10.9.3

Figure 10 PMac poster depicting the correct patient, correct site, correct procedure protocol (Oct, 2009)

The RAH treatment team radiation therapists had a similar methodical way of completing the daily tasks but it appeared less structured in how these tasks were undertaken and there was not a printed document that visually provided each step of the process.

The patient appointments were managed using a computer program and the scheduled appointment lists of patients for each treatment unit were easily accessed from most areas of the radiation therapy department at both PMac and the RAH. This allowed bookings and changes to be made in the clerical area and the patient to be queued in the system to alert the treatment team of the patient's arrival in the department. The daily appointment list of patients provided the foundation of what tasks lay ahead for the treatment team on any particular day. However, this was disrupted at times when there was a technical problem within the treating area. A machine breakdown could disrupt the entire treatment area and generate another set of tasks around patient treatment delays and throughput.

A team meeting with the treating radiation therapists on M5 was held in a time slot allocated between patient treatment appointments after the charge radiation therapist, Mark, had returned from a meeting of the charge radiation therapists. I was told I could stay while they discussed several issues. One issue I found of interest centred on the log in/out system, a requirement of each radiation therapist involved in delivery of treatment, and the current method employed by the radiation therapists. I was aware of and familiar with the current PMac method because I had observed several radiation therapists' teams on M3, M5 and M6.

Dee, a radiation therapist rostered on M5 confirmed and provided her views of the current system in place at PMac:

S: How does the team manage the daily work load?

Dee: We use the in/out system where the early shift will work until a certain time then the late shift log in. Dee G5.3 #14

Although the electronic log on system was widely accepted and used every day Dee highlighted an aspect of the way it was incorporated in the daily structure that for her

did not improve the balance of the workload. I also investigated the system used at the RAH to understand what I observed there because it was different to the methods used by the PMac radiation therapists. Rose, a radiation therapist at the RAH, informed me each treating pair of radiation therapists log on and then off for each patient. The system used at the RAH is alternating pairs of radiation therapists to treat the patients in contrast to the PMac radiation therapist pairs who treat continuously for an hour or more.

My observations and involvement in the use of the PMac system demonstrated to me a procedure that provided those radiation therapists not logged on an opportunity to undertake other time consuming tasks such as research and education either away from or at the treatment unit. However, after the meeting some of the radiation therapists spoke to me of their concerns that the system did not promote patient care:

After the big discussions yesterday about the 'log in/log out' system the RTs spoke to me of their concerns and how it seems to hinder patient care. They told me that they feel rushed and obliged to get back with their team mate as they are logged into the system. FN 1/9/09

The treatment radiation therapists at both PMac and the RAH undertook a daily set of tasks that required a diverse skill set with a strong emphasis on technology and technical knowledge. Each patient had an individually recorded treatment plan stored on the treatment machine computer and the treating radiation therapists downloaded the treatment sequence prior to taking the patient into the treatment room and setting them up in the treatment position. The prescription and directions for setting up the patient were usually electronically stored or recorded on a paper treatment sheet. Details recorded included any immobilisation devices, patient preparation details (e.g. removal of dentures, bladder fill, sedation, pain control), and body landmarks for reference points to obtain the correct treatment centre.

The procedure for each patient had the same steps involved but the details of what must be prepared would vary between patients. In the treatment room the two treating radiation therapists positioned the patient according to the instructions on the treatment sheet and cross checked with each other to ensure the positioning was correct. Once the radiation therapists were happy to proceed with the treatment they

left the treatment room and sat at the console in the area outside the room. Here more cross checking was done prior to turning the treatment machine on. Many treatments were not given until some images had been taken to confirm the correct position had been obtained. Precision and accuracy were important, particularly with high dose radical radiation therapy where critical structures close to the treatment volume must be avoided (J. Martin, Bryant, McDowall, & Runham, 2008).

Decisions about the images were made by the radiation therapists, while the patient was lying on the treatment couch. This was a recent change in the past few years with the newer machines having the capability to capture images of a high quality enabling on the spot decisions and adjustments to the position of the patient for millimetre accuracy:

RTs have sort of taken over the role of imaging and you know, signing off on images. Jess G6.2 #1152

Prior to this technology being available images were taken and viewed remotely with radiation oncologists making final decisions about the field placement. Now the responsibility has shifted to the treating radiation therapists to make the decisions while the patient is there, adding the requirement of an advanced skill set, increasing responsibility, and putting the radiation therapists under added pressure (Rybovic, Halkett, Banati, & Cox, 2008).

6.4.1.2 Risks and responsibility.

The relatively new responsibility of decision making about the treatment field placement placed greater importance on reporting incidents. PMac had a risk management system (Riskman) used to report an incorrect decision or procedure. This was an essential area in radiation therapy because of the importance of accuracy in the delivery of radiation doses and approaches to this are still developing in some centres such as at the RAH where there were moves being made to strengthen reporting procedures. At PMac emphasis was placed on the importance of reporting incidents ranging from a serious incident to one classified as a near miss. Strategies to resolve repeated incidences in radiation therapy were undertaken using documentation of incidents to assist in reducing causal factors.

This study found the responsibilities of radiation therapists were changing and the boundaries of the work continually shifting with the focus narrowing on the delivery of accurate treatment of the disease. Planning of the treatment traditionally was seen in the eyes of radiation therapists as the slightly more responsible work of a radiation therapist but now responsibility is increasing in the delivery of treatment too. Planning has also traditionally placed the radiation therapist in a position with less patient contact and this has arguably enabled the radiation therapist to have time and better conditions for concentration on performing the important job of beam placement and dose calculations for the delivery plan of the treatment. On the other hand, this relatively new responsibility of onboard imaging and associated decision making at the treatment console has drawn the radiation therapists away from the patient because of the importance of the tasks and the concentration required to perform the tasks. This is reflected in the comment made by Tom in his interview:

...the emphasis has been on technology more and more and so the time is taken up with more and more chores and gives less time for patient support.

Tom B5.2 #47

Another similar comment was made during a group interview, this time from Carol, one of the radiation therapists rostered on M5:

They're only sort of concerned really the younger ones, if they're treating the right side, the, the correct spot and the, and the dose. Carol G2 #1365

6.4.2 Automaticity

The findings of this study indicated the repetitive nature of the structured tasks undertaken daily by the radiation therapists coupled with less time devoted to patient interaction could encourage complacency and automaticity. Toft and Mascie-Taylor (2005) discuss involuntary automaticity occurring in occupations such as airline pilots and radiation therapists where verbal checklists are frequently used and acknowledge that in the case of radiation therapists this could be up to 40 times a day. In some investigative work the authors found a major error of a set up procedure in a radiotherapy department went undetected for a period of time during which verbal checks were undertaken on many occasions. Toft and Mascie-Taylor indicated

the checks were not effective despite the staff involved adamant all checks were undertaken diligently and carefully.

The automatic behaviour created by repetitive tasks can also affect performance in other ways. Frustration and boredom can take hold particularly if the roles are prescriptive and do not engage critical thinking skills. Atyeo (2008) found radiation therapists thought work on a treatment unit was more like working in a factory “assembly line” and perceived the radiation oncologists as believing treatment radiation therapists were merely “button pushers”. According to Atyeo this was found to stem from the combination of a lack of staff and pressure felt from time restraints.

Atyeo (2008) also indicated several older radiation therapists thought the “dynamic” younger radiation therapists would become bored with the work. This notion was supported by a focus group Atyeo conducted of radiation therapists with at least 5 years experience, who voiced their unhappiness about the repetitive nature of the work and lack of challenges. However, Atyeo reported the focus group of radiation therapists with the least experience indicated they were happy with the work challenges in using new technology. This contrasted, however, with the most experienced group expressing concern the technology was creating an automated approach to the work (Atyeo, 2000).

6.4.3 Uniform (ity)

Dressing alike can demonstrate the role similar to actors undertaking a part in a play. Personal performance and action of a role occurs within a setting (Goffman, 1959) and props such as clothing become the costumes used to set the scene and are prescriptive of the role undertaken. This study found that in radiation therapy it provided a visual demarcation of the boundaries between the radiation oncologists and the radiation therapists. Radiation therapists in both PMac and the RAH were required to wear a particular regulation uniform but the radiation oncologists do not.

Much of the general population continue to acknowledge males in a hospital or clinical environment as doctors and females as nurses and it was found this still occurs in radiation therapy today. This was an aspect of the workplace touched on in a discussion between Ginny and Madge during a group interview:

Madge: If an RT is a male, they'll still call them doctors.

Ginny: Mmmm... Yes they do.

Madge: And they... call female doctors nurses.

Ginny: So everybody is still [of] this view that medicine is males.

Madge: Even though the majority of your medical staff these days is female. And the majority of people going through medical school are female now but all the old patients will all call them, nurses and assume that all doctors are male or the majority of them will. Gr2 #1057-1065

Despite wearing a uniform radiation therapists often did not stand out as a different professional group in the multidisciplinary radiation therapy workforce. This is contradictory to the notion costume assists in defining the role of the actors (Goffman, 1959) in this case the radiation therapists. This study also found there tended to be a majority of female radiation therapists particularly in the treatment areas of each radiation therapy department, possibly one reason for people confusing the role of the radiation therapist with that of a nurse. However, the wearing of a uniform did set the radiation therapists apart from the radiation oncologists in the nurse-doctor tradition. As suggested in the literature this is part of many continued traditional practices found in hospitals and health centres (Brooks & Brown, 2002).

Despite uniform being compulsory this study found there were a couple of radiation therapists at the RAH who flouted the rules and added a personal touch with things such as colourful jewellery or bright shoe laces. This was the subject of a discussion with one older radiation therapist:

Uniform was discussed with an RT, in particular shoes and some double standards with reference to pink shoe laces on one particular individual's shoes who has been put in 'charge' of uniform wearing standards. Added to this the RT was upset to find out her 'Mary-Jane' style duty shoes (cut out on the top of the feet) were described by management as unsuitable. FN 18/11/09

Further remarks about this blatant disregard for the regulatory uniform were also made to me by some of the other radiation therapists who saw it as unprofessional behaviour that showed of lack of respect towards the team:

Several RTs mentioned the pink shoe laces to me and went on to tell me that it seemed disrespectful to the team and as if the person did not want to be seen as a professional. It was certainly something that upset them. FN 18/11/09

This indicated that these radiation therapists who did not adhere to the uniform policy were quietly rebelling the radiation therapy protocol driven environment and although members of the team they wished to be seen and respected as individuals.

6.4.4 Teams of teams

Autonomy is mentioned in several texts as a measure of professionalism (L. Williams, 1998; Willis, 1983). It is well documented that allied health professionals have limited autonomy and their professional status has been under scrutiny as a result of the dominance of the medical profession (Davies, 2000; L. Williams, 1998; Willis, 1983). This was also reflected in the development of radiation therapists as professionals. Radiation therapists were found to continue to struggle for autonomy, which was complicated further because much of the role required the work to be carried out in teams or at the very least in pairs.

As discussed in Chapter Five, there were many teams involved in the delivery of radiation therapy. Radiation therapists were part of a multidisciplinary team involving radiation oncologists, nurses, clerical staff, physicists and engineers. Radiation therapists also worked in teams with other radiation therapists in either the planning of the treatment or the delivery of the treatment. Some centres also had an education team and even others a research team. This study paid particular attention to the treatment areas and for this reason the following discussion is centred on the radiation therapist treatment team and the teams of radiation therapists on each treatment unit.

The treatment units at both PMac and the RAH were usually in use between eight and ten hours a day and normally manned with a minimum of four radiation therapists but this varied and at times a student was also present for much of the day. The teams at PMac had a charge radiation therapist and a deputy charge radiation therapist and consisted of both full time and part-time staff. The part-time staff together represented a full time equivalent position. Dee, a radiation therapist with five years experience, answered some questions I posed to confirm what happened at

the beginning of the day on the treatment units at PMac and the current structure of the staff of the treatment areas:

S: How do you start your day at work?

Dee: I get the kids ready for childcare and drop them off. At work I organise tasks such as getting the treatment sheets ready or if on beam check I prepare the machine for the day.

S: Can you tell me about the team dynamics?

Dee: Yes, there is a charge and a deputy charge on each machine. They are usually on different shifts so that there is always someone to cover if there are any problems. Dee G5.3 #5-10

I also questioned Tom, an older radiation therapist rostered to M6, about the team dynamics:

Tom: This very much depends on the people making up the team. Some of the younger ones are confident and want to make decisions that are really charge and deputy charge responsibilities as they may not have that much experience.

S: What else comes to mind when we talk about the dynamics on the machine?

Tom: These days the workload takes away the emphasis on patient support and care and sometimes we may take short cuts due to this. If a patient has a problem we might refer the patient onto someone else such as the nursing staff or as in an instance recently to the social worker. Tom B5.2 #10-17

The findings of this study indicated the necessary safety procedures in the set up and delivery of radiation treatment dictated the need for radiation therapists to work in teams. I observed certain camaraderie within some of the teams and an “us and them” attitude when a treatment radiation therapist referred to a planning radiation therapist. At times this attitude was evident within the treatment unit team where the radiation therapists tended to break into smaller teams usually consisting of pairs but occasionally an extra radiation therapist or student might be involved.

Ginny and Carol indicated that the downside of working in teams was the pressure some members felt:

But is it, ... is it a perception that within our own profession with, we've cultivated because I was talking to one of the girls today who's on doing a project and that's implementation of new technology designed to say if is going to be better or it's not. And she says that she doesn't like doing it because she feels guilty that everybody else perceives her, as not going in and out with patients all the time. And you know, have we put our own pressures on ourselves? Ginny Gr2 #1493

I've just gone back to clinical work and I've been there a week and a half and I've been told off three times for talking to patients. Carol Gr2 #1517

These issues could impact on the success of the team performance according to the literature which suggests that within teams is the existence of a shared reliance between team members with trust and cooperation necessary for the successful performance of the team (Goffman, 1959).

During the last month of fieldwork at PMac I was informed by one of the team on M6 that the charge radiation therapist had warned them to ignore my presence and not be distracted by me:

They were told by the charge RT not to talk with me and not to be distracted by me because I was there to observe not interact with them nor to interrupt the workflow. FN 2/10/09

This incident reinforced my observations that the functioning of each team depended on the mix of personalities, experience, age, gender, full or part-time working capacity and the position held. The positions were hierarchical and some radiation therapists used their position to control the treatment unit work practices and team members.

During the time I observed the daily happenings on M3 the team consisted entirely of full time females with at least five years experience who had been working together for several months. The work was completed in a calm, organised and efficient way with minimum disruption and very little social banter. This contrasted sharply with M5 where the team was a mixture of males and females, part and full timers with a range of experience.

Often the team was distracted with social talk and at times the team seemed to perform many of the daily tasks at a much slower rate than the M3 team. However, during this time, I recognised a link between two of the radiation therapists, Carol and Dee, when they were working together because they were talking about Carol's grandchildren and Dee had children of similar age. So despite a difference in age and experience in radiation therapy there was a social connection and in this case a distraction from the tasks to be completed.

Bosch et al. (2009) undertook a review of the research literature on teamwork from 1990-2008 to assess the impact of teamwork on the delivery of patient care and patient outcomes. Despite reviewing many studies on teamwork within a variety of workplace settings they did not find any studies where details of member numbers, age, gender, or team tenure were provided. This was surprising given the findings of the impact of these on the treatment teams in radiation therapy. In addition to this PMac radiation therapists added another interesting dimension to the team dynamics because there were a number of married couples working together within the radiation therapy department.

At times conflict arose and on one particular occasion the radiation therapists on M5 decided that they could treat a "new case" (this was the term given for a new patient) scheduled for treatment on M6 so they proceeded to transfer the patient to their machine but then the M6 charge radiation therapist came back from a meal break and decided that it was not necessary so the patient's details were transferred back again. The charge radiation therapist indicated the deputy charge radiation therapist had instigated it and was not happy with this but that was not actually the case. It seemed over the course of the time I was present that there was an issue of control and the charge was attempting to keep control and maintain his charge position. This was also indicated in his mannerisms with head held firmly erect and a very stern look on his face particularly when the deputy charge radiation therapist was present.

The numbers of radiation therapists in the teams at PMac fluctuated for a number of reasons. This did not seem to hinder the ability of a radiation therapist to meet commitments in other areas:

It was interesting to note that projects and work that needs to be done is not sidelined when there is less staff. FN 19/8/09

However, there were times when many radiation therapists were on one treatment unit and there would be a gathering in the side room and some socialising. This was found to compromise the time spent in some of the interactions the radiation therapists had with patients and the general efficiency of the team also seemed to wane. In contrast, the RAH treatment teams did not seem to have as much time to spend on other areas such as education, research, and meeting attendance but there was also a tendency to socialise in the areas off to the side of the treatment machine control area.

6.4.5 Treats for treat (ment)

An interesting cultural aspect of radiation therapy that this study found was the amount of chocolates and other treats available to the radiation therapists. This was evident at both PMac and the RAH where there was often a large amount of chocolates, cakes, and sweets. Patients gave these as a token of their gratitude for providing treatment often viewed as life preserving. Radiation therapists often joked about the quality and quantity of chocolates as a measure of the care provided but it had become an expected reward by the radiation therapists with periods of no gifts likened by the radiation therapists to a “drought”:

Someone mentioned lollies and asked are they a measure of patient care. I am sure that was for my benefit! FN 22/7/09

The giving of treats was often two-way because the radiation therapists would share their proceeds with patients and visitors including me:

One young patient was finishing and I observed one of the RTs giving her some lollies from the ‘stash’ on M5. FN 21/8/09

On a number of occasions there was a cake to celebrate a birthday and when a radiation therapist was going on leave. This was provided by one of the radiation therapists but on several occasions this was supplied by a patient:

One staff member is on holidays after today so she baked a cake to share with the staff of M5. I was also invited to have some cake. FN 12/6/09

Someone jokingly wanted to know, in one group interview, when students learned about the significance of treats in radiation therapy:

Do the students get taught that the amount of chocolates they get demonstrates how good they are at looking after their patient...? Gr1 #2190

This was followed by a discussion about the students' experiences on clinical placement and their feedback about the treats:

You know, they were amazed at the amount of chocolates. Gr1 #2209

The acknowledgement of the patients' appreciation for the services of radiation therapists was also discussed by the group in terms of the experience being normalised or made less difficult and thank you cards from the patients and their families with messages conveying this:

You know your card you get at the end of the treatment that, and that's what they write, you know, you've turned an, what could be a horrible experience, at least coming in to friendly faces... Rose Gr1 #1978

Sometimes patients would develop a rapport with one particular radiation therapist as in the case of Mark who was given a present for his daughter, who was quite ill at the time, by a patient while waiting in the waiting room (FN 18/6/09). My own experiences are laced with memories of patients giving gifts and cards to the treatment team to express their gratitude for making the radiation therapy treatment experience less onerous than had been expected. The discussion of this phenomenon in the group interview determined the treats radiation therapists enjoy is a common cultural aspect across many Australian radiation therapy centres.

6.5 Awareness: Time and space

6.5.1 Real time

This study found radiation therapists, particularly working on the treatment units, were acutely aware of time and running to schedule. Commenting on the efficiency of the treatment team one patient said:

...they're very businesslike... Yes well there's, I mean there's not a huge amount of time...and they've got to ...you know do their job. Mary 6.4 #40 & #292

Another patient's comments about her own perceived level of involvement while attending the radiation therapy department for treatment highlighted the possible reasons some patients are affected by the frenetic environment:

...and you do it every day, you know, so it is, yes, it sort of consumes you. Like even though you're not here for long, it consumes you for the whole time that you're here Jackie 6.3 #244

The urgency of keeping on time is also reflected in some of the patients' actions and thoughts as these comments made during patient interviews reflect:

...and the other stressful thing is trying to get here on time. Because you always think, "Oh God, if I'm late, they can't just take somebody else in." That just mucks up everybody. You know? Kathy 6.1 #911-913

Sometimes efficiency, I'm not saying – that certainly doesn't [happen] in here though sometimes efficiency sometimes cause people to move people through very fast doesn't it? Denise 6.5 #577

The number of patients, their preparation for treatment, and the use of the treatment room combined to form a "pressure cooker" situation that required keeping a close watch on timing and the use of space. Sometimes, radiation therapists have likened the treatment area to "the factory floor", reflecting the production like efficiency of the treatment delivery to an "assembly line" (Ayteo, 2008).

Two of the radiation therapists rostered on M5 thought time slots of fifteen minutes allocated for treating a patient was enough time to set up the treatment room, get organised for the patient, set the patient up, and deliver the treatment. However, Dee thought that fifteen minutes did not allow enough time to provide supportive interaction with the patient and pointed out that this was further compromised at meal breaks or on days when staff were absent because of the lack of radiation therapists:

S: Do you think 15 minute appointment time slots are appropriate?

Dee: If a patient wants or needs to talk this is not enough time to do this adequately. It is worse over lunch or tea breaks. Dee G5.3 #59

However, one radiation therapist rostered to M6 thought it was possible to spend time talking with patients and still ensure all tasks were completed despite how busy the treatment unit became:

You might be running an hour and a half behind and yes it's important to be efficient and... but there's only so much you can do. You can get each treatment sheet and make sure the patients are informed and the next one's ready to go. Jess G6.2 #1222

Jess added to this remarking on the tasks that must be completed prior to the patient entering the treatment unit and once these tasks were completed there was often an opportunity to do something extra:

Even though yes we are quite busy and we need to be on the ball I think there's always time. Like it's just what, what you make of the time. Jess G6.2 #1242

The radiation therapists' acute awareness of time and its impact on the patients was reasonable given the time most patients wait for treatment, prepare for treatment and undergo the actual treatment. Preparation required of patients can be as simple as changing into a gown or much more complex such as ensuring a certain amount of water is drunk in a certain timeframe prior to treatment. Radiation therapists disliked making any patient wait very long particularly if the patient was prepared for treatment and had a full bladder. Problems arose if the patient needed to urinate because this meant further delays with other patients also compromised.

It was not only the patient preparation component in the treatment area that radiation therapists often complained about in relation to time management. Radiation therapists had many tasks to complete each day from image review to complete checking of all details of any new cases or changes to technique on a treatment. This entailed several steps of checking the data entered into the treatment machine computer and ensuring all equipment and accessories were available to the staff who would be treating the patient.

One of the PMac nurses described their thoughts on what the radiation therapists perceived as patient care:

...well they think they are doing 'good patient care' by keeping the patient's flowing and so that they are not waiting. N1 #32

In light of the preparation often required of the patient it seemed understandable the radiation therapists would believe that the timely throughput of the patients was indeed an indication of providing good patient care.

Another aspect of this “must keep to time” ideal was brought to my attention in a conversation with a nurse at the RAH who was irritated by the general attitude by radiation therapists afforded nurses in the department in relation to time:

Always nurses are wanted by the RTs in an 'instant' (the) patient cannot wait another minute longer despite the nurse being involved with something else at the time. N2 #24

A common complaint voiced by radiation therapists at both centres was the lack of time they had for other aspects of the job such as research, further studies and continuing professional development (CPD) activities. However, no one thought this was something that could be easily fixed, nor did they think the radiation therapists themselves could do much about it because it was thought to be beyond their control. Perhaps this is resonant of a lack of critical thinking and reasoning skills (Sim & Radloff, 2009) and an issue created by the attitudes of management, levels of staffing and time restraints as the research by Atyeo (2008) suggests.

6.5.2 Virtual reality

The treatment areas of PMac and the RAH, discussed in detail in Chapter Five, were a combination of spaces, some for the patients (audience), some for staff (performers) and some that were utilised by both the audience and performers. The waiting areas provided seating and some light reading materials and sometimes a jigsaw puzzle or other activities to use to fill in the patients' time while waiting for treatment. During the interview with Kathy, one of the patient's at PMac, a comment was made about the waiting room:

As far as the waiting room goes, that's sort of a little bleak I think because you sit there and you look at all the other people and they sort of look at you.

Kathy 6.1 #189

The room I was allocated to interview patients was not an appealing space because there were a few haphazardly placed pieces of furniture. The room was often used for first day talks, or if a patient was distressed or unwell and waiting for treatment. It was not a very welcoming room but rather an ugly uncomfortable small room. It was next to the children's play area and in comparison it seemed drab whereas the children's area was a bright happy space. However, the interview room and those immediately adjacent were used less frequently than the treatment units and reflected that in the neglectful appearance that they portrayed.

Each treatment unit at both PMac and the RAH, discussed in detail in Chapter Five, was divided into three main spaces of the subwait (waiting area provided adjacent to treatment unit control area or entrance to treatment room), the control area and the treatment room (commonly known as the bunker) see Figures 5 and 6 in Chapter Five. The treatment unit was a domain under the control of the radiation therapists. It was not a place often frequented by the radiation oncologists and the nursing staff also tended to avoid entering the area as one RAH nurse indicated:

Overall the teams of RTs are caring and good with patients but I rarely go near the actual treatment machines. N2 #33

The treatment bunker housed the treatment machine known as the linear accelerator and this room was under the complete control of the radiation therapists' treatment team of the treatment unit and actions within the room were directly governed by the radiation therapists on the treatment unit. This room was found to be a very special space for a number of reasons. The machinery within it produced radiation, it was expensive, it could only be operated by specially educated professionals (radiation therapists, engineers and physicists) and the treatment it provided was in constant demand placing importance and uniqueness on the space.

The control the radiation therapists' exercised over the treatment room mirrors Riley and Manias's (2002) account of the control nurses have over the operating room and describe the space of the operating room as "the disciplinary technology of

power”(Riley & Manias, 2002). The lack of control the radiation therapists have over many aspects of their role as radiation therapists could contribute to their tight management of the treatment unit and in particular the treatment bunker.

Literature suggests the division of spaces is used to gain control of “a place”, (Foucault, 1995; Riley & Manias, 2002) and this is mirrored by the radiation therapists who have made the treatment bunker their “place” and consequently maintained control of the space and the time the space is accessed.

6.5.3 To be, or not to be

The physical spaces within the workplace are important but the radiation therapists as individuals are also important in the workplace. Radiation therapists on the treatment units work in a pressure cooker environment with exposure to patients in pain, with disfigurement and visible treatment reactions. It can be emotionally challenging for radiation therapists interacting on a daily basis with patients dealing with cancer. Alternatively the patient contact and sense of reward felt from the work by radiation therapists can be uplifting particularly in the challenging situations that occur (Ayteo, 2008).

Several comments were made in one group discussion about the death of a patient during attendance for treatment. Debriefing or counselling was not offered in those days according to Beth and Edwina:

And of course there's a great lot of emotional support for all of that. Oh, none, absolutely none. Beth G1 #636

I think in the tea room, that was the only support, the support you got was from the rest of the staff... and when we were talking and that... and then it, it was bad luck if you really got yourself mixed up because nothing ever happened. Edwina G1 #1419

Although the experiences were related with some amusement the seriousness of the impact on the radiation therapists was still evident despite the number of years since the event occurred. Within PMac and the RAH there were services available to assist staff in coping with adverse situations and workplace pressures and Seb talked about a situation at the RAH later in the group discussion. However, it did not seem a

common practice undertaken by radiation therapists to seek psychological assistance in coping with emotional situations in the workplace:

If an incident happens like when that man died in the suite three waiting room, he (hospital psychologist) came down and counselled all the staff. Anything traumatic like that and even after the suite three incident, there has, that was available if anyone needed it. It was standard about it. I don't know if anyone was overly bothered about that...But they're there and people know they're there and occasionally people use them. Seb G1 #2814

In general, there is now some recognition within PMac and the RAH of the importance of staff health and well being with more availability and provision of services to assist staff in coping with adverse situations. However, it could take time for radiation therapists themselves to realise they are as important as their patients (Ayteo, 2008) and regular debriefing could assist in lowering levels of work related burnout.

6.6 Summary

The findings of this study indicated culture of radiation therapists' appears dominated by four concepts that influenced their daily work performance. These concepts are: a disease focus, technology as motivator, task and teamwork behaviour, and time and space awareness. The study found that the radiation therapist culture embraces a biomedical model of health and places its focus on the disease of cancer but in contrast to this some individual radiation therapists displayed a patient centred focus. The motivator of radiation therapists' work is technology and new equipment, continually embraced in an endeavour to enhance both patient outcomes and work place practices.

The behaviour of radiation therapists is a combination of structured tasks and teamwork because the work of radiation therapists demands that high levels of accuracy, safety, and efficiency are maintained. These demands provided radiation therapists with a heightened awareness of time and space. This research found that radiation therapists' culture plays an important part in defining the role of modern Australian radiation therapists, and contributes to how radiation therapists interact with their patients. The key findings of this chapter relate to the changing role of

radiation therapists in treatment delivery. The findings of the interactions between radiation therapists and patients are presented in the following chapter.

7. Talking Terms

Communication in context

“All the world's a stage, And all the men and women merely players:

They have their exits and their entrances...”

(William Shakespeare, *As you like It* trans. 1978 2.7)

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7.1 Introduction

The previous chapter discussed the cultural concepts of disease focus, technology as motivator, task and teamwork behaviour, and time and space awareness. It also highlighted the importance of these concepts in informing the role of radiation therapists. This chapter addresses the impact of these concepts on the interactions between radiation therapists (RTs) and patients with cancer undergoing radiation therapy using a framework developed by Feldman-Stewart et al. (2005) for patient-professional communication. This framework was discussed in detail in Chapter Two and provides a useful structure to discuss communication within the radiation therapists' cultural context.

This chapter is divided into four sections based on the patient-professional communication elements outlined in the patient-professional communication conceptual framework (Feldman-Stewart, et al., 2005) presented in Chapter Two (Figure 1) and in this chapter (Figure 11). These elements include the environment, the participants (patient and provider), the interaction, and the goals of the interaction. The first section of the chapter provides details of the environmental backdrop in terms of the global, local, and individual impact on the participants. The second section discusses the participants (patients and radiation therapists) and what they bring to the interactions as individuals. The next section discusses the structured and unstructured nature of the interaction process between the participants, including the interaction between radiation therapists, because it was deemed important for gaining a greater overall understanding of the interactions between radiation therapists and cancer patients. The final section provides a summary of the possible goals of each participant, and the potential outcomes from the interactions.

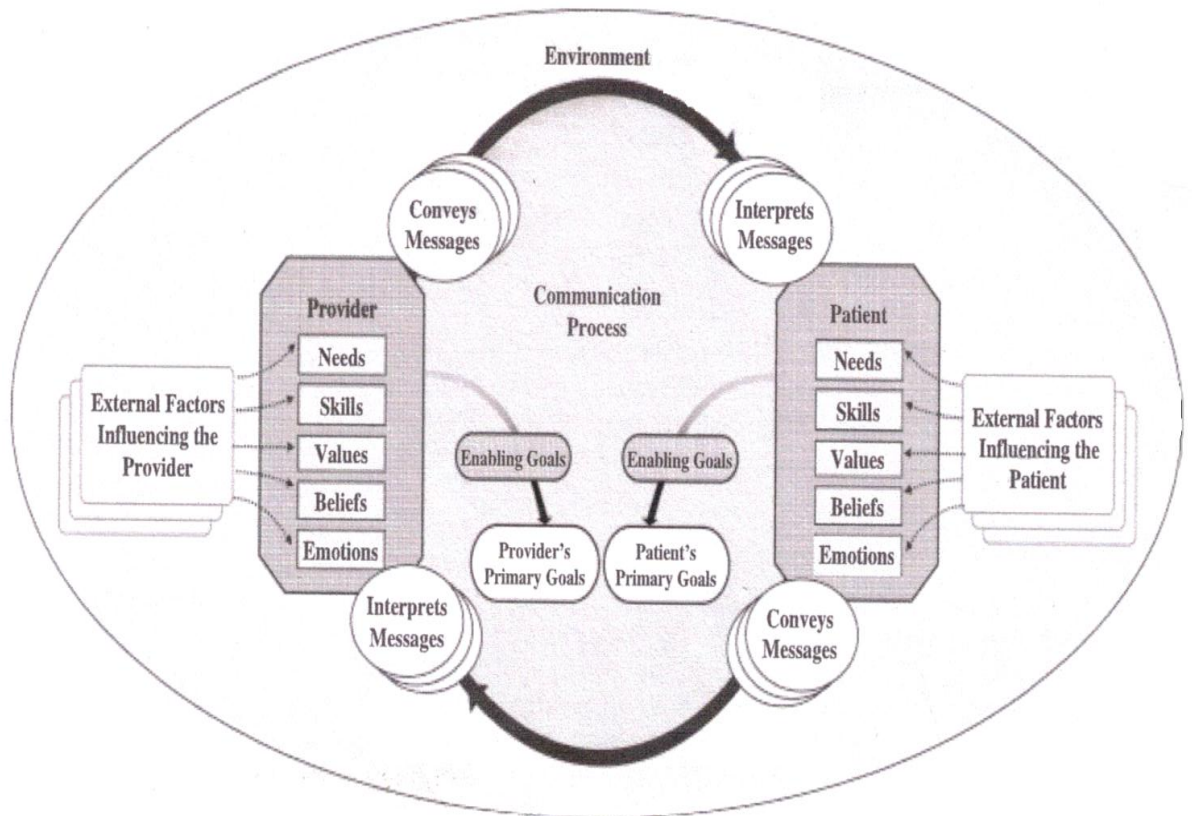


Figure 11 Patient-professional communication conceptual framework

From “A conceptual framework for patient-professional communication: an application to the cancer context,” by D. Feldman-Stewart, M. D. Brundage, C. Tishelman, SCRN Communication Team, 2005, *Psycho-Oncology*, 14(10), p. 803. Copyright 2005 by John Wiley and Sons. Reprinted with permission.

7.2 The Backdrop: The environment

The environment where interactions took place played a major role in shaping the interactions between radiation therapists (RTs) and patients with cancer. The interactions between radiation therapists were also influenced and shaped by the environment. The interactions did not occur in a vacuum or void but in a setting within a larger location, and internal and external characteristics of the patients’ individual environment and the radiation therapy environment provided a complex backdrop for the interaction process.

7.2.1 “All the world is a stage”: The external and internal environment

Several elements of the external and internal environment of patients were found to influence their radiation therapy experiences and subsequently impacted on the interactions that took place during my observations. Transport and accommodation arrangements, medical appointments, social activities, and work commitments impacted on patients’ day-to-day experiences of having cancer and receiving radiation therapy.

Patients talked about their experiences of adjusting to daily treatment arrangements alongside concern for others who might be finding it difficult. Mary talked about distance and being lucky not to have far to travel each day:

No, well I’m, I’m lucky in that I don’t have far to travel. So I can come and go easily and you know, it’s, I haven’t had to wait. One day there was a fair wait, things went wrong but that’s inevitable but you know, I’ve just been lucky I think. ... You’ve got to do it so, you’ve got to make the most of it but it would be... I can see some of the poor old things that sort of travel in from ... (country) places that would make it an awfully long day. Mary 6.4 #182

Ken spoke of his accommodation and travel experiences associated with relocation for the purpose of attending for radiation therapy treatment and how he hated the travelling that was involved for his first two weeks before he moved to the PMac apartments located next to the centre:

...we were staying at the Ivanhoe [Apartments] ...for the first two weeks and so forth, and then we came here. Ken 3.2.4 #1036

I hated travelling from Ivanhoe down to here every morning and going back and stuff like that. I only hope that when they shift the hospital, that they maintain the apartments [PMac] or something for the people from the country. Ken 3.2.4 #1092

Alan, who was from country Victoria, told how he chose to stay in the suburbs and use the Red Cross transport to travel in for daily treatment:

What’s made mine easy too is the Red Cross brings me in each morning and takes me back. See I’m from the country. I’m from...two hours away...

Well I remember one appointment I came here and I couldn't get a park in the street and I couldn't get a park in the underground park there. Alan 3.2.1 #371 & #426

Alan also spoke of his concerns of being late because he relied on transport to attend the centre each day:

I get a bit worried sometimes when you know, even the likes of today, you know, they didn't pick me up until nearly quarter past nine and my appointment here was quarter to ten. Alan 3.2.1 #528

Travelling long distances for treatment had an impact on the daily activities of many patients and added to the physical and emotional stress experienced by these patients (Martin-McDonald et al., 2003). Living away from home for several weeks impacted on the treatment experience of patients and removed them from family members, friends, familiar surrounds and their support systems (Martin-McDonald et al., 2003; McConigley et al., 2011).

The plans of family and friends also affected some patients as Denise and Kathy pointed out:

Because my family are going away...they're going off to Vietnam for a holiday, my sister is coming down from Queensland to stay with me so she'll be coming in with me... Denise 6.5 #373

I mean the whole six weeks I was only held up once and that was on a Monday night and I had my son with me and he was due to go to Japan the next day and because he was sort of, you know, he hadn't packed, he hadn't done anything. That was the only time that we were sort of, you know, (were) held up. But he got to Japan and everything's fine. Kathy 6.1 #934

Jackie's treatment and coping mechanisms included communicating with her estranged partner, who lived in another state, indicating the wide spread impact of cancer and radiation therapy treatment on her family and friends:

If I need that kind of support I just ring my kids' father in Cairns and rant and rave to him and have a scream and yell at him and he calms me down and then we're fine again. Jackie 6.3 #382

Family, friends, support groups and other health professionals were also called on to support the patient (Hinds & Moyer, 1997). As Roos (2003) suggests, the diagnosis and treatment management of cancer is an intensely personal situation and each individual has differing needs for the involvement of others.

Some patients indicated that they had taken time off from their employment because of receiving treatment and would need some time to readjust back into their previous routines because of their diagnosis and the side effects of the treatment:

I'm having a couple of weeks off, then going back to work. So I mean you want your life to get back to the way it was before. Kathy 6.1 #658

People don't understand how debilitating the actual treatment can be. Yes and how exhausted you feel and just, you just don't cope with, you know, normal stuff. You can't, you can't remember everything, you know. So you need to give yourself a bit of time. Kathy 6.1 #677

I finished chemotherapy then three weeks later I'm starting radiation. So literally getting up every day and just trying to function as normal as you can is difficult enough. Melissa 6.2 #43

One patient indicated how he wanted appointments to fit with his golfing commitments:

In the interview I conducted with Arthur, he decided to continue to talk with me after the audio recorder was switched off. He mentioned that he had been well looked after with appointments being made for him to accommodate his weekly game of golf. FN 8/9/09

Another patient was often late for her scheduled appointments because of external factors not always known to the radiation therapists:

One patient was over two and half hours late today. There was little communication when she arrived but she had rung twice to say she was delayed. It is interesting how this was/wasn't dealt with, after all she runs a minimum of a half hour late every day but insists on having the earliest appointment. (Apparently she is a health professional). FN 29/7/09

The cultural background of patients was another external factor that could affect the way a patient coped with their disease management and was raised by staff at the RAH during my observations:

Some discussions while on the TSI were about better cultural awareness as a patient currently on treatment runs a program that helps to address this and the team thought that attendance at the program would be a great idea because there are a number of indigenous people on treatment at any one time.

FN 18/11/09

Issues related to substance abuse, particularly in relation to alcohol and cigarette smoking of patients with head and neck cancers, were discussed at PMac:

I had a discussion with Carol about head and neck treatment and how those patients often have been or still are substance abusers. Apparently they are offered the QUIT nurse but they tend not to take the offer up. This discussion was triggered by one patient, currently undergoing treatment, who smelled very strongly of alcohol and cigarettes at ten am. FN 27/7/09

Several external factors that directly affected the radiation therapists' daily organisation and attendance at work were highlighted:

I get the kids ready for childcare and drop them off. Dee G5.3 #4

One of the RTs had a car accident this morning and arrived very late and flustered. Initially she needed to talk about the experience and the others were very sympathetic. FN 30/6/09

Elle described how she felt when she was sick and could not come to work; that she felt she was letting the team down. On the other hand, she had also been subjected to what she described as bullying when she was dating one of the interns and she did not feel like being at work and hated each day, leaving in tears. FN 18/11/09

The external environments of patients and radiation therapists were found to provide the larger backdrop or environment that contributed to the perspectives of patients and radiation therapists and their interactions suggesting that the environment is a

complex grouping of factors which play an important part in shaping the interactions of two participants by setting the scene both physically and psychologically.

The complex nature of an individual's perspectives and what shapes them is captured in Figure 12 where the health status of communities and populations of human beings in the 21st century are illustrated. The figure shows the collaborative approaches to health and highlights the influence and combination of individual, local and global components that shape each individual's perspectives of their everyday life.

At an individual level the perspective of a human being is shaped by the physical elements of their world from the micro-level of genetics to the macro-level of the geographical location of their environment. The social factors of family and the society in which they live play an important role in how the individual views their world, and is further complicated with the spiritual, emotional, behavioural and cognitive aspects of the individual.

The local level within Figure 12 indicates the factors that affect individuals at a community level. Factors such as infrastructure, average population age, and skills workforce mix can impact indirectly or directly on an individual. The global perspective points out the international level of factors that indirectly affect an individual's perspective of life.

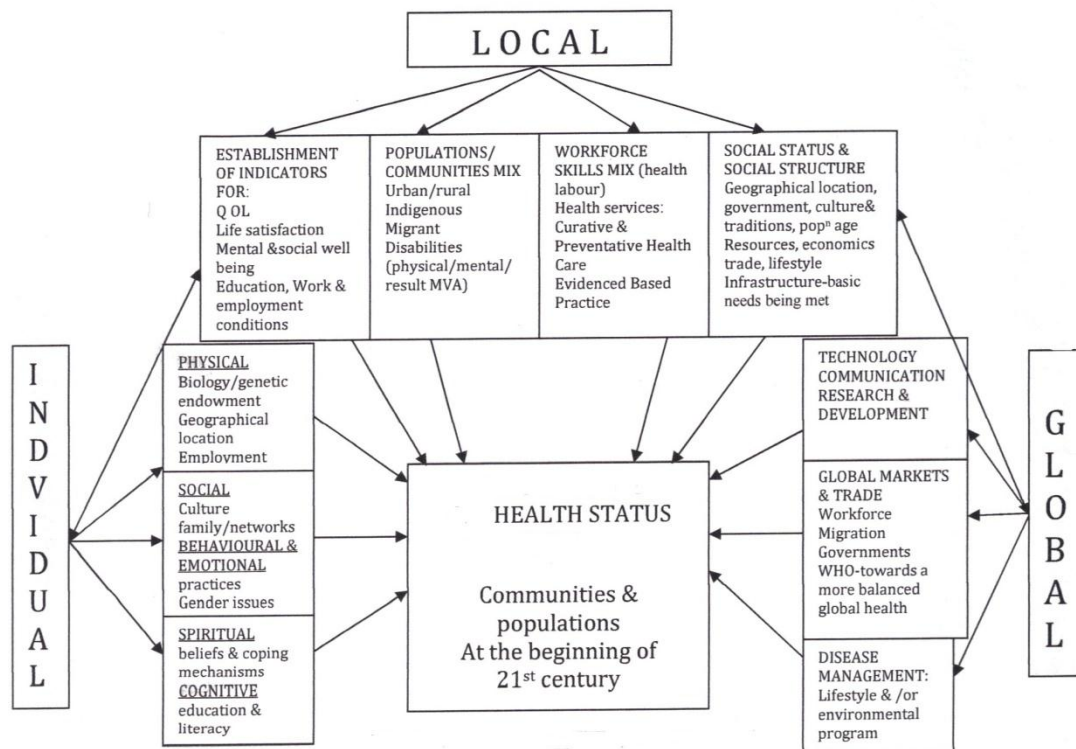


Figure 12 Summary of influences on health status informed by literature and clinical experience. (Merchant, 2007)

The key findings that the environment has an important role in shaping interactions between people is consistent with the Feldman-Stewart et al. (2005) framework that highlights these factors on any interaction between two or more humans under the heading of “Environment”.

A further model, which helps articulate the interactions between two or more individuals, is provided as a guide by Hymes (1986). Hymes’ SPEAKING model is a model consisting of eight parts and was developed to assist in ethnographies of communication. Each letter in the name of the model represents one component of interaction: **S**etting, **P**articipants, **E**nds, **A**ct sequences, **K**ey, **I**nstrumentalities, **N**orms and **G**enres. This model illustrates the significance placed on the environment and surrounds which consist of the time, place and the physical location and situation grouped together and referred to as the “Setting”.

In looking at how “places” are created and used, the setting is referred to by Canter (1977), in his place theory, as the “place” and he describes “the nature of places” as

the overlapping constituents of the physical dimensions of the setting; the knowledge of the expected behaviours and actions in the location; and the understandings held of the actions within the setting by people in different role groups (e.g. patients and radiation therapists). The notion of a relationship between the environment and the participant in a particular situation is also central to the ideas of Canter who highlights the importance of each participant's perspective of the setting where the interaction occurs and the role they play within that setting (Canter, 1977).

Goffman (1959, 1963) discusses "social situations" to capture both the physical constructs of the setting where the interaction occurs and the set of characteristics of each participant on the particular occasion the interaction occurs. He states there are two qualities of face-to-face interaction of "richness of information flow and facilitation of feedback". According to Goffman (1963) these qualities depend on several factors, for example, the distance between the two people interacting and the physical properties such as geographical location and air temperature, can impact on the interaction. In addition to this there are other factors outside of when and where the interaction occurs and there are also details that remain hidden at the time of the interaction that can affect the interaction process (Goffman, 1959).

7.2.2 "At the Playhouse": The radiation therapy environment

The radiation therapy environments I observed were an intricate blend of technology and machinery with caring and therapeutic processes completed by and for human beings. The physical location of radiation therapy, discussed in Chapter Five, was isolated from other areas of the hospital and could be a contributing factor to the conceptions of other hospital staff and the general public about radiation therapy (Hinds & Moyer, 1997). Individuals of a wide range of ages, races, religions and nationalities, with different needs to be met, coexist daily in the radiation therapy environment but the nature of their disease and the isolation of the area also impacts on the perceptions and attitudes of the radiation therapy staff and patients creating a "miniature society" (Ross, 2004, p. 206).

Cancer and radiation are both generally feared by the public because of their association with death, maiming and suffering (George, 2011). In the early years of radiation therapy, treatment was frequently given as a last resort and often resulted in

painful side effects, and this continues to bias public perceptions of radiation therapy “as an unsuccessful treatment of last resort” (Munro, 2003, p. 35). Therefore, it is important for the radiation therapy setting to provide an environment where patients and staff feel a sense of comfort.

There were some attempts by management and staff to provide patients a warm and welcoming environment within the radiation therapy departments I observed. At PMac there were a number of paintings scattered throughout the treatment areas. On each frame there was a small plaque stating who had donated the artwork and the date it was donated. These donated works of art added an element of warmth to the worn feel of the place. Reading material and puzzles were also available to patients in the small waiting areas, and in the larger waiting areas there were televisions. The children’s waiting area was decorated with murals depicting characters from children’s stories. Some games and a selection of DVDs were also available for young patients and their families:

There is a huge painting in the subwait area. This area is screened with a glass partition and there are three chairs and a table with the magazines on it. Besides magazines it has a folder with crosswords and Sudoku puzzles.
FN 5/6/09

In addition to the art and supplied activities music was played inside the treatment room at PMac via a computerised system. This allowed patients to choose what they wanted to listen to while they were receiving their treatment. It was part of a project that several radiation therapists were conducting, which aimed to provide each patient with a sense of ease and comfort (Sproston, O’Callaghan, Tongs, & Willis, 2008). Some patients left the choice of songs to the radiation therapists and on several occasions I saw patients entering the treatment room without being asked for their preferred selection of music. However, one day during my visit the appropriateness of some music was questioned by the M5 radiation therapist team:

The choice of music in the treatment rooms was raised. Conversation with a couple of the team on Wednesday involved how it was thought that the content of the songs and indeed the beat or nature of the song could be inappropriate given the patients and their current position. FN 12/6/09

Something that did occur when the new patient was on the treatment couch: the music playing at the time was 'everybody hurts sometimes...' one RT was astute and quickly changed to the next song. FN 29/6/09

The artwork, the music and the reading materials at PMac indicated that there was an attempt by staff to provide a comfortable and friendly environment for the patients and their families. However, according to Tom, the physical layout of the last treatment unit (M6) discouraged interactions between radiation therapists and patients, and impacted on the interactions of the radiation therapists within the control area because the space was open and not divided by glass doors from the corridor or patient waiting areas:

I think we need them [glass doors] as M6 doesn't have them but we want them as it gives us better opportunity to speak about work issues and a patient's treatment in confidence rather than having the potential to be overheard by patients in the sub wait area. The place was designed years ago and worked differently as the patient was set up in a room and wheeled into the treatment room. Tom B5.2 #71

The physical dynamics of M6 may impact on the interactions and working conditions of the RTs. The machine is the last one along the corridor. It has no glass doors or subwait area and shares the waiting area with M5. The sharing of the subwait means men and women sitting there together in their gowns waiting to enter the treatment rooms. FN 19/8/09

Another finding was a lack of emphasis on the aesthetics of M6. M6 was not used regularly until one of the other machines was decommissioned and a replacement made. However, the M6 treatment unit was put into daily use without attention to de-cluttering the control area where a variety of objects had been placed:

M6 area is older and some parts are curtained off. The storage of the casts/masks is behind one of these areas. FN 19/8/09

This machine was used for one or two patients a day up until a few weeks ago. Now there are approximately thirty five patients on treatment. Interesting that it wasn't 'tidied' before using the area full time. FN 24/8/09

The lack of natural light in the treatment areas of a radiation therapy centre together with the enormity of the treatment machines were found to create an alien environment to the new visitor and also add to preconceived fears the newcomer had about cancer and radiation which is in contrast to the professional care and support patients seek. During an interview one patient mentioned how the environment of the treatment bunker was akin to a science fiction film:

...there's nothing threatening except that big machine comes over you. Looks like something out of a science fiction movie. Denise 6.5 #203

In another conversation at PMac a patient reported how his background in the army assisted him in coping with the unknown details of radiation therapy and the treatment he received giving the impression he was prepared for a battle against an unknown force:

My training in the army helped me to be prepared and to cope with the unknown. John 5.2 #6

Pete also reported that he found the treatment experience scary:

At the start it was scary. I had some problems with reflux that made the experience frightening. Pete 5.3 #31

Many modern radiation therapy centres have attempted to mask some of their alienating features to create a more pleasing visual environment. The newest satellite centre of PMac, for example, has special ceiling effects in the treatment bunkers with one room having a day sky ceiling and the other treatment room a night sky ceiling. The night ceiling, as shown in Figure 13, is spectacular but taking into consideration the impressions of John and Denise, of their treatment experiences, it could add to the “alien”, “outer space” feel of the treatment room for some patients and be counterproductive to an effective therapeutic environment for them.



Figure 13 **One of the treatment bunkers, Sunshine PMac centre, showing the position of linear accelerator and the night ceiling effect.**
(Courtesy of B. Taylor, Peter MacCallum Cancer Centre, 2011)

As the literature suggests, aesthetics, in this sense, refers to the physical and psychological effects of the space incorporating characteristics such as natural light, acoustics, colours, and resources to provide a level of comfort and support for the users of the space (E. Miller, 2006). This highlights the importance of the presentation of the radiation therapy treatment environment, in terms of useable space and aesthetic appearance, in enhancing the treatment experience of patients and the delivery of treatment.

Health establishments, such as hospitals or clinics, provide care and healing and are referred to as “therapeutic environments” by Canter and Canter (1979) who propose there are two meanings attached to an environment of a therapeutic nature. The first is based on the idea therapy takes place in a particular location with the second meaning based on the idea the location will give positive assistance to therapeutic procedures (Canter & Canter, 1979). Taking both of these meanings into consideration, a radiation therapy centre would provide therapy in an environment created to enhance and be supportive in the healing and caring processes associated with the therapy.

The association of aesthetics of an environment in the accomplishment of healing and caring is supported by both anecdotal and empirical literature including a recent Norwegian study by Caspari, Eriksson, & Nåden (2006) of hospitals’ strategies for environmental aesthetics. The authors found that the environment of hospitals was not generally part of documented strategies or guidelines in the daily running of hospitals despite the evidence of available research on the importance of aesthetics in therapeutic environments (Caspari et al., 2006). This suggests the aesthetics and use of space within hospitals and clinics should be regarded as an important aspect of the treatment and healing process of patients, and highlights the significance of the need for greater consideration of the impact environmental aspects have on the care provided in radiation therapy centres.

An example of research conducted on organisation effectiveness and viability supporting the differing perspectives of users of the same space is a case study undertaken in a southern English head and neck cancer clinic (Bate & Robert, 2007). A red line was drawn on the floor in front of the reception desk by staff to indicate where patients should queue until it was their turn to approach the desk with the aim of providing a space to assist the privacy of the patient checking in. However, this line was reported by patients as creating a division that once they crossed over it they felt they became a part of and controlled by the hospital. It also caused some concern and confusion for patients in where they should stand or when to approach the desk and, according to the authors, the red line did not protect the patients’ privacy because sitting anywhere in the clinic all interactions were clearly audible (Bate & Robert, 2007). This research also suggests the necessity to include patients’

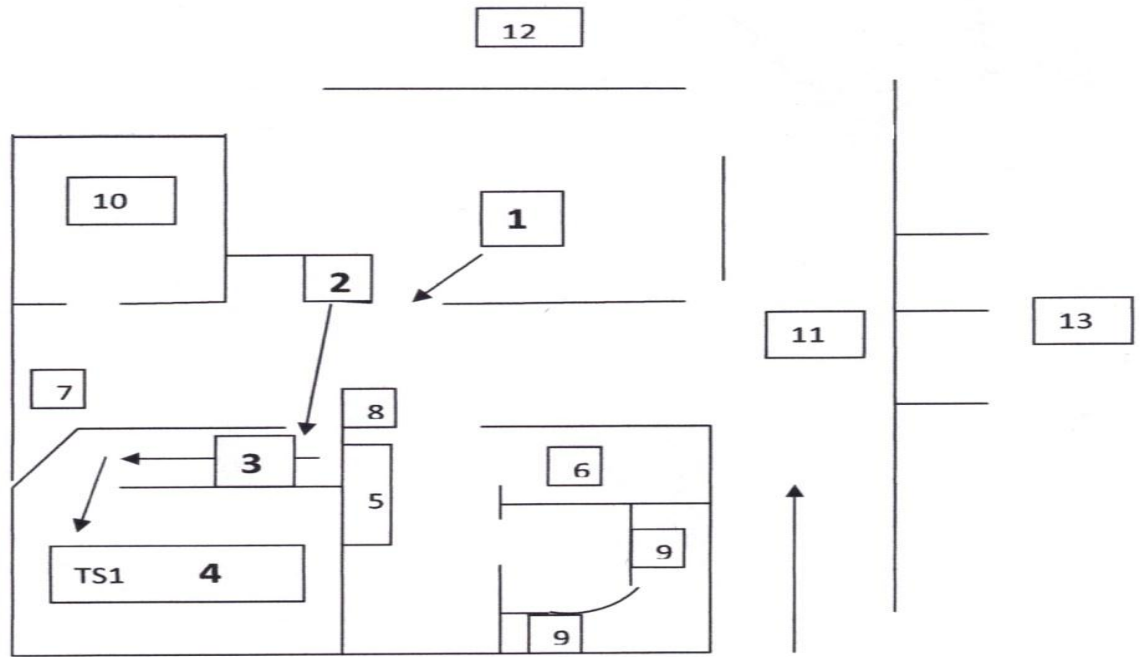
perspectives in the planning and establishment of aesthetics of the clinical environment.

The radiation therapy environment was found in this study to impact on the experiences and perspectives of the patients and radiation therapists. This reflects the need for thoughtful planning of hospital and clinical radiation therapy environments because recent studies indicated strategic planning and consultations with the users of the environment are important in encouraging the development, management and maintenance of therapeutic environments.

7.2.3 “Centre Stage”: The radiation therapy treatment environment

This study found that there are four main areas within radiation therapy treatment settings where interaction between patients and radiation therapists can take place: the general waiting room, the subwait, the maze, and the treatment room. A fifth space, the control area, is rarely a space used for interaction between radiation therapists and a patient but during my observations at both centres, occasionally patients and their companions were shown the control equipment and some interaction did take place. However, it is the space radiation therapists use the most to interact with each other both professionally and socially because of the amount of time they spend there each day.

The path taken by patients on treatment suite one (TS1 RAH) and treatment unit M6 (PMac) are presented in the diagrams of Figures 14 and 15 to illustrate the environment discussed in this section. The redrawn layout of TS1 in Figure 14 shows the layout with the four areas numbered from one to four in the order a patient visits each area with one being the waiting area, two is the secondary wait or subwait, three is the maze and four is the treatment room.

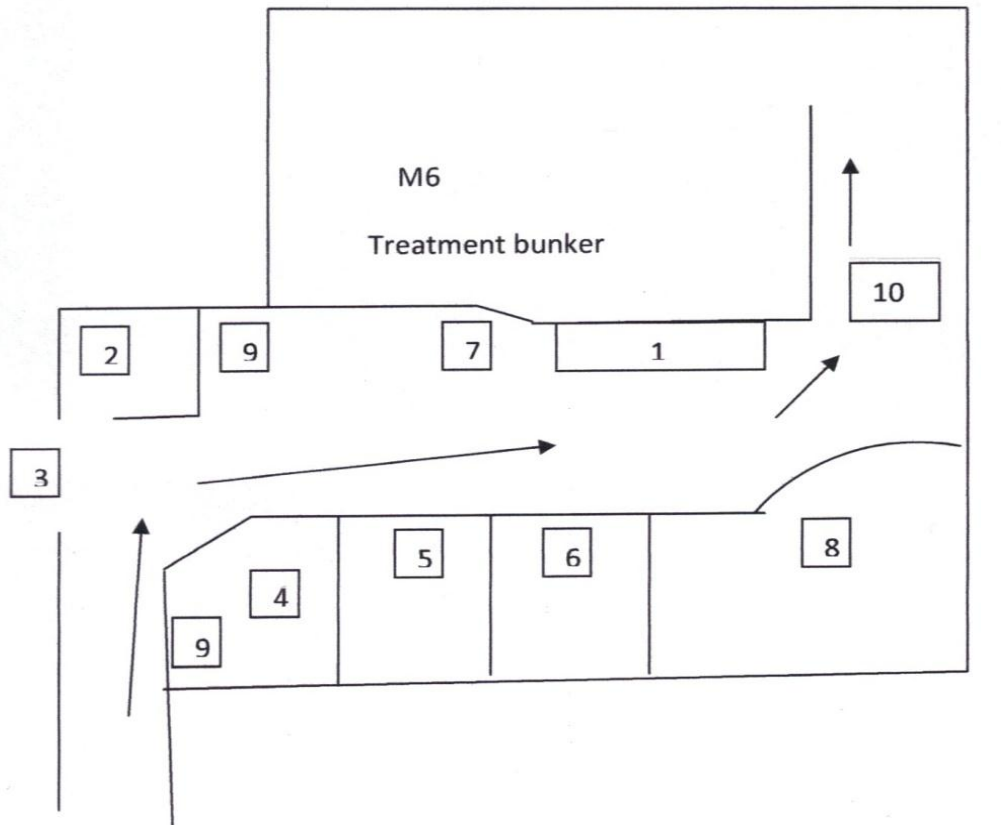


Key: path taken by patients

- 1. Waiting room
- 2. Sub wait
- 3. Maze
- 4. Treatment bunker
- 5. Controls of machine
- 6. Storage
- 7. Storage [curtained]
- 8. Sink
- 9. Computers
- 10. Staff room
- 11. Main corridor
- 12. TS2
- 13. Clinics and nurses rooms etc

Figure 14 **The reconstructed diagram of TS1 (RAH)**

The arrows depict the path taken by patients entering the treatment unit.



Key: —————> path taken by patients

1. Controls of machine
2. Sub wait
3. M5 entrance/glass doors
4. Office
5. Storage [curtained]
6. Storage [curtained]
7. Sink
8. Storage of casts etc [curtained]
9. Computer
10. Maze

Figure 15 The reconstructed diagram of M6 (PMac)

The arrows depict the path taken by patients entering the treatment unit.

7.2.3.1 Waiting areas.

At the RAH the waiting area for TS1 is shared with TS2 (treatment suite two) and is a large space filled with chairs and a few tables, including one with a jigsaw puzzle. People waiting can be seen by others walking up and down the corridor and at certain

times of the day the hospital volunteer workers (known as Lavender Lads and Ladies) push their soup and tea trolley along the corridor providing some distraction for those waiting. It is not a space that encourages personal or private interaction between a patient and a radiation therapist because it is large and open to the main corridor.

There were often people moving in and out of the waiting room and the area became quite congested on several occasions. The weather was hot so cold drinks were made available for the patients in each waiting room which could have impacted on the number of patients moving through the area:

Very hot day today of around thirty nine degrees so water in jugs provided for the patients in the waiting areas. FN 10/11/09

On one busy occasion a patient was knocked by the bag of another patient and this tipped a cup of coffee over the uncompleted jigsaw puzzle on one of the tables:

There was a waiting room dilemma with coffee spilt on the jigsaw table so I volunteered to help clean it up. FN 11/11/09

The waiting areas were similar at PMac where two treatment units shared a large waiting area and at certain times of the day volunteers pushed their trolley of goods for sale between waiting areas. However, at PMac there was the addition of a television in each main waiting area:

Volunteers came around with a trolley that had lollies/papers etc for sale.

*The waiting area seemed calm. The TV may help to occupy patients. Cool in waiting area as opposed to treatment console area. This difference may be because of the electrical /electronic equipment in the treatment area perhaps.
FN 18/6/09*

A previous patient and current patient advocate of PMac, whom I met while undertaking my observations, reported how he thought the televisions inhibited interactions between patients. He found this disappointing because he felt interaction between patients could be supportive and even therapeutic (I. Roos, personal communication, May 22, 2009).

The control areas of the treatment units were not in view from the waiting room and likewise the waiting areas are not in view from the control areas in either centre. The radiation therapists relied on the electronic appointment booking system for patient arrival updates. Before electronic appointment schedules were developed radiation therapists were forced to leave the control area on a regular basis to check the waiting room for the arrival of patients. Currently radiation therapists only venture into the waiting room once a patient is registered as arrived on the electronic appointment list in order to ask the patient to move to the secondary waiting area in preparation for treatment.

7.2.3.2 Secondary waits.

A space adjacent to the treatment room entrance, referred to as the subwait at PMac, provides a secondary waiting area for the patient who is prepared and ready for treatment. Treatment suite one at the RAH had a single chair positioned away from the full view of the main waiting area but surrounded by change rooms and disused equipment. At PMac this second waiting area was positioned close to the entrance to the treatment unit control area and was furnished with several chairs, coffee table and magazines and partially partitioned from view. The secluded nature of this second waiting space provided more of an opportunity for interaction between a radiation therapist and a patient than the general waiting room. However, each treatment suite at the RAH provided a single chair in this space and did not seem to encourage or stimulate the radiation therapists to interact with the patient.

The subwait provided a space for the patients to wait once they were fully prepared for their treatment. Preparation depended on the patient and what their individual treatment plan required, with most patients changing into a gown prior to entering the subwait area. A typical example of a prepared patient is a male patient having treatment for prostate cancer clad only in a gown and who would have a full bladder after consuming several cups of water over the previous 30 to 60 minutes. This does not provide the ideal situation for a radiation therapist to spend any length of time interacting with the patient.

The subwait did provide an opportunity for interaction but it was also often brief because of time constraints. The patient was not called to the subwait until the previous patient was receiving treatment in the treatment room. Often this gave the

patient a few minutes to change and a few minutes to wait but did not allow for any detailed interaction between the patient and the radiation therapist. One of the patients thought waiting in the subwait was a daunting experience for some patients particularly if they were nervous:

For me it's been pretty much the same. It's, it's one of the three of them usually that just comes and says, "How are you today? Come on in and get changed." I mean I think if you were a nervous type that next bit would probably be the worst in that little, little room but it's usually pretty quick. Mary 6.4 #118

However, I observed that, on a few occasions, two experienced PMac radiation therapists, Carol and Meg, used the subwait space to talk to patients about their treatment. I also noticed the first day information talk was given to new patients in this area by Carol:

A chat given to a patient on their first day of treatment prior to entering the treatment room was given by Carol. This took 15-20 minutes. This was done in the subwait area. FN 24/6/09

Meg was engaged in a casual conversation with a patient in the subwait area in regard to nausea control. FN 29/6/09

The utilisation of the subwait in this way indicated that interaction can be initiated in this area to establish the current condition of the patient. It might not be possible for a lengthy conversation prior to treatment but it could be a trigger to follow up any issues after the treatment has been delivered.

In Chapter Five the significance of the glass doors of the control rooms at PMac that separated the control area from the subwait and corridors was discussed. The doors made a finite division between the areas assisting the radiation therapists in their endeavour to deliver accurate treatment with minimum distractions. However, the same glass doors separated the radiation therapists from the patients and had become a physical barrier that discouraged interaction. The doors were like the curtaining off of the wings of a theatrical stage that divide the centre of the action from the area backstage where the actors undertake different fronts to those they use to participate on centre stage for the audience (Goffman, 1959). Several of the radiation therapists spoke about the glass doors during interviews:

...if you don't want to have patient interaction it kind of can promote not to have that because you're behind the door and you can do whatever else...

Jess G6.2 #666

Well the patients can see through them which sometimes is not good when they are peering through them. Joyce G3.2 #45

I think we need them as M6 doesn't have them but we want them as it gives us better opportunity to speak about work issues and a patient's treatment in confidence rather than having the potential to be overheard by patients in the subwait area. Tom B5.2#71

The treatment suites at the RAH did not have the same set up. They had a window, similar to a servery opening that was once used to greet the patient and acknowledge their arrival. Since the introduction of electronic appointment bookings these openings always remain closed. The arrangement made it difficult for patients to approach the radiation therapists prior to preparing for treatment. During my visits to the RAH the radiation therapists were hidden away in the control area and only ventured out to ask patients to change and proceed to the second waiting area. This was similar to the PMac procedure.

7.2.3.3 The Maze.

The treatment corridor, often referred to as the “maze”, is a long entrance into the treatment room. The patient was usually escorted into the treatment room by one of the treatment radiation therapists and the walk provided yet another opportunity for interaction to occur. The walk into the treatment room was found to be an opportunity for the patient and the radiation therapists to engage in light hearted banter about something current such as the football or favourite television shows as Mary mentioned during her interview:

...there's not a great deal of interaction because of necessity. They've got to get through heaps of patients and the machines have got to be used all the time but they're always, you know, really pleasant and there's a bit of, you know, bit of banter. Mary 6.4 #31

However, it can be difficult for some patients to talk and walk quickly and the situation can be hard to manage. I observed that when the treatment team felt time

pressured there was an air of urgency in the radiation therapists' approach and patients were less likely to engage in conversation for fear of delaying the staff from their tasks. According to Dee, sometimes in busy periods the radiation therapists used this walk as an opportunity to inform the new patient of the procedures about to take place instead of using a quiet space to speak with the patient in private:

I prefer to do this talk sitting down somewhere in private but sometimes when we are busy other RTs prefer to "walk and talk". Dee G5.3 #27

The staff and management of the treatment units involved in treating children at both the PMac and RAH have used strategies to enhance the look of the maze in order to create a more pleasant entrance to the treatment room. Treatment suite five (TS5) at the RAH had motifs on the walls (Figure 16) and the PMac treatment unit M3 had fairy lights on the ceiling of the maze.



Figure 16 **Decorated maze wall of TS5 (RAH)**

FN 27/11/09

7.2.3.4 Treatment room/bunker.

The treatment bunker, where the treatment machine was housed, was found in this study to be a special space for several reasons as discussed in Chapter Five. It was

home to expensive radiation producing equipment used in the treatment for cancer. This space was utilised in an efficient manner by the radiation therapists with very little time used for interactions. Radiation therapists were very aware of the time it took to set up and deliver treatment to a patient, and the need for keeping on time because of the number of patients scheduled and waiting for treatment. There were often pressures from planning radiation therapists and radiation oncologists for timely delivery of treatment as delays would affect waiting lists and emergency treatments. However, this special space was found to be in the control of the treating radiation therapists and the treatment machine was central to the performances acted out within it:

Because the waiting lists were just getting out of control, the, we had a bit of pressure on us saying that if they are suitable for 6 mV[radiation energy of a machine], even if it's, you know, you're slightly out then, you know, that might be the best course of action ...Brett Gr3 # 843

Time and space use was an integral component to the power of control the radiation therapists had over the treatment bunker. This spatial control provided the radiation therapists with some recognition and ownership of their space within the centre although the association with the machines was possibly one reason many others in the centre referred to the radiation therapists as technicians or “button pushers”. As discussed in Chapter Six this reflects Foucault’s (1995) explanation of people’s use of space and how it defines them.

Findings from a recent study likened the treatment areas of radiation therapy centres to the factory floor by radiation therapists because of the mechanical conveyer belt manner patients are prepared for and given treatment (Ayteo, 2008). This provides a possible reason for the growing need for radiation therapists to control the treatment bunker and console area in a bid for recognition of their special skills and role within radiation therapy instead of being seen as assistants to the radiation oncologists or thinking of themselves as factory workers on an assembly line:

...it's you know, unique [radiation therapy] you may need largely, you know, very sound IT skills but I mean you really do. Especially the way things are going I mean. It's yes...everything is either trained, everything is computer

*driven and you know if you can't handle playing around with computers
then...Brett Gr3#649*

In addition, the increase in control radiation therapists exercise over the treatment bunker and console area is indicative of the amount of time treatment radiation therapists spend within this area. Increased treatment verification tasks and safety checks required the radiation therapists to focus on their work with considerable concentration. These circumstances and safety regulations allowed radiation therapists less time for interaction with patients away from the console or treatment bunker.

7.3 The Players: The participants

The findings of this study highlighted the significance of the two aspects of a patient's adjustment to disease and treatment, and the personal and professional cultural expectations of radiation therapists on the interactions that took place in the radiation therapy environment. Each individual participant has a unique combination of physical, social, behavioural, emotional, spiritual, and cognitive perspectives that they bring to any situation. However, the role of the participant in the radiation therapy situation will determine an extra aspect is brought to the interaction by each participant. To understand the influence of the aspects of a patient's adjustment to disease and treatment, and the personal and professional cultural expectations of radiation therapists on any interaction it is necessary to examine them more closely and discussion is provided in the following section.

7.3.1 "The X factor (s)": Factors affecting interactions

The more obvious physical attributes of a person such as gender, age, and ethnicity provide a partial description of a person and were found, at times, to affect the patients' treatment experiences. Other attributes also had an effect on interactions such as hearing difficulties, chronic health conditions, and the impact of disease (e.g. the inability to speak in the case of a patient undergoing radiation therapy for laryngeal cancer) and were highlighted on a number of occasions during my observations. On M5 I observed an elderly patient hovering near the subwait and entrance to the treatment unit and looking uncertain about what she was expected to do:

One RT went to the waiting area to get a patient and returned quite quickly to the treatment unit and started to talk with a fellow RT. The patient who had been called [was using a walking frame] eventually appeared a bit 'lost' near the subwait area. Meanwhile the RT was engaged in conversation not work related so I tried to get her attention by speaking her name three times with no success. Then another RT [the charge who was busy with paperwork] told her and only then did she attend to the patient finding that the patient had not yet changed. The patient said to her that she was too quick for her to follow and wondered where she had disappeared to. FN 12/6/09

There was a new patient who has agoraphobia, who after the RTs read her notes was discussed and they forewarned each other of any potential problems with the patient. It helped prepare them for the first day chat and in assisting the patient. FN 31/8/09

Today the RT teams consisted of 2 girls and 2 guys. This scenario actually came under discussion although not in such an obvious way. Carol spoke to me, along with Dee part of the time, about communication and how some patients are difficult to engage in conversation. However, they had had an experience with a woman who was difficult to converse with in any great detail or length but when the guys weren't there she opened up and spoke a lot (which in fact they could hardly believe she was so chatty). FN 18/6/09

As suggested in the literature each participant brings to the interactions their own complex combination of perspectives derived from family and cultural background; education and knowledge; friends and the community; and spiritual and self belief that is brought to any interaction (Cranton, 1994; Mezirow & Associates, 2000). The bio-psychosocial model of health (Engel, 1977) is based on the concept of providing care and treatment to an individual with a health issue rather than focussing on the disease in isolation of the individual, suggesting the individual perspectives of each participant should be considered and respected in any interaction.

The interactions between individuals within a radiation therapy centre will also be influenced by the role of the person in that particular environment and the meaning the person attaches to the environment as discussed earlier in this chapter (Canter & Canter, 1979). Patients and radiation therapists will have dissimilar meanings of and different roles within the radiation therapy environment. There are also an added two

differing but equally important factors. The stage of adjustment to their disease and treatment will influence patients at the time they are participating in the interaction, and professional culture and workplace expectations will add to the factors affecting radiation therapists' interaction with patients.

The next section will discuss the important aspect of a patient's adjustment to disease and treatment followed by the importance of professional culture and workplace expectations of radiation therapists.

7.3.1.1 Adjustment to disease and treatment.

This study found that patient adjustment to a diagnosis and subsequent treatment for cancer to be a very individual experience. Denise, Jackie and Melissa spoke of their reactions to being diagnosed with cancer as “disappointing”, “unpleasant”, “hated”, “dreading it” and “difficult”:

... But then and I think, this has not been, this has not been an unpleasant experience for me at all. Annoying and disappointing because I thought I was all you know, I have been through it all before but I'm, I have no complaints.
Denise 6.5#615

I hated radiotherapy – I didn't want to do it. I was dreading it more almost than chemotherapy. Don't know why. Jackie 6.3 #46

And as a woman it's really a difficult thing. I've and I've spoken to others, women patients in the same thing and it's really hard. Apart from the fact that you're dealing with something that might kill you. You have all these other issues as well. Melissa 6.2 #164

Overheard one patient saying that she felt the first two weeks of treatment were the hardest then you seem to settle into a routine. FN 18/6/09

Melissa in her statement “you have all these other issues as well” indicated radiation therapy treatment was just one of many things she had to contend with in the management of her disease, and life became structured around the treatment and management of the disease.

In an account of his own personal reactions to the diagnosis of cancer Roos (2003, pp. 219-234) describes the experience as a “turbulent journey” from wellness to

being a “cancer patient”. From the time of his cancer diagnosis Roos explains it was for him a “steep learning curve” where decision making was interspersed with emotion and the emotions of friends and family. He also acknowledges the sense of “meaningfulness” he attached to the treatment experiences he underwent during his daily visits for radiation therapy. He identified the process of changing into a gown and lying on the treatment couch as representing his role as “Ian the patient”, different to his role outside of the radiation therapy centre.

It was suggested by Rotman, Rogow, DeLeon, and Heskell in 1977 that the treatment of cancer with radiation is one of the most misunderstood medical therapies. Thirty years on it is still a source of anxiety and concern to cancer patients. The commencement of radiation therapy for a person with cancer is just one of many facets of being a cancer patient as Roos (2003) indicated in his portrayal of his experiences. The interconnectedness with many other aspects is reflected in the literature in a study by Christman (1990) of various factors influencing adjustment to disease and radiation therapy treatment which found “uncertainty” and “less hope” were two factors affecting a person’s adjustment to the diagnosis and treatment of their disease.

This mirrored the results of a study using semi-structured interviews with breast cancer patients conducted by Halkett et al. (2008). Fear of radiation therapy and coping with this fear were the two main themes to emerge from the study with “fearing the unknown” one of several subthemes. However, it was found the women generally feared radiation therapy more prior to commencing treatment because once they had started the treatment they became less anxious and better informed.

It was also reported, in a cross-sectional study in Germany, that anxiety and fear toward radiation therapy treatment has a major impact on the quality of life of cancer patients. Nevertheless, it was highlighted that fear of the treatment facilities might change over time and could mask other psychosocial issues of the patient (Frick, Tyroller, & Panzer, 2007). The context in which radiation therapy treatment occurs is important according to Wells (2003) who also emphasises the significance of appreciating that radiation therapy is not a standalone event but one part of the experience of cancer.

7.3.1.2 Professional culture and workplace expectations.

The four identified cultural concepts of disease focus, technology as motivator, task and teamwork behaviours, and space and time awareness of radiation therapists were discussed in detail in Chapter Six. It is acknowledged that these concepts defining the radiation therapists' culture are further influenced by the workplace expectations of individual radiation therapy centres. However, in this study the cultural concepts were found to be instrumental in shaping the process involved in the interactions of radiation therapists with patients and between themselves.

The next section discusses the role radiation therapists play in the patients' daily visits to the radiation therapy environment and presents the findings that demonstrated radiation therapists have an opportunity to interact and provide supportive care to their patients on a regular basis.

7.3.2 “Starring roles”: Radiation therapists and patients

Each time a patient visits the radiation therapy centre for treatment a number of people are involved (as discussed in Chapter Five). However, most of the time patients spend within the treatment area usually involves interaction with the treatment team of radiation therapists on a particular treatment unit. Treatment appointments are generally scheduled in ten to fifteen minute slots, although this depends on the degree of difficulty in the technical aspects of the treatment and on the individual needs of the patient (e.g. a patient who is deaf, immobile, non-English speaking).

This study found that this daily meeting presents an opportunity for radiation therapists to provide a supportive and caring environment with the ability to reduce anxiety and fears about treatment and side effects. Radiation therapists with good skills in active listening and understanding assisted those patients with unmet needs or deep seated issues with referrals to either the radiation oncologist or to other professionals (e.g. social worker or psychologist). Jackie reported it presented a “personal touch” having the same small team of radiation therapists deliver the treatment:

Having them talk to you like a normal person to person level and because you come in daily as well. Yes it does make you feel a bit more like a person and not

just you know, next in line kind of thing. So it's good, yes, and then I suppose that relaxes you ...you don't see the same people everyday but there's maybe four, five of them that you see, if you were to see someone different all the time it would be that same thing because no one would get to sort of, not that you really get to know someone in ten minutes a day every day but have that little bit of the personal touch. Jackie 6.3 #143

Arthur spoke about being able to have a joke with the radiation therapists:

I've mainly been on M3 and they've been the same ones all the time so you get to know them and have a bit of a joke with them time too, at times you know. Arthur 3.2.3 #103

Nursing staff were involved with some patients on a daily basis but this varied from centre to centre and on the specific needs of the individual patient. I confirmed with Tom the normal nursing and radiation oncologist practice of reviewing the patient at PMac:

Yes they see the patient on the first and last days of treatment. If the patient wants they can be seen more regularly. The doctors tend to see the patients weekly. Tom B5.2 #25

John recalled a situation when he had called upon the nurse to provide support for a patient because he felt that he was unable to spend time with the patient:

...we had a lady who was coming in for treatment for breast cancer and her husband had just been diagnosed with prostate cancer and just while we were chatting to her as we were setting her up, she told us and then she just burst into tears and I you know, I'd tried to, you know console her or whatever and you know, you know, whatever... And then get her through the treatment and then because I really didn't have the time to go through things with her I made sure that the nurse was around straight after the treatment for her to go and have a chat to about treatment options for her husband and...just to get it together because they're less, well I don't know. Maybe they (nurses) are time poor as well. But I figured that she had more time than I did, to go through that. John Gr3 #1410

One patient indicated he had not seen the radiation oncologist regularly but he did have regular contact with radiation therapists and the nursing staff. Another patient stated she did not have regular contact with the doctors only the radiation therapists:

I've only seen one doctor, was it the once when we came...during the treatment, because we've only seen one doctor but the rest of the contacts been with the radiotherapists [RTs] and the nurse. Ken 3.2.4 #61

...besides the radiotherapists [RTs], I never really had anything to do with the radiotherapy oncologist. I didn't even know there was such as thing as a radiotherapy oncologist and the surgical oncologist until about a week ago. Jackie 6.4 #351

This study found a nurse is usually involved if a patient has daily dressings, chemotherapy or the patient depends on medication prior to, or after, treatment. However, the majority of patients did not see a nurse on a daily basis at PMac or the RAH. The number of times a radiation oncologist will see their patients varies from radiation oncologist to radiation oncologist, and centre to centre but rarely does a radiation oncologist see a patient on a daily basis while the patient is undergoing treatment.

Radiation therapists are often seen by other health professionals as “button pushers” and “technicians” (Ayteo, 2008), and this is sometimes reflected in the actions and attitudes of the radiation therapists about patient care. This was not; however, always the case, as Tom suggested:

Well there are workflow and staffing issues that do not always allow time for the RT to give justice to the issues a patient may have but as in the case the other day I had to sort a patient's issues prior to her having treatment which ended up making the treatment machine run late but it was probably better in the long run for all of us, the patient and the team as it has been smooth since then. Tom B5.2 #19

Patient numbers and the emphasis placed on time and the throughput of the patients seemed to distract from the supportive patient care aspects of the radiation therapist role. The importance and urgency placed on the throughput of the patients was captured in the following remark by Madge during a group interview:

...we've got to get our, we, we don't want to stop behind, we don't want our machine to run late so therefore we actually have to get the patients through, do you know what I mean? Madge Gr2 #1495

During her interview Dee shed some light on the factors that impact on the daily communication that would usually take place with a patient. Dee suggested that there was some supportive care provided through interaction with the patient but there were barriers that could prohibit the level of care offered:

We talk about how they are going. Any tiredness particularly if it's in the first week to check for other issues or if any referrals may be needed. Also we can talk about social life and activities. Personality, English as a second language and deafness can impact on conversation and communication. Who you are teamed with can also impact on it. It tends to be one person that takes that role of communication while the other person prepares the treatment room.

Dee G5.3 #33

A person's adjustment to a diagnosis of and treatment for cancer will depend on the many factors discussed earlier in this chapter. Studies have found that there are various time points during a course of radiation therapy, including prior to planning treatment, start of treatment, during treatment, and at the end of treatment where the patient will change and adjust attitudes and responses to their circumstances (Halkett et al., 2008; D. Harrison, Galloway, Graydon, Palmer-Wickham, & Rich-van der Bij, 1999; Stiegelis et al., 2004). This suggests the ongoing support of the patient throughout the treatment trajectory is important and the interaction opportunities between the patient and radiation therapists could provide structured supportive measures to ensure the needs of the patient are met.

7.4 The Performance: The interaction process

This study identified that the communication between radiation therapists and patients, and between radiation therapists is divided into several parts. The structured and unstructured concepts of the interaction process of radiation therapists and patients, and between radiation therapists are discussed in this section and illustrated with the corresponding themes and subthemes in Tables 4 and 5.

Table 4 The concepts, themes and subthemes of patients and RTs interaction

| CONCEPT | THEME | SUBTHEME |
|---|---------|---------------------------------------|
| Structured interactions (mandatory) | Scripts | Scenario I (Information provision) |
| | | Scenario II (Instruction giving) |
| Unstructured interactions (not reinforced) | Cues | Scenario III (Informal talk) |

Table 5 The concepts, themes and subthemes of interactions between RTs

| CONCEPT | THEME | SUBTHEME |
|---|---------|---------------------------|
| Structured interactions (mandatory) | Scripts | Act I (Collaboration) |
| | | Act II (Communication) |
| Unstructured interactions (not reinforced) | Cues | Act III (Conversation) |

This section discusses the structured and unstructured interactions between patients and radiation therapists in three separate “scenarios” of information provision, instruction giving, and informal talks.

The second half of the section discusses the interactions between radiation therapists and this is also divided into structured and unstructured interactions of the three “acts” of collaboration, communication, and conversation.

7.4.1 Scripts: Structured interaction (patients and RTs)

7.4.1.1 Scenario I: Information provision.

Findings indicate that there are several time points in the treatment journey when information about radiation therapy is generally provided. The patient is initially given information by the radiation oncologist prior to a treatment planning session. Further information about the planning session and treatment is offered in a number of ways usually by radiation therapists or the nursing staff depending on the centre’s preferred approach.

Once the patient is ready to commence treatment information is given to them on their first day of treatment and usually includes information about preparation for radiation therapy, what the process entails, possible side effects, and the recommended skin care for the treated area. At PMac a first day talk is normally conducted by a radiation therapist and followed up after the treatment by a nurse. PMac radiation therapists have a check list to structure the information giving on the patient’s first day of treatment. This is reflective of the protocol and task driven behaviour of the radiation therapists’ culture and indicative of how this behaviour influences their current approach to communication.

I was unable to be present at any of the first day talks because the consenting process for this study, accepted by the ethics committees of Curtin University and PMac, did not provide the opportunity to discuss participation with patients prior to their first treatment. However, I asked several PMac radiation therapists what happens on the first day of treatment to gather different individual perspectives and to understand the procedure:

We do a first day chat using guidelines of the information. Sometimes I feel that although we need to talk about skin care this is also provided by the nurse after treatment in greater detail. Dee G5.3#24

We see them on the first day and you have that formal chat with them.

I think that can be quite daunting for them and I mean, different people do it in different ways. I tend to keep mine quite short and sweet because I feel like it's way too much information overload if you try and go over everything. I tend to just go, like do the ID check and then go over the processes coming in each day and where to sit and where to report to. So that, you know, they'll, yes, be in the right spot each day and that and then just a little bit about what to expect on the first day and the way the machine will operate and what we will actually be doing but I don't tend to give them too much information about side effects or you know, go into too much detail. I think, you know, I wish we could but I think if they get too much information on the first day they're just not going to retain it. Jess G6.2#296

All the general side effects information and skin care and so on. The skin care was put on the first day check list to remind the RTs what they should tell the patients as it was being missed. Joyce G3.2 #19

Unlike PMac radiation therapists the RAH radiation therapists do not provide a structured information talk on the patient's first day but according to one nurse informant the radiation therapists rely on the nursing staff to present the patient with the appropriate information:

...we chat to the patient on the first day of treatment prior to the patient having treatment. The nurse would have met the patient at sim/CT and taken the history and so on and then this is a natural progression when they return to commence treatment. N2 #27

Although the RAH radiation therapist often relied on the nurses to provide information and support for the patient highlighted a focus on technical aspects of the radiation therapist role there were times I observed radiation therapists discussing aspects of the treatment with a patient and offering support while escorting them into and out of the treatment room:

Most of the conversations of the RT and patient occur during the walk into the treatment room. Once the patient is on the treatment couch RTs go through set up procedures and leave the treatment room. FN 10/11/09

In discussions about the structured approach of the PMac first day information Dee and Joyce mentioned skin care as an important part of the information despite the nurse reiterating this information in more detail to the patient on completion of the radiation therapy on day one. In contrast, Jess talked about the need to keep the information to a minimum because the patient might not be able to recall much of it at a later time. Regardless of the structured style of the first day talk adopted by PMac radiation therapists there was some ambiguity in the delivery of information.

The use of markers on the skin was one issue Kathy talked about. She did not feel she was adequately informed at the start of her treatment about this. However, she acknowledged that it could have been due to not hearing what the radiation therapists said at that time:

Not annoys you but the way they've got to write on you every time. I mean I guess they've got to do it but then you come back and all your clothes end up with texta all over them that you can't get off. But I mean that's obviously something that they just have to do but it would have been good if they had have said right from the word go, and I don't know whether they did and I just didn't hear them? Kathy 6.1#340

Exploring the general information giving of radiation therapists further and to gather a male radiation therapist perspective I asked Tom what sort of information he felt comfortable giving to patients:

I am happy to give general side effects information including skin care and appointment information. If there is a particular medication then I would ask advice of the nurse or refer onto nursing and as I mentioned before I would refer anyone having other difficulties to the social worker and so on. Tom B5.2#34

Several of the patients gave further insight into what the first day talk meant to them. The comments made by the patients about the radiation therapists spending time with them and discussing various aspects of the treatment were very positive and

indicated the practice assisted in a level of comfort about radiation therapy for the patient:

They explained to me even though I'd read the literature on it, they explained to me about the side effects, about the burning of the skin, how, you know, the tiredness, things like that. They explained how long it was going to take. It, it was pretty thorough, I was pretty happy with it. Melissa 6.2 #30

Yes I got, got heaps of information and I was on a different machine for the first couple of treatments and they were beaut. They explained everything and you know they told me that the machine would make noises but we'd run through it, had a dummy run the day before. Mary 6.4 #19

First day of treatment, they were really, they were great. The people here are fantastic. Jackie 6.3 #116

At PMac the first day interaction between radiation therapists and patients appears an appropriate time to familiarise the patient with one of the members of the treatment team and a useful measure to assist the patient in coping with the situation. It is also an opportunity for the radiation therapist to assess the degree of anxiety or issues the patient may have prior to commencing. The facilitation of rapport building between radiation therapists and their patients is highlighted in a recent study.

Halkett et al. (2010) used simulated radiation therapy planning sessions to ascertain the role radiation therapists and nurses play in the provision of information at the planning appointment prior to the start of radiation therapy treatment. The results of the study indicated that radiation therapists have an important role in the provision of information, and can assist in the reduction of anxiety and stress of patients. However, it was reported that radiation therapists' communication with the patient was restricted by time and the need to perform required planning procedures. Participants of the joint interview forums conducted for the research agreed that a pre planning consult would assist the development of a relationship between the radiation therapist and the patient. It was suggested this meeting would foster open communication, mutual engagement, and greater opportunity to understand and record the patient's individual needs and concerns (Halkett et al., 2010).

Unfortunately, the first day of treatment can become more stressful when the set up does not go according to plan as John and Pete related to me. Very little verbal communication takes place when the patient is taken into the treatment room and they are immobilised on the treatment couch; in particular when a head and neck mask is used which could add to the patient's feelings of stress and anxiousness:

My first day was hard as the mask was loose. The swelling I had when the mask was made had gone down...it took a long time. [To be set up in the correct position] John 5.2 #7

Wearing the mask and the unknown was really quite scary. Pete 5.3 #32

Tim's thoughts about being informed of possible side effects and outcomes were different to most of the other patients. He was of the opinion it was better to find out about the side effects of treatment when they happened not a week or two in advance:

If you were told you were going to break a leg with a truck running over it five times next week it would be terrible. Better for it to happen and then deal with it. Tim 5.7 #50

In reality it is the responsibility of the radiation therapist to deliver the radiation treatment safely and accurately which places an ethical responsibility upon the radiation therapist to provide adequate information to assist a patient's understanding of possible outcomes resulting from the delivery of the radiation. However, it seemed much of the information the radiation therapists give focuses on the technical aspects of delivery and information about the physical impact on the patient's body is left for nursing staff to impart. Adequate information was not given according to Jackie who said she had not received information about how radiation therapy is delivered and what it does:

...well the physical aspect of about the actual machine and what you're going through, I don't think the information is there. I still couldn't tell you exactly what radiation therapy does. I couldn't tell you exactly why it leaves you fatigued. Why, I mean you can guess but I wouldn't know the ins and outs why. Usually I ask questions if I don't know the answer to but I haven't really... Jackie 6.3 #343

The account given by a patient having treatment on M3 also indicated sometimes information is either not given by the radiation therapist or not heard by the patient and reinforcement of information to counter for this is not always provided on subsequent days:

The only thing that was a bit, well the bit of a muck up really I suppose was I got here the first day. ... The first day I was up here and they said, "Drink your water," and I did and I got here just the normal time for the appointment time and so I did that the next day and they said, "When did you finish your water?" I said, "Oh, a couple of minutes ago," or whatever it was. And she said, "Oh you're supposed to drink that half an hour before you have your radiation done." Now ... I thought, well that wasn't explained to me on the first day. But once I knew that, I've been getting here in time and, and in plenty of time to drink the water and have it done in half an hour. Arthur 3.2.3 #32

In contrast, explanations were given along the way by some but not all radiation therapists according to Kathy when she related her experiences of being informed by radiation therapists:

They (RTs) were really nice and they explained things as they went. Not all of them but some of them would sort of say well, "We're doing this for this reason, and for that reason." And especially like when it came to having the booster treatment at the end, a couple of the girls were terrific. They'd sit there, "Do you understand what, what all this is?" Kathy 6.1 #100

On the other hand, Ken felt his needs were met very well by all staff:

I think in most cases I've never come across any of [the] staff that have been either non-communicative or anything like that. They've all been very helpful and I've never had to prompt anyone for, for anything. They've, you know, they've come forward with anything... I needed to know, yes. Ken 3.2.4 #44

An interesting situation occurred during observations on M5 when a patient was shouting at a radiation therapist to stop because the radiation therapist was not listening to him pre-empting what he was saying, talking over him, and getting ahead of him while walking through the control area toward the maze. The patient was elderly and found walking difficult. He became irritated and raised his voice in his

attempt to be heard. This was not indicative of good and effective communication and several days later Dee raised her concerns about the incident in a conversation with me:

Dee mentioned the episode from a few days ago on M5 with the patient shouting at the RT and said she thought that it showed a lack of effective communication and I agreed. FN 18/6/09

During my observations this was the only occasion where I witnessed such an adverse interaction between a radiation therapist and a patient. The expectations of timely throughput of patients could be one reason behind the display of poor communication as Ginny discussed with the group:

I just feel that radiation therapists as a group are under this incredible, terrible pressure of patients' throughput. I don't know how to break it but in actual fact if the targets do not allow for good patient care as far as I'm concerned, I, I mean yes we can get it treated, that's fine if you want to just make it, you know, we can treat you like it good as gold. What our skills are, are a lot more involved in that and we are still achieving them but not I think to a satisfactory patients' perspective. Ginny G2 #2631

This study found information provision to be an important component in radiation therapy and this is supported by several studies that have shown strong links between information giving and supportive care of cancer patients (Häggmark et al., 2001; Halkett et al., 2007; D. Harrison et al., 1999; Hinds & Moyer, 1997; Long, 2001). Not only is information giving important but this study found there is a need for instructions to be given to patients for the safe and accurate delivery of treatment.

7.4.1.2 Scenario II: Instruction giving.

A number of instructions are required to ensure the patient is ready for treatment. Preparation, as discussed earlier, required the patient to be instructed in what they must do such as remove clothing and wear a provided gown. For others, it might also include bowel preparation and drinking a specific amount of water.

It seemed there was either a lack of instruction or the patient did not hear the information given. This lack of recall was discussed by Arthur with his confusion over his required water drinking:

Now that was about the only thing really that could have been explained a bit more to me on the first day. That you're supposed to have [water] half an hour before you, you need to, before you have your radiation treatment.

Arthur 3.2.3 #38

I asked several radiation therapists about the way the gowns should be worn to determine if there was a lack of recall or lack of instruction:

The gown should be worn with opening at the front so undies and bare backs are not hanging out. This is usually explained at the 1st day chat but some patients don't really listen and I guess even if they [the patient] get told they tend to disregard that and keep doing it. Tom B5.2 #78

I don't really have any issues if the patient wears it backwards. A few prefer it if they have to lie prone but even if we say that it should be with the opening at the front some of them don't really listen. Joyce G3.2 #41

I don't know why but I think that some patients do get told to wear their gown like this. Having had a scan recently I had to wear a gown and I realise how vulnerable you can feel. Dee G5.3 #52

This highlighted that there was a degree of confusion over the correct way to wear a gown with patients not listening as one reason given for people wearing it the wrong way. Despite Dee mentioning how vulnerable she felt wearing a gown the radiation therapists questioned did not see the gown issue as a real concern.

Inside the treatment room the patient is instructed daily to provide identification (ID) details before he/she is immobilised on the treatment couch. Daily verification of ID is mandatory to ensure the safety of the patient and to make sure that the correct information for the patient is downloaded to the treatment machine. The patients at the RAH have an ID bracelet attached to their wrist at reception prior to entering the waiting room. This band is checked against all the details in a similar fashion to the verbal checks carried out at PMac. Several patients spoke about their experiences

with the radiation therapists and set up procedures within the treatment room indicating the precise, technical nature of the role of the radiation therapists within this setting:

They go through all their numbers and they check your date of birth and they check everything so you know, they've got all their angles or whatever it is they get right, right and they measure everything up with a cold ruler and, and so forth. Mary 6.4 #41

Pretty exacting sort of a business isn't [it] I mean, you know, getting all the measurements and everything right. That's, you know, they go to a lot of trouble doing that don't they? Alan 3.2.1 #209

Oh they are ... from what I, yes they seem very professional, professional to me, you know. They, they, oh a couple of times they forgot to ask my birth-date but... that's only happened a couple of times but most times everything's good, you know... Arthur 3.2.3 #147

And I think, I mean, you know, obviously when you have an x-ray, they all leave the room. When you have this sort of thing, they leave the room and shut the door and have a light flashing so you sort of think, "Oh." Kathy 6.1 #150

This emphasises the importance of instruction giving in radiation therapy for the safety of the patient and the accuracy of the treatment given. It also emphasises the importance of how the instructions are given to ensure the patient understands and carries out what is required of them.

7.4.2 Cues: Unstructured interaction (patients and RTs)

7.4.2.1 Scenario III: Informal Talk.

The patients talked about the treatment room experience as “professional”, “exacting business”, “going to a lot of trouble”, “measurements and numbers”, and “flashing lights”. This portrayal depicts a cold, clinical setting, which is not conducive to cheery friendly chatter. However, the level of comfort provided through interaction with the radiation therapists was mentioned by several patients as important to them. Chatting with the radiation therapists about everyday life not only helped patients to

feel comfortable and relaxed in the setting but, importantly, it helped to normalise the situation:

But other than that, no everything, as I said the staff particularly here have been really good and, and they're not, they're like, they make you feel comfortable which is one of the most important things. Melissa 6.2 #115

...they just sort of, because I'm not a very talkative, relaxed type person but that little bit of chat I think is, is really good. Mary 6.4 #43

The main thing is that they [RTs and nurses] talk with you and call you by name. They are all friendly. John 5.2 #9

I have a chat to them you know, and then they disappear while you're being zapped and then come back and have a chat about the footy or anything, you know. Alan 3.2.1 #236

You've got to have that interaction instead of only just going in there, getting up on the table and not saying a word. If you got a reaction like when you go, when you – see you again tomorrow and, and have a bit of a joke and that, you know. Everything's totally different. If, if you had somebody there that just sort of looked at you, "Get up on the table," yes, measure you up. "Bye." You know. And not say anything else; it would be a totally different experience. Arthur 3.2.2 #295

The importance patients placed on the friendly chatter with radiation therapists indicates social interaction has an important place within the treatment area. Patients indicated that this interaction assisted relaxation and provided a sense of comfort which made the experience less daunting. Radiation therapists are often perceived by their patients as technicians whose main role is to operate the treatment machine. However, the interaction patients experienced with the radiation therapists provided a positive aspect of treatment that patients generally appreciated.

7.4.3 Scripts: Structured interaction (between RTs)

7.4.3.1 Act I: Collaboration.

Collaborative teamwork was found to be necessary for radiation therapists to complete the important checks and cross checks required for correct, safe, accurate

and efficient delivery of treatment. Collaboration was also found to be required in the decision making around the delivery of treatment by radiation therapists. Prior to the delivery of the radiation treatment image capture and review, while the patient is in the treatment position, is now accepted practice. This requires two radiation therapists to make judgements and decisions quickly and efficiently which indicated a high level of cooperation was needed to carry out the action.

Cooperation between team members was also needed for the equitable division of the daily workload. A team leader often delegated the workload with the team members agreeing to or negotiating the conditions. Other conditions such as rostered time off and part-time radiation therapists could either foster or hinder team collaboration because of the difficulties in being available for team meetings and discussions according to Dee's experiences:

Now I am full time it is easier to get more involved with patients particularly the passing on of any information [daily or unusual] about patients. Also it is easier to be at team meetings which when I was part-time I often did not get to.

The RDOs [rostered days off] are worked out from requests for a particular day off directed to the manager of treatment and the rest have the day allocated to them as is best for the team. Part-timers can be rostered on a machine but can be used to fill any gaps when staff numbers are short on other machines.

Dee G5.3 #17

Much of the clinical work undertaken by radiation therapists requires collaboration with others. One of the prominent cultural concepts of radiation therapists is their team and task behaviour. Teamwork involves several participants often with one participant taking a lead role to direct and maintain the actions of the group (Goffman, 1959). The actions of the team, according to Goffman, depend on the positions of the participants within the team and the control of the setting where the actions of the team take place. Goffman also highlights that a team will use its control of the setting to establish the level of information they wish to share with the spectators, which, in this case, is the patients. The team's control of the setting can also support a level of security because according to Goffman the setting in a sense becomes part of the team.

Drawing again on Goffman, a team is defined as individuals who come together and present a united front for an effective performance. The united front relies on a mutually agreed approach which according to Goffman results in the team having characteristics that are not shared by the audience. Nonetheless, the performance of each member will be different because it will depend on the amount of time given to the performance itself and to the actual activity undertaken (Goffman, 1959). This recognises the individuality of the roles within the teams but supports the notion that collaboration is an important aspect of a successful team and therefore is essential in the task and teamwork behaviour of radiation therapists.

7.4.2.2 Act II: Communication.

Good communication skills are required for effective teamwork. The team, as mentioned earlier must collaborate to provide a united front to perform at an optimum level. There is minimal room for error or inaccuracy because of misinterpretation or misunderstanding of each other. The physical attributes of clear audible speaking and command of the terminology and jargon used are necessary for effective communication. This study also found respect of each others' thinking and reasoning skills was also important but the level of respect varied from radiation therapist to radiation therapist. In a group interview some of the participants spoke about working with older more experienced radiation therapists:

I've found the older generation they might not be as quick to get all the IT sort of technical things but they're in terms of the patient care it's on a bigger scale. I mean the younger, the younger generation are good but then it's just the older generation have a little bit more focus really on that sort of area [patient care].
Lee Gr3 #1155

Like, sometimes I can't see past one little problem or something like that and I'll be working with this one older RT I used to work with all the time. And she would just clarify something like so logical, like if I just, just, I'm trying to think of an example for you. I would just get caught up on all the little technical stuff and she'd just come up with something so logical I'd think I'm pleased I wasn't working on one side or something. Kim Gr3 #1124

In contrast, in another group interview, older experienced radiation therapists related their perspectives of the younger radiation therapists and their conduct in the work place:

And also, the other problem with all that is that we're the, we're the dinosaurs in more ways than one in those sort of things and the young ones, I haven't – I, probably in the more recent years, my, my, most of my fights have been with the young ones telling them to slow down. Ginny Gr2 #685

I think a lot of it is that Gen Y bit, that we've got to get our notes and work done, have to get the patients through... Madge Gr2 #1495

Personality, level of experience and position held will add to the way individuals communicate with one another. This was evident one day on M5 when the charge radiation therapist, a female aged in her thirties was showing another radiation therapist, a male in his fifties, how to do something linked to treatment and image capture on the computer. There was some hint of impatience by the charge radiation therapist but then she reinforced his “good pickup” of a potential error. Later the charge radiation therapist mentioned that this radiation therapist “phaffs about” (does not appear efficient FN12/6/09) and this is why many of the younger staff do not have a lot of respect for him and do not understand his perspective of radiation therapy.

The high degree of accuracy coupled with ensuring the safety of the patient necessitated good communication between radiation therapists. Much of the radiation therapists' work was found to be task oriented and demanded two radiation therapists to complete most of the daily tasks in a timely manner. This reflected the literature which suggests that teamwork behaviours are determined by task interdependence and a combination of the complexity, scope and structure of the tasks undertaken by the team (Molleman & Slomp, 2006; O'Connor, Pugh, Moyez, Hughes, & Fisher, 2011; Rousseau, Aubé, & Savoie, 2006).

Roles of the team members need to be clear for the team to function effectively according to a study conducted by O'Connor and Fisher (2011) on the provision of psychosocial care by interdisciplinary palliative care teams. The authors found that the roles of team members were not clearly defined and there was a “blurring of the

role boundaries” (p. 194) resulting in a tension between team members and the perceptions of the care provided for the patients. Recommendations from the study suggested that structured approaches to teamwork education should be embraced by organisations because training programs are important in raising awareness of and enhancing the skills of team members (O'Connor & Fisher, 2011).

7.4.4 Cues: Unstructured interaction (between RTs)

7.4.4.1 Act III: Conversation.

Treatment radiation therapists find themselves in a confined space with several others for most of the day. Naturally, the team dynamics changed depending on the staff arrangements of leave and expected hours worked. However, the situation lent itself to both professional and social communication. Casual conversations occurred between radiation therapists at various times throughout the day depending on the work being carried out:

I noticed a link between Carol and Dee when they were working together as they were talking about Carol's grandchildren and Dee has children of similar age. FN 29/6/09

The small room directly off of the control room provided a space away from the console and often radiation therapists would gather there for a social chat. This was more likely to occur if chocolates or cake were available. Not all the conversations were social with one technical conversation I overheard in the side room:

... There was talk regarding random vs. systematic error policies. This went for about 15 minutes and then diverged into other more social chat. FN 24/6/09

I found the situation much the same at the RAH where social conversation would occur in and around the structured communication of treatment protocols:

Often the chat between the RTs at the console is more than the checks required. There can be other discussion between the checks and is often continued after the patient has come off of the couch and left the treatment room. The RTs seem to be able to hold one conversation with the patient and another with the RT they are partnered with and even another either with an external person to the team or one of the other RTs rostered on the machine. At times there can be

multiple topics being discussed before, during, and after the treatment of the patient is carried out. This seems to depend on the team personality mix and the other dynamics of the team. FN 10/11/09

Radiation therapists, in their endeavour to perform at an optimum level and provide patients a high level of care, need to balance the structured interactions with the unstructured interactions which Dee described as a balancing act between the social and the professional:

It is the balance of when you know the patient or not familiar with the patient. The balance of showing that you are confident, being friendly and communicating while ensuring that you understand the set up. Dee G5.3 #41

The socialising of the radiation therapists built rapport and a familiarisation of one another that is much the same as the social talk the patients found supportive and comforting. Mutual understanding and respect for one another's similarities and differences underlies the strength of the teams and encouraged sturdy bonds to form. Engaging in social conversation showed camaraderie amongst the radiation therapists and it became obvious it helped to build rapport among some of the treatment radiation therapists because during tea breaks several of them were often observed going upstairs together to the cafeteria or to the coffee shop along the street. The gathering of radiation therapists in the central staff room at the RAH also reflected a strong alliance with one another.

7.5 The Outcome: The applause

The degree of success of the interactions of the participants within a social situation is evaluated in the Feldman-Stewart et al. (2005) framework in terms of goal achievement. Each participant has primary and secondary goals in any interaction and these could be both conscious and unconscious to the participant at the time (Feldman-Stewart et al., 2005). Feldman-Stewart et al. discuss the primary goal as the purpose or the intention to interact together and the secondary goals are the stages that make it possible to achieve the primary goal. For example, a primary goal of interaction between radiation therapists and cancer patients for the radiation therapist could be delivering adequate information about the treatment process on the

first day of treatment. In the same interaction the patient might seek clarification of the treatment appointment process as one of several primary goals of the meeting.

7.5.1 “Curtain Call”: End of treatment interaction

A performance is measured on the outcomes for the performers and the audience. This study found certain factors must be considered for successful outcomes in radiation therapy interaction between radiation therapists and patients. The first day talk provided to patients at PMac is indicative of the implementation of a supportive measure important to both participants. It facilitates the patient’s introduction to the radiation treatment by familiarising the patient with expected activities and the treatment staff and in turn helps the patient to reduce the fear of the unknown. This is mirrored in the work of Knobf and Sun (2005) who report that providing appropriate information can assist in decreasing the distress and anxiety the patient might be experiencing.

The amount of information offered at the beginning of treatment, according to both patients and radiation therapists, might not be appropriate because sometimes patients do not recall being told or time pressured radiation therapists might cut corners and minimise the amount of information given or do a walk and talk delivery of information. When this occurs there is more likelihood of additional stress on the participants and because the manner in which the information is delivered is not documented, the patient at the next treatment session might not remember what information they received (Knobf & Sun, 2005). Consequently, the radiation therapist may presume a certain level of information was given on the previous encounter.

Several patients mentioned they had either not heard some points of information or indeed were not told of them by a radiation therapist. Communication “on the run” does not encourage the participants to engage in meaningful or effective communication strategies. Preoccupation of radiation therapists with other factors such as running behind time can reduce the emphasis placed on the importance of the information and the information process itself and add a risk that the patient will not be heard. Many patients are elderly and some quite ill and find walking difficult. Communicating under these conditions can inhibit understanding and recall of the

information at a later time. If a patient has hearing problems or there is a language barrier an encounter that is not face to face in a quiet environment will also inhibit the receiving and understanding of the information.

The radiation therapists at the RAH did not give a structured first day talk as mentioned but leave this for the nursing staff. The merits of this approach are that the information is delivered in a clinic away from the distractions of the treatment unit and there is less likelihood of the information being delivered too quickly, too briefly, or on the run. Although this seems an advantage it is arguably the radiation therapists' ethical responsibility to provide correct information about the treatment they deliver. Therefore an appropriate approach to quality information delivery undertaken by radiation therapists would seem most favourable.

Despite patients wanting their situation to be different they found becoming familiar with the radiation therapists and the radiation therapy environment helped them in adjusting to their disease and treatment:

As I said it's like going to jail and doing what you have to do until you are free. No-one goes through life without some upsets, it's just life. You do what you have to do. Eric 5.8 #41

Look putting it bluntly I still hate it. I hate coming here every day. ...But I hate the whole process of everything that I have; you know of course you do. But I just don't like coming here every day. But I think they [RT] make it a lot easier because they're so friendly and so nice. Jackie 6.1 #570

I was very, sort of hesitant. I didn't want to have it done because of everything that I'd read and, and, and that, and I was sort of a little bit negative and a bit worried when I first started the treatment but with everybody here, that sort of just disappeared and everybody is so friendly, you know. Arthur 3.2.3 #284

In order to increase patients' confidence in the radiation therapists and treatments and to lessen fears about radiation therapy, radiation therapists need to deliver accurate and relevant information throughout a patient's course of treatment, including the first day of treatment. According to Mose et al. (2001), there is a link between the anxiety of a patient with the radiation therapy environment, and the level

of confidence the patient has in the medical staff. Mose et al. reported that patients who felt a sense of familiarity and experienced continuity in the care they received found their levels of distress and anxiety were reduced.

It was reported by Halkett and Kristjanson (2007) that in the interaction between the patient and radiation therapist there are two different perspectives of the participants to consider. Achieving an acceptable level of emotional comfort of the patient is important but radiation therapists can also benefit through the patient's familiarity and comfort because this can facilitate the delivery of the course of treatment in a timely manner, which is a key aim of radiation therapists.

7.5.2 “Encore”: Interaction after treatment completion

On completion of their course of radiation therapy treatment patients are usually given an appointment to see the radiation oncologist sometime in the coming weeks or months. However, radiation therapists' involvement in the follow up of their patients was raised by several radiation therapists:

Well we're happily letting all these nurses do work nurse-led clinics with our(patients), which are really following long term effects and that's really all these nurse-led clinics are doing, is following long term effects because the protocols really, once anything happens to the patient, the protocols say they have to go somewhere else and see a, see a specialist. And you know, and I think RTs could be doing that perfectly well. Madge Gr2 #1631

Horrifying, I must admit sometimes but you know we don't even follow our own patients, or given the opportunity to be able to follow it. Ginny Gr2 #1623

And then how often do you see a patient that comes back months later looking for a familiar face? Seb Gr1 #2079

According to AIR Chief Executive Officer, David Collier, as a parent of a child with cancer, there should be follow up of the patient by radiation therapists immediately after the conclusion of the course of treatment. In his presentation “Mind the Gap- Therapist and Patient-Journeying Together” at the ASMMIRT in Adelaide April, 2011 he talked about the time after treatment has finished as a time when patients

and their families feel the sudden loss of the support the daily visits created and would welcome some continued connection with the radiation therapists during this time. The follow up of the patients by the radiation therapists is something he proposed should be considered seriously in the future development of the supportive role of radiation therapists (Collier, 2011, April).

The idea of radiation therapists being involved in patient follow up immediately after the completion of a course of radiation therapy treatment is one of several areas of advanced practice that warrant further exploration (Bolderston, 2004). Patient expectations about their treatment should be considered in the development of radiation therapists supportive patient care practices. Recent doctoral studies have shown the need for radiation therapists scope of practice to include a patient care focus to be recognised as professionals and not technicians by patients and other health professionals (Ayteo, 2008; Sale, 2011).

7.6 Summary

This study found that the interaction between radiation therapists and patients is important on a number of levels. The key findings discussed in this chapter are related to patients' expectations. The patients who experience supportive interaction with radiation therapists are better able to cope with their treatment and disease, and radiation therapists are able to assist timely completion of a patient's course of treatment. Both structured and unstructured interactions can contribute to a positive radiation therapy experience for the patient and provide a sense of comfort, familiarity with the surroundings, and confidence in the staff and the treatment.

Interactions between radiation therapists are also of importance for the safe, accurate and efficient delivery of the radiation therapy treatment. These interactions can impact on the patient's treatment experience and their overall coping mechanisms. Therefore, the interactions between patients and radiation therapists, and the interactions between radiation therapists should be recognised as a significant component of radiation therapy and the treatment experience.

8. Trends, Trailblazers and Transformation

Discussion and Conclusions

“The act of critique implies that by thinking about and acting upon the world, we are able to change both our subjective interpretations and objective conditions” (Thomas, 1993, p. 18).

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8.1 Introduction

A diagnosis of cancer results in many physical and psychological challenges for an individual (Bottomley, 1997; Hjörleifsdóttir et al., 2008; McIllmurray et al., 2001; National Breast Cancer Centre & National Cancer Care Initiative, 2003; Ryan et al., 2005; Sanson-Fisher et al., 2000; Turner et al., 2005). For most patients with cancer it is the beginning of numerous visits to health professionals for diagnostic tests, examinations, and treatment. Many undergo radiation therapy treatment as a part of the management of their disease, although at what time point this treatment is given depends on a number of factors (e.g. tumour type, stage of disease, and other prescribed treatments).

People receiving radiation therapy attend a hospital department or private clinic. Radiation therapy is provided on a daily basis over six to eight weeks for radical treatment, and over a shorter period of time for palliative treatments. The radiation therapy environment is a technologically driven environment where radiation therapists plan and deliver prescribed doses of radiation for the treatment of cancer. Daily provision of prescribed radiation therapy treatment necessitates that radiation therapists and patients spend short but regular amounts of time together. As such there are opportunities for interactions between radiation therapists and patients to provide psychosocial supportive care throughout the treatment trajectory.

The aims of this study were to gain an understanding of the underlying beliefs, values, practices and systems that form the culture of Australian radiation therapists, and to explore the interactions between radiation therapists and cancer patients within that culture. From the outset, the purpose of this study was to provide the radiation therapy profession with an understanding of the role of radiation therapists and their interactions with their patients. The intention was to assist future supportive patient care and future career advancement for radiation therapists.

Descriptive detail of the treatment units and surrounds were given because this study focused on the daily happenings and interactions of radiation therapists and their patients within the treatment areas of two large metropolitan Australian radiation therapy centres. Ethnographic field work was used to explore the environment and everyday activities of radiation therapists. The field work consisted largely of

observations and interviews that provided a unique awareness of the culture of radiation therapists and the context in which radiation therapists interact with cancer patients.

This study revealed the complex interaction between four main cultural concepts: a disease focus, the emphasis on technology, the importance of tasks and teamwork behaviour, and time and space awareness. These cultural concepts of radiation therapy are central to the interactions between radiation therapists and patients with cancer.

This chapter discusses the main findings of this study within the following chapters: Chapter Five – context setting; Chapter Six – cultural concepts; Chapter Seven – structured and unstructured interactions. This is followed by the key findings and recommendations of the study. The final sections discuss the strengths and limitations of the research, and areas for future research.

8.2 Radiation therapy treatment setting

Chapter Five provided descriptions of the radiation therapy setting to provide an insight for those unfamiliar with the place, the people, and the practices and to provide the backdrop for the findings in Chapters Six and Seven.

8.2.1 Territory - The radiation therapy treatment environment

The isolated location of many radiation therapy centres invokes feelings of mystery and fear for the general public. Despite the increasing demand for radiation therapy and the need for strong multidisciplinary teamwork to provide seamless cancer care, this physical isolation of the radiation therapy environment leads to professional isolation adding to misunderstandings and misconceptions of radiation therapy amongst other health professionals. The combination of the two fear-inducing topics of “radiation” and “cancer” add to the mystery that surrounds radiation therapy and emphasises the significance of documenting the constituents of the radiation therapy setting in this study.

The treatment bunkers and adjacent areas, where patients and radiation therapists interact daily, is a highly technical environment. Each treatment bunker is a large

room where an expensive treatment machine called a linear accelerator is the dominant feature. Machines are central to the prime task of treatment delivery and the importance placed on both the machine and the space by the radiation therapists overshadows the seriousness of the patient's condition.

The preoccupation with technology of the staff stifles meaningful interaction with patients because the patients do not want to distract the radiation therapists, nor waste the radiation therapists' time asking for help or information. These findings are similar to those reported in a study based on the radiation therapy experiences of twelve patients with head and neck cancer, which captured the essence of this phenomenon through the use of diaries and interviews. Patients reported the general downplay of how they really felt by themselves and the treatment staff during their regular attendance for treatment (Wells, 1998).

The impression of a backstage area where radiation therapists actions are less formal and more relaxed (Goffman, 1959) is demonstrated by radiation therapists accessing PMac treatment units through the connecting sliding doors to avoid the waiting areas and any possible interaction with patients. This might be an innocent shortcut taken but it adds to the division between radiation therapists and waiting patients. This is also created by the glass doors at each entrance from the subwait and corridor. All of these barriers lessen the opportunities for interaction between radiation therapists and patients. Although this might be unique to PMac it emphasises the need for the design and arrangement of radiation treatment areas to enhance (Wells, 2003), rather than detract, from opportunities for radiation therapists to interact with patients.

8.2.2 Tribes - Radiation therapy personnel

An overview, provided in Chapter Five, of the people involved in radiation therapy service provision demonstrated the multifaceted nature and shared tasks and procedures of a radiation therapy centre. The role of radiation therapists within the multidisciplinary team is significant in the provision of an adequate standard of care to all patients.

Radiation oncologists, who refer patients for treatment, are not involved in the actual delivery of the treatment and do not have the time available to see the patient on a

daily basis. However, the time radiation therapists spend day-to-day with each patient portrays the need for radiation therapists to ensure each patient is supported adequately both physically and emotionally throughout the treatment trajectory. Arguably, this responsibility relies on a relationship built on good communication and liaison skills with the patient (Bolderston, 2008; Halkett et al., 2010). This responsibility also relies on a good relationship with other health professionals and on an understanding of the assistance these professionals can also provide the patient (Wells, 2003).

8.2.3 Travellers - Radiation therapy patients

Patients, although not part of the fabric of radiation therapy services, are integral to the daily work of radiation therapy and, for this reason, descriptions were given of their participation and their individual needs. Concerns of travel, transport, and appointments were raised along with the impact of side effects and psychological issues faced at the time a patient receives radiation therapy (Colyer, 2003; Halkett et al., 2010; Halkett et al., 2009).

Each patient has individual needs and concerns, directly related to their disease, and also related to the practicalities of attending for treatment, and maintaining as normal a life as possible throughout the course of radiation therapy treatment. The stress of relocation to receive treatment, for example, can severely impact on a patient's ability to cope because the supportive network of family and friends is not available or it is limited (Martin-McDonald et al., 2003). Travelling long distances can increase a patient's fatigue. Patients who travel long distances each day may make requests to staff in order to manage issues that side effects of treatment may cause. For example, specific appointment times are often requested to avoid driving in peak times.

The provision of a supportive network for each patient requires the acknowledgement of individual issues. However, the main priority for radiation therapists is on ensuring the patient completes their prescribed course of treatment in a timely manner because of the time pressures of the highly technical environment. There is little regard for many of the emotional, social and physical issues faced by the patient. On the other hand, the literature suggests that a good relationship

between the health professional and the cancer patient provides a therapeutic benefit, which in turn reduces emotional stress and anxiety and assists in improving the patient's quality of life (Schnur & Montgomery, 2010).

This study supports the notion that there is a mismatch of what radiation therapists deem as supportive care and what is deemed supportive care by patients. For example, several studies have reported that what patients deem as important in information and education needs about radiation therapy are rated differently by radiation therapists (Bolderston, 2008; Hinds & Moyer, 1997; Zissiadis et al., 2006). However, radiation therapists do not necessarily have the appropriate skills to identify and action psychosocial issues; contributing to the differences in the interpretations of supportive care and the emphasis radiation therapists place on the delivery of treatment rather than on the patient. This indicates a need for changes in attitudes and modification of how patients are perceived by radiation therapists. Radiation therapists need to be educated and supported so that their attitudes shift towards a more patient centred approach by gaining an understanding of the importance of forming meaningful relationships with their patients and the impact of this on the patient's overall radiation therapy experience.

8.2.4 Trade - Practices and processes in radiation therapy treatment

The daily activities involved in the delivery of treatment were described from the perspectives of both patients and radiation therapists to capture the fundamental nature of the actions that underpin the core of radiation therapy (for example, checking in at reception each day; preparation for treatment). As advocated in many health and environmentally related studies the reception and initial greeting practices can affect a patient's impressions of a clinic (Bate & Robert, 2007; E. T. Miller, 2006; Schweitzer, Gilpin & Frampton, 2004). Those patients interviewed at PMac gave glowing reports of the daily reception they received on entering the treatment section of the department. However, this contrasted with the experiences of the patients at the RAH who found the daily application of an ID bracelet more confrontational than welcoming. These opposing situations verify the evidence in the empirical literature of the therapeutic benefits such as mood lifting linked with a positive clinical experience (Schweitzer et al., 2004).

Many of the daily tasks, including safety and patient ID checks, undertaken by radiation therapists are repetitive and well rehearsed. As such, they are performed automatically. These tasks and procedures are growing in number with the increasing complexities of treatment delivery and the need to ensure the correct identity of each patient. More time is required for radiation therapists to perform these tasks allowing less time for meaningful interactions between radiation therapists and their patients. These procedures are responsible for the tasks involved on a treatment unit becoming central to the radiation therapists' work practices, and reinforcing behaviours favouring the technical aspects of the role while diminishing the caring aspects of the radiation therapist role.

The descriptive content of Chapter Five set the scene and provided the backdrop in which the fieldwork was undertaken. It gave an overview of the place and the people in context of the treatment practices and processes that occur daily within two large Australian radiation therapy centres. The key messages in relation to Chapter Five were that within the radiation therapy environment the delivery of radiation therapy treatment relies on: current technology and associated safety procedures; professionals from different disciplines involved in teamwork; and the physical and psychological needs of patients with cancer receiving radiation therapy treatment. These key messages are important and serve to highlight the complexities of the radiation therapy environment that affect the provision of radiation therapy treatment to individuals with cancer.

The following sections discuss the significance of culture on the interactions between radiation therapists and their patients and provide the key findings of the study.

8.3 Cultural concepts

This study uncovered four cultural aspects: a disease focus, technology as motivator, task and teamwork behaviour, and time and space awareness of the culture of Australian radiation therapists. These aspects provide valuable insight into the interactions between radiation therapists and their patients. Findings were presented in Chapter Six and are summarised in the following section.

8.3.1 Disease focus

The central focus of radiation therapists is based on cancer and the treatment of the disease with radiation. This study found the historical development of the role of radiation therapists has influenced this focus on disease, drawing the radiation therapists away from a patient-centred focus. The combination of adopting a biomedical model of health, in keeping with the radiation oncologists' approach, and the radiation oncologists being responsible for the overall treatment of the patient, drew the radiation therapists' "gaze" (Foucault, 1975) away from the patient as an individual with cancer and onto a particular disease requiring treatment. Munro (2003) argues that those health professionals who provide treatment for patients with cancer are caring for individuals rather than treating body parts or tumours and insists it is paramount that each patient is supported and cared for as an individual.

In large centres, such as PMac and the RAH, where there are five or six linear accelerators, there is a trend towards streamlining the workload by placing the majority of patients with a specific diseased body part on a particular treatment machine. This assists in efficient use of time and space because the equipment required for different set up procedures can be left where it is in most demand. However, it also assists in the workload on a machine being interpreted by radiation therapists in numbers of specific body parts, rather than a number of different individuals with individual needs leading to de-individualisation.

Traditionally radiation therapists have not been involved with the patients they treat apart from during the planning of treatment at CT/Simulator and on the treatment units, encouraging little to no involvement with the patients apart from the time spent within the treatment room and adjacent waiting areas. Recent studies (Acharya, 2009; Alfieri, 2009; Shi et al., 2009) have suggested the merit of radiation therapists becoming involved in advanced practice education to enable them to undertake treatment reviews where the patient consults with a radiation therapist, rather than the radiation oncologist, about side effects of and coping with treatment and other associated problems and issues. This measure would be a step towards radiation therapists taking a greater role in the overall management of the treatment trajectory of individual patients. It would also assist in the development of a more patient

centred focus through relationship building and a greater awareness of a patient's medical and family history and any resulting individual needs.

8.3.2 Technology as motivator

Emphasis is placed on delivery of treatment and the introduction and embracing of new techniques is a vital part of radiation therapy. Improvements in equipment and techniques are ongoing and provide a challenging work environment for radiation therapists. Checking and monitoring each step of the process is essential for safe practices and it is for this reason, in recent times, radiation therapists have become more autonomous in particular technical imaging aspects of their work. This has, however, driven a wedge between patients and radiation therapists because radiation therapists find more time is required to perform the technical tasks. Therefore, radiation therapists are spending less time interacting with their patients, another reason the direction of radiation therapists' focus continues to be on the delivery of radiation to the diseased body part and not on the individual with the disease.

The radiation therapists' utilisation of technology detracts from the supportive care of the patient, with technology often viewed as taking the human element out of the care given. This study found that it is not the technology itself that depersonalises the care given but a much more complex phenomenon consisting of a combination of the users of the technology, their accepted practices and their perceptions. This mirrors the views of Barnard and Sandelowski (2001) in their discussion about the misconceptions of some health professionals about technology dehumanising the caring for patients. They state that technology does not de-humanise the care and patients' experiences of caring but rather it is the users of the technology and their perceptions of technology that de-humanise the care provided. These authors point out that technology should be incorporated into the caring of humans and not viewed to be in opposition in providing humanised care (Barnard & Sandelowski, 2001).

8.3.3 Task and teamwork behaviour

Teamwork undertaken by radiation therapists on treatment units does not encourage one-to-one interaction with the patient. Tasks revolving around technical aspects of the work, as mentioned, require concentration, communication, and collaboration within the team. This is viewed by many radiation therapists as central to the role of

a treatment radiation therapist, and a tension is created if one team member takes time away from the tasks to talk with a patient. Some team members will leave the information giving to their counterpart because they lack confidence in their knowledge and prefer not to engage with the patient (e.g. informing the patient of side effects of treatment).

The streamlined approach of the teams to preparation and delivery of the treatment is likened to a production line (Ayteo, 2008) and generates a form of automaticity, which is not conducive to meaningful interactions between radiation therapists and patients. This finding concurs with similar findings in the study conducted by Ayteo (2008), where more experienced radiation therapists feared the tasks and procedures required to use new technology automated radiation therapists' approach to the work and detracted from providing supportive patient care. This research also highlighted that many radiation therapists do want patient contact and find it stressful when this does not occur at a level they find acceptable.

Being rewarded with gifts from patients provides radiation therapists with a sense of a "job well done" and also provides radiation therapists with the perception that their interactions with patients are adequate to meet the patients' needs. However, the gift giving of patients could show how grateful they are for receiving potentially lifesaving treatment and being given another chance to embrace good health. It could also assist a patient to achieve a sense of accomplishment at the end of the course of treatment, and to acknowledge their progress forward in overcoming the burden of disease.

8.3.4 Space and time awareness

The layout of treatment areas within radiation therapy centres varies from centre to centre but, in general, the treatment units are situated away from the clinics and planning areas. This study found that there was a lack of space available that is both therapeutic and inviting for personal one-to-one talks for radiation therapists to engage in meaningful interactions, in private, with patients. Although some radiation therapists found opportunities to engage with patients there are several spatial barriers to overcome.

The waiting areas are open areas where a number of patients can be waiting at the same time. As such there is always an issue around privacy. The subwait might allow some privacy but the patient might not be able to maintain a lengthy in-depth discussion because of their preparation for treatment. A patient is called to the subwait immediately prior to entering the treatment room. However, radiation therapists dislike patients waiting more than a few minutes in this area because the patient is prepared for treatment. The daily appointment schedule does not allow time for patients to use this space for lengthy interactions.

The radiation therapists keep a close watch on time and the throughput of patients. The use of the treatment room, combined with the number of patients scheduled, places pressure on the treatment team to perform quickly and efficiently. The radiation therapists rush patients from one waiting spot to the next because of a fear of running late and delaying patients. Despite the rush the walk into the treatment room provides an opportunity for radiation therapists to engage in social talk but it is not conducive to helpful interaction about the treatment or the patient's issues in coping with treatment.

The treatment room is in high demand and is a space that is considered special. The constant use of the room coupled with time restraints discourages interaction apart from compulsory ID checks. It is not a space radiation therapists utilise for engaging with their patients in meaningful interactions because each patient is allotted a set amount of time for their treatment. Some social talk does occur but the amount of this type of interaction depends on the patient and the members of the treatment team.

Safety and accuracy of set up procedures also makes conversing with the patient difficult for radiation therapists. One radiation therapist found it challenging to concentrate on setting the patient up in the correct position and to hold a conversation with the patient at the same time. However, patients indicated that some social talk provided a sense of comfort and put them at ease pointing to a need for reassessment of the processes and procedures that currently take place within the treatment units.

The work radiation therapists undertake is challenging and stressful because they operate highly technical equipment that produces radiation to treat patients with the life threatening disease of cancer. Despite this, most radiation therapists attempt to make sense of the challenges by debriefing amongst themselves during scheduled breaks, and much less often through professional debriefing. Another coping mechanism for many radiation therapists is to refrain from giving emotional and supportive care to patients because maintaining an emotional distance allows them to be less affected by the patient's situation (Zellars et al., 2000).

8.4 Structured and unstructured interactions

Chapter Seven provided discussion of the interaction which occurs between radiation therapists and patients with cancer and the interactions that occur between radiation therapists. Interactions are categorised as structured and unstructured with the culture of radiation therapists' affecting on both types of interaction. Information and instructions are the basis of the structured interaction that occurs during a patient's course of treatment. Unstructured interaction, on the other hand, refers to the conversations and social talk that occurs in the treatment areas of radiation therapy when two or more people interact.

8.4.1 Structured interaction

The interactions that take place between radiation therapists and their patients centre on information and instruction-giving by the radiation therapist to the patient. Instructions are given to enable the safe and accurate delivery of radiation treatment, and information is provided about the treatment and possible side effects forming part of the many tasks performed by radiation therapists.

The structured nature of the interactions reflects the task and protocol driven behaviour of radiation therapists and suppressed opportunities for patients to ask questions, and for those questions to be responded to in an appropriate manner. This study also found the seriousness of a patient's illness was often played down by both the patient and the radiation therapists. There was also little evidence of appropriate responses to a patient's verbal and non verbal emotional cues. In contrast, however,

this study found the unstructured interaction between radiation therapists and patients provided the patients with a sense of comfort and familiarity.

8.4.2 Unstructured interaction

The daily visits of patients were found helpful for building rapport with radiation therapists. Social talk in the form of greetings and exchanges about the weather and popular daily activities helped patients feel a sense of comfort and assisted in normalising the situation. However, the amount of social talk depended on the current machine status and whether the treatment unit was running to time or not and the members of the treating team. In most situations the patient was ushered into the treatment room swiftly and the social talk was brief.

The social interaction between radiation therapists was found to assist rapport and familiarisation amongst the radiation therapists. This promoted mutual understanding and respect between many of the radiation therapists. The strength of a treatment team was reflected in the reciprocal support of one another and the general organisation and implementation of the daily workload.

8.5 Key findings

This study found radiation therapists' interactions with patients were complicated by a combination of radiation therapists' cultural aspects, perceptions of supportive patient care, and the environment where the interactions occur. The key findings of this research related to: (a) current spatial use of the environment (refer to Chapter 5 p.133), (b) the changing role of radiation therapists in treatment delivery (refer to Chapter 6 p.177) and (c) patients' expectations (refer to Chapter 7 p.230).

8.5.1 Use of spatial environment

The radiation therapy treatment environment impedes the interactions between radiation therapists and patients. It was found there were four areas where radiation therapists interact with their patients within the treatment areas: the waiting room; the subwait; the maze; and the treatment room.

The waiting areas were designed for more than one individual to use at any one time; they were often shared areas for patients scheduled to more than one treatment unit.

There was a lack of privacy in this space making it difficult for any in-depth or confidential interactions between radiation therapists and patients to occur.

The subwait area, the space where the prepared patient waits immediately prior to having treatment, differed between centres. It was found PMac had small glass partitioned subwait areas for each treatment unit with the exception of one treatment unit where it was necessary for patients to share the subwait of the adjacent treatment unit. At the RAH the subwait area was normally a single chair placed adjacent to the treatment unit near the entrance to the treatment bunker.

The RAH subwait areas did not encourage in-depth or confidential interactions because of the open position of the chair and the lack of partitioning. The subwait areas at PMac did provide a space that could be used for meaningful interactions but the amount of time a patient used this space was short because the patient took up this position after preparing for and immediately prior to treatment. The preparations for treatment were not conducive to conducting meaningful interactions.

The third area where interactions were found to take place was the maze but this provided a very small opportunity because the interactions occurred during the walk from the subwait along the maze and into the treatment room. The maze was not conducive to in-depth conversations because the interactions occurred while both participants were moving from one place to another, and this situation did not provide an opportunity for eye contact or face-to-face engagement necessary for meaningful interaction.

The treatment bunker is regarded by radiation therapists as a special space because of the expensive machinery (linear accelerator) and specialised equipment housed within this area and the constant demand for, and utilisation of, radiation treatment provided in this space. The bunker provided a space where individual patients could interact with radiation therapists about confidential issues but the amount of time allocated within the treatment bunker for each patient was inclusive of the amount of time for correct positioning, verification of details, and the delivery of the radiation treatment. There was an insufficient amount of time factored into the daily schedules to provide an opportunity for the patient to interact in an in-depth way with radiation therapists within the treatment bunker.

The design of treatment areas in radiation therapy negatively affected the level of interaction that occurred between radiation therapists and their patients. Furthermore, the level of, and amount of time given, to meaningful interactions was severely restricted in the current practices of radiation therapists within these spaces- also due to the design.

8.5.2 Changing role of radiation therapists

The findings of this study indicated current Australian radiation therapists have greater autonomy in decision making around the technical aspects of delivery of treatment than in the past. In recent years, radiation therapy technology has led to changes in the way pre-treatment images are conducted, interpreted and used for the accurate delivery of daily radiation therapy treatments. Acquisition of digital images is now achieved, assessed, and actioned by the treating radiation therapists, while the patient is positioned on the treatment couch. In the past images were recorded and used after treatment to assess correct placement of the radiation treatment by radiation therapists, and also remotely assessed by the radiation oncologist. This practice continues for the treatment techniques that do not require daily imaging but the treatment regimes that require the delivery of high or escalated doses to an area with tight treatment margins utilise the new imaging technology that demands critical accuracy and on-the-spot decision making by radiation therapists.

The safe delivery of accurate treatment is paramount in radiation therapy and necessitates a greater amount of radiation therapists' time to perform the technical tasks. The reliance on electronic equipment has increased the radiation therapists checking of procedures, of downloaded treatments and the crosschecking of the work of each other. The amount of time radiation therapists needed for these processes was found to lessen the time radiation therapists spent interacting with their patients.

This study also found emphasis was placed on the delivery of treatment and there was an underlying pressure on radiation therapists to keep to a schedule that did not provide adequate time for meaningful interactions with their patients. The throughput of patients was seen as an important aspect in the provision of treatment and it was found that keeping to time on the treatment units was extremely important to radiation therapists. It also added to the pressures felt by treating radiation therapists.

The role of treatment radiation therapists has changed and continues to change with each introduction of new technology, equipment, and the resulting new treatment protocols and techniques. Caring for patients in this highly technical environment is a constant challenge for radiation therapists.

8.5.3 Patients' expectations

For most patients there is some level of stress and anxiety that accompanies a diagnosis of cancer, and referral for radiation therapy treatment. This study found that patients undergoing radiation therapy were generally grateful for the treatment they were receiving and did not expect radiation therapists to provide supportive care. Patients generally viewed radiation therapists as technical experts whose primary role was to deliver their radiation therapy treatment. Patients were also reluctant to engage radiation therapists in lengthy interactions because it was perceived that, as a result, other patients could be delayed in receiving their treatment.

However, it was found that the unstructured interactions that did occur between radiation therapists and cancer patients provided patients with a sense of comfort. The interactions were helpful for normalising the situation and reducing anxiety levels. Patients found the familiarity that arose through daily interactions with the same treatment team of radiation therapists also assisted with the level of comfort they achieved.

Some patients indicated the information and instructions given to them were difficult to recall or had not been given in sufficient detail, if at all. This caused unnecessary confusion and angst for some patients, particularly at the beginning of treatment. Patients indicated there was a need for information to be given and repeated on another occasion because large amounts of information that are generally offered prior to, and at the start of treatment were difficult to retain or recall. It was also found that patients varied in how much information they wanted. Some patients indicated they felt they were adequately provided with information while others felt that they were given either too much or too little.

This study found that unrelated pre-existing chronic medical conditions (e.g. arthritis and diabetes) and the individual needs of patients were often overlooked by radiation therapists. Many of the patients undergoing radiation therapy treatment were elderly and contended with a variety of age related disabilities, which are not always visually perceptible. For example, patients may need extra assistance with preparation for treatment, they may have difficulty in hearing instructions and the recall of information might be difficult for those with memory loss.

Although patients receiving radiation therapy did not have many predetermined expectations of radiation therapists, it was found that patients responded favourably to unstructured interaction with radiation therapists and to the familiarity of the daily interaction with the same treatment team. Patients varied in the level of information that they wanted, and often radiation therapists were unaware of other non related conditions of the patient that had potential to compromise the delivery of information and radiation therapy treatment.

To summarise there are clearly key challenges to the work of radiation therapists and their provision of supportive care for patients with cancer. Technology, the medical model of health and the changes in the technical side of the role of radiation therapists overtake the roles of supportive care and effective communication with patients. Privacy and space also impede radiation therapists' ability to engage in effective communication with their patients.

The researcher, in taking a critical stance, has taken a "value orientation" (Carspecken, 1996, p.3). The term "value orientation" refers to the concerns of researchers about social life and social realm. According to Carspecken, the values and assumptions of inequalities in social life direct the work of researchers who describe themselves as critical social researchers (Carspecken, 1996).

Concerns of the researcher, about the inequalities in the total provision of care provided by radiation therapists to their patients, reflect the "social inequalities" value orientation of many criticalists (Carspecken, 1996, p.3). Hammersley (2009, p.2) suggests that a critical stance should be taken in all social research and acknowledges the involvement of "value assumptions". However, Hammersley cautions us about taking value assumptions at face value and proposes justification is

required (Hammersley, 2009). There is ongoing discussion and debate between researchers about the dilemma of being critical in social research and what constitutes being critical (Hammersley, 2005).

One concern, voiced in the debate between researchers, rests on how symbolic interactionism can make claims to be critical because the perspective of symbolic interactionism focuses on the micro components of social settings and human interactions within social organisations rather than the macro aspects that focus on power and control of organisations. However, Dennis & Martin (2005) uphold that the focus of symbolic interactionism is based on the actions and social interactions of people and includes people who hold positions of authority and control. The authors argue that social interactions can therefore be explained in terms of their “power dimensions” and it is possible for social research to take a critical stance (Dennis, 2005, p. 208). Hacking (1999) and Thomas (1993) also suggest that research using an interpretivist approach, such as the study presented in this thesis, may also embrace a critical approach to analyse the micro-issues of power.

The value orientation and value assumptions in this thesis are based on the combination of background literature, evidence-based practice(s) and the observations and interviews conducted by the researcher. Many of the dilemmas faced by radiation therapists between the pull of efficiency in the movement of patients through the system and the provision of supportive patient care are made obvious by this study. The recommendations for future changes, in the following section, arise from issues concerning the social characteristics of structure, culture, power and actions of radiation therapists reflecting the critical stance taken in this research (Carspecken, 1996).

8.6 Recommendations

Recommendations based on the three key findings of this research are presented in four sections: recommendation one- spatial use; recommendation two- work strategies; recommendation three- skill sets; recommendation four- care pathways and advanced practice. For these recommendations to be effective they must be embraced at all levels; at the individual level (e.g. training and education); the

organisational level (e.g. changes in environment design and processes); and the systemic level (e.g. management support and policy changes).

A summary list of these recommendations is given and a detailed discussion of these recommendations follows this summary.

Recommendation One - spatial use:

- New department building plans should consider private spaces for patient consultations with radiation therapists. This could be a consultation room or an alcove that provides complete privacy and enough space for a patient to feel a sense of comfort.
- Existing departments need to rearrange spaces to encourage and improve interaction. This could incorporate the use of a screen or curtain or furniture rearrangement to provide a private and comfortable space for a patient to feel a sense of comfort.
- Management to involve and engage clinical radiation therapists in design/changes of treatment environments to meet the communication needs required to encourage supportive care.

Recommendation Two -work strategies:

- Changes in treatment team strategies for the workload - radiation therapists assigned patients to encourage regular interaction and effective communication.
- More equitable division of work practices.

Recommendation Three - skill sets:

- Education for radiation therapists on the use of space for face-to-face interactions, including the creation of privacy even when in a limited environment.

- Education for radiation therapists on communication skills, importance of patient stress and anxiety reduction, and radiation therapist self satisfaction and the prevention of burnout.
- Education for radiation therapists on the necessity of patient centred care in order to change current practices.

Recommendation Four - care pathways and advanced practice:

- Radiation therapists to instigate, be responsible for and use clinical care/patient pathways for the treatment trajectory of each patient.
- Radiation therapists to use clinical care/patient pathways to nominate time points for delivery of information, repeating information, additional information, and assessment of the patient including end of treatment and immediate post treatment follow up.
- Specialist/advanced radiation therapists (trailblazers or champions) to have education in basic skills of counselling for consults with patients and to manage pathway understanding, delivery, and coordination.

8.6.1 Recommendation one: spatial use

Radiation therapists have the ideal opportunity to provide supportive patient care to patients receiving radiation therapy treatment. However, this research has shown appropriate and ample space is needed in the radiation therapy treatment environment for radiation therapists to engage with, and provide an adequate level of supportive care for their patients. The establishment of new radiation therapy facilities should consider the inclusion of private spaces, particularly in the treatment areas, for patient consultations with radiation therapists. Ideally, these areas would provide a quiet place that provides the patient with a sense of comfort, and radiation therapists can interact with their patients in private. Consideration should be given to the inclusion of current practicing radiation therapists in the planning of the treatment areas to assist in the design of these radiation therapist consultation spaces.

Without dedicated space it is harder for radiation therapists to interact with patients effectively, and to provide the level of support the patient may need (Wells &

Faithfull, 2003). There is a need for existing radiation therapy centres to rearrange or use available space to encourage and improve the interactions, and the level of supportive patient care offered to patients by radiation therapists in treatment areas.

8.6.2 Recommendation two: work strategies

The current research found treatment radiation therapists were under pressure to ensure timely throughput of scheduled patients which resulted in less time allocated to interacting with patients. Changes in treatment team strategies for managing the workload to incorporate more available time, and encourage meaningful interactions are recommended. One strategy worthy of consideration is for each treatment radiation therapist working on a treatment unit to be assigned specific patients to encourage regular interaction in a similar manner to Swedish nurse radiation therapists (J. Cox, personal communication, April 15, 2011). This may assist a more equitable division of work practices that reflects a balance of technical aspects with patient care aspects of the role.

8.6.3 Recommendation three: skill sets

Education is essential for radiation therapists to develop skills in the use of available space in conjunction with basic counselling skills to enable radiation therapists to conduct meaningful interactions within the available spaces of their work environment. Strategies are also recommended for greater commitment to education in basic communication and counselling skills to enable radiation therapists the ability to feel comfortable in engaging on a different level in interactions with patients. Training in basic counselling skills would provide radiation therapists with a heightened awareness of the support they can provide patients through their interactions with patients.

Research has shown the necessity of training in picking up emotional cues from patients and responding with empathy (Butow et al., 2008; Girgis & Burton, 2001; Girgis et al., 2009; Schofield & Butow, 2004). The work of Girgis and Burton (2001), Girgis et al (2009), Schofield and Butow (2004) and Butow et al (2008) demonstrated the need for listening to patients, recognising cues and responding appropriately. This work on eliciting and responding to emotional cues has been deemed essential for other health care professionals such as nurses and has been

extremely effective in improving patient care. The need for more than good personal skills has also been demonstrated with a range of health professionals in oncology settings. These skills have been linked to a reduction in patients' anxiety and to facilitate patients' understanding and comprehension of information and instructions. This training and these skills will also ensure radiation therapists do not get compassion fatigue, or emotional overload and will lessen their concerns with taking too much time away from other duties.

It is vital these skills are promoted because they will facilitate radiation therapists to assist in the reduction of patient stress and anxiety, provide radiation therapists with a greater sense of work satisfaction, and enable radiation therapists to educate patients (Ayteo, 2008; Ryan et al., 2005).

8.6.4 Recommendation four: advanced practice and care pathways

Information provision and instruction giving to patients were found to be important aspects of radiation therapists' delivery of treatment. However, there were some inconsistencies in the process indicating a need for reassessment. Recommendations include the development and use of clinical care/patient pathways to provide radiation therapists with a structured approach to supportive patient care.

Clinical care/patient pathways have been used in nursing for many years in a variety of settings. A clinical pathway is a documented plan of care in which treatments are based upon known best practice and sequenced along a specific timeline. "The aim of a clinical pathway is to improve the quality of care, reduce risks, increase patient satisfaction and increase the efficiency in the use of resources" (De Bleser et al., 2006, p. 562).

Wells and Faithfull (2003) stated that there are many areas of radiation therapy worthy of further research. They suggest the mapping of each patient's pathway to identify the complexities, the gaps and the delays that occur in the provided services. The authors also suggest that research is required to explore the ongoing supportive care of patients throughout the treatment trajectory and propose the use of pathways for this exploration.

Radiation therapists' use of clinical care pathways for the treatment trajectory of each patient would allow nominated time points for the delivery of information, repeating information, and additional information; the assessment of individual patient needs, documentation of pre-existing medical issues, and treatment specific considerations; consultations at the start of treatment, end of treatment, and immediate follow up after the completion of treatment.

Implementation of managed care pathways suggests the need for advanced radiation therapists, or trailblazers (Martino & Odle, 2007), who are educated in the development, delivery and coordination of pathways and the ability to lead the radiation therapy team in the implementation and auditing of the pathways.

However, recent research has shown there is a wide variety in roles taken on by radiation therapists in Australia indicating standardisation and structure of radiation therapists' practices are required (Sale, 2011). The implementation of care pathways should be included in radiation therapy and one suggestion is incorporating it into the role of advanced practitioner radiation therapists who are educated in patient review and consultation processes.

8.7 Strengths of the study

This is the first empirical study to look at the radiation therapy culture and the interactions of radiation therapists within that culture. This study drew upon literature from a range of disciplines and it is embedded in an interdisciplinary approach. This study explored the interactions between radiation therapists and patients with cancer at two large Australian metropolitan radiation therapy centres (in Victoria and South Australia) using a critical ethnographic approach. The use of observations and interviews facilitated the exploration and understanding of the radiation therapists' culture providing a new and unique interpretation of the culture and its influence on the interactions of radiation therapists.

Ethnography is generally used to study the behaviour of a small group of people in order to understand the activities of the group in their natural environment (Hammersley, 2007). The main data collection methods of observations and interviews in ethnography require the ethnographer to be involved with the group as

both a participant and an observer (Spradley, 1980). These methods employed in ethnography provide the researcher an opportunity to gather rich descriptive data and a depth of data that may not be attainable with other research methods (Savage, 2000). The strength of this approach enabled the researcher to elicit aspects of the environment that affected the interactions of the participants. Radiation therapists were not conscious of these environmental issues within radiation therapy treatment areas and this would not have been provided by interviews alone.

Conducting the research in two settings allowed a small scale concentrated focus of the research. Observations of the daily happenings within the radiation therapy centres provided an in-depth understanding that would not have been possible through interviews alone. A total of 266 hours of fieldwork conducted in the treatment areas of radiation therapy generated a large volume of field notes which provided greater understanding of the environment and its impact on radiation therapists' interactions with their patients.

A combination of different strategies ensured the rigour of the study. The management of each centre supported this research and a clinical mentor was provided to assist in the early stages of the planning and the setting up of the study. Data triangulation verifying the observational data was achieved by conducting semi-structured interviews with individual participants and informal discussions with informants at each site. Group interviews with radiation therapists were held after the completion of observations to further verify and strengthen the credibility of the findings. Supervisors were consulted throughout data collection and data analysis to provide different perspectives and discussion. Presentations of the study were given to peers and colleagues at various time points throughout the research allowing valuable peer review.

My active clinical involvement as a radiation therapist while undertaking this research provided many opportunities for discussions with radiation therapy colleagues which also enabled further questioning and debate and added to the strength of this study. A reflective journal was also kept throughout the study to record my thoughts, feelings, attitudes and decisions. This record added to the credibility of the study because it enabled any influence I had as the researcher to be transparent.

8.8 Limitations of the study

The fieldwork of this study was limited to two radiation therapy centres located within large public hospitals. Observations were limited to the treatment areas of radiation therapy and the participants, purposively selected, were radiation therapists, patients, nurses and administration staff of the treatment areas. However, by focusing the study on the treatment areas of two centres an opportunity was provided for the researcher to gather in-depth data that would not have been possible to achieve if attempts were made to observe additional centres. This concentrated focus allowed the researcher to delve deeply into the radiation therapy environment and the culture of radiation therapists. Radiation oncologists, physicists, and engineers were not expected to participate because these professionals were not central to the research focus and did not spend significant amounts of time within the treatment areas during the hours the centres were open for treatment delivery.

The appointment of a clinical mentor at each site, who in determining the areas for observation, limited the scope of observations. However, the clinical mentors added to the strength of the study because they ensured the research was carried out in an ethical and responsible manner (Merchant, Halkett, & O'Connor, 2011). Ethical requirements for written consent, rather than verbal consent from all participants restricted the number of consented patient participants and the flexibility to observe all treatment units and adjacent areas. These restrictions caused a small delay in the observations and impeded the spontaneity of the observations of patients in the treatment rooms. The treating radiation therapists were also aware of the patients who were participants and it is acknowledged that this situation could have affected the observations.

Ethnography is often criticised because it relies heavily on the researcher as the research data collection instrument (Brewer, 2000). The findings of the study are based on the researcher's interpretations of the observations through the lens of the researcher. However, strategies such as verifying observed events with informants and actively participating in discussions with participants were employed throughout this study to ensure the interpretations of the researcher were an accurate and relevant account of the daily interactions of radiation therapists and their patients.

The same research undertaken in a different setting, or by other researchers, could provide different results and interpretations. However, components of the findings and recommendations of this study could be transferable and provide radiation therapists with insight and the building blocks to create change.

8.9 Further research

The key findings and recommendations of this study indicate further research is necessary. Suggested areas for future research resulting from this study include: similar studies in other centres, studies of the spatial use of other areas of radiation therapy environments, advanced education in communication skill sets, and the development of a foundation and auditing tools for clinical pathway use in radiation therapy.

8.9.1 Radiation therapy environments

This research was based on two large metropolitan hospital radiation therapy settings and provided a foundation for future studies. Further research conducted in other settings (e.g. satellite centres, rural and remote centres, and privately managed centres), using a similar approach, could provide additional or alternative findings and interpretations of the findings and provide a more comprehensive understanding of the cultural aspects of radiation therapists.

This would be advantageous because radiation therapists in these environments may have different roles within the multidisciplinary team. As a result, radiation therapists may also have different approaches to their role and their interactions with patients. It could also provide greater insight to the issues and challenges patients face in different geographical settings because the needs of the patients accessing these centres may be different to those accessing public metropolitan centres.

8.9.2 Spatial use in radiation therapy environments

The role of radiation therapists is restricted by the spatial use and layout within the treatment areas of radiation therapy. The treatment environment does not support meaningful interactions despite radiation therapists having opportunities to engage with their patients. Spatial use in radiation therapy centres needs to be further explored to inform the profession of the changing spatial needs within all areas of

radiation therapy environments. Continued development and research is needed to establish appropriate use of available space for meaningful interactions between radiation therapists and their patients. Research using focus groups to ascertain communication needs is essential for enhancing the supportive patient care practices of radiation therapists in radiation therapy.

8.9.3 Communication skill sets

Many radiation therapists are not equipped with appropriate communication skills, or lack confidence in conducting meaningful interactions with their patients. Future research into the appropriate level of communication skills for radiation therapists is recommended. To address the lack of communication skills it is highly recommended that immediate attention is given to the development and evaluation of a training program for radiation therapists to provide communication and counselling skills required for meaningful interaction.

8.9.4 Clinical care pathway development

The findings of this study have provided recommendation for a structured approach for supportive patient care using clinical care pathways. This necessitates the need for further research into the development and trialling of clinical care pathways appropriate for use within radiation therapy by radiation therapists. However, it is imperative the development of clinical care pathways is supported by rigorous trials to determine the fundamental elements needed to provide a robust foundation for the pathways. The development of pathways must also be supported with ongoing auditing, necessitating the development of suitable auditing tools.

8.10 Conclusion

In Australia, it is estimated over 50% of newly diagnosed cancer patients should receive radiation therapy at some stage of their disease. Cancer and recognised conventional medical treatments such as radiation therapy are emotionally, psychologically, and physically challenging. Radiation therapy invokes added fears of radiation and the unknown to further compromise the emotional and psychological well being of an individual with cancer.

This study was undertaken to assist radiation therapists in understanding the role they can play in supporting patients with cancer, through their daily interactions with these patients, throughout the treatment trajectory. Unlike other research, this study provides a unique view of the inherent processes and practices of radiation therapists, within the radiation therapy environment, that shape their interactions with their patients, and provides an interpretation of these interactions.

A critical ethnographic approach was used to understand the culture of radiation therapists with the aim to explore the interactions of radiation therapists, and identify the aspects of the culture that shape these interactions, with the view to provide radiation therapists with new insight to challenge their current practices of supportive patient care.

In conclusion, this research has presented the interactions of radiation therapists and cancer patients within the context of the Australian radiation therapist culture. This study has highlighted that it is paramount radiation therapists undertake a structured approach to supportive patient care in radiation therapy. In order to embrace a structured approach to supportive care additional research is needed to further explore the complexities of the interactions of radiation therapists with their patients, and the supportive patient care that radiation therapists can provide.

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"Every reasonable effort has been made to acknowledge the owners of copyright material. I would be pleased to hear from any copyright owner who has been omitted or incorrectly acknowledged."

memorandum

| | |
|----------------|---|
| To | Dr Georgia Halkett, Faculty of Health Sciences |
| From | A/Professor Stephan Millett, Chair, Human Research Ethics Committee |
| Subject | Protocol Approval HR 164/2008 |
| Date | 6 February 2009 |
| Copy | Susan Merchant, Unit 1 185 City Road, Southbank, VIC 3006 Graduate Studies Officer, Faculty of Health Sciences |



Office of Research and Development

Human Research Ethics Committee

TELEPHONE 9266 2784

FACSIMILE 9266 3793

EMAIL hrec@curtin.edu.au

Thank you for your application submitted to the Human Research Ethics Committee (HREC) for the project titled "Exploring the interactions between radiation therapists and cancer patients: An ethnographic study". Your application has been reviewed by the HREC and is **approved**. Please note the request to amend the Participant Information Sheet to include an alternative contact number ie landline, not just a mobile phone number, or alternatively please use a call-back system.

- You are authorised to commence your research as stated in your proposal.
- The approval number for your project is **HR 164/2008**. Please quote this number in any future correspondence.
- Approval of this project is for a period of twelve months **03-02-2009** to **03-02-2010**. To renew this approval a completed Form B (attached) must be submitted before the expiry date **03-02-2010**.
- If you are a Higher Degree by Research student, data collection must not begin before your Application for Candidacy is approved by your Divisional Graduate Studies Committee.
- The following standard statement **must be** included in the information sheet to participants:
This study has been approved by the Curtin University Human Research Ethics Committee (Approval Number HR 164/2008). The Committee is comprised of members of the public, academics, lawyers, doctors and pastoral carers. Its main role is to protect participants. If needed, verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee, c/- Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth, 6845 or by telephoning 9266 2784 or by emailing hrec@curtin.edu.au.

Applicants should note the following:

It is the policy of the HREC to conduct random audits on a percentage of approved projects. These audits may be conducted at any time after the project starts. In cases where the HREC considers that there may be a risk of adverse events, or where participants may be especially vulnerable, the HREC may request the chief investigator to provide an outcomes report, including information on follow-up of participants.

The attached **FORM B** should be completed and returned to the Secretary, HREC, C/- Office of Research & Development:

When the project has finished, or

- If at any time during the twelve months changes/amendments occur, or
- If a serious or unexpected adverse event occurs, or
- 14 days prior to the expiry date if renewal is required.
- An application for renewal may be made with a Form B three years running, after which a new application form (Form A), providing comprehensive details, must be submitted.

Regards,


A/Professor Stephan Millett
Chair Human Research Ethics Committee



05 May 2009

Susan Merchant

susan.merchant@postgrad.curtain.edu.au

Re: Exploring the interactions between radiation therapists and cancer patients: An ethnographic study

Project No: E08-09

Dear Susan:

The Expedited Review Committee has reviewed your correspondence dated 27 April 2009 regarding the above-titled submission. Your application is approved. The expiration date of your approval is 5th May 2011.

You are required to alert us to any unforeseen events or unexpected developments that merit notification and to supply a final report when the project is completed.

Kind regards,

Megan

Megan Brooks

Ethics Coordinator

Peter MacCallum Cancer Centre

9656 1699

9656 3771 (direct)

9656 1800 (facsimile)

Megan.Brooks@petermac.org

NB: Approval by the Expedited Review Committee, a sub-committee of the Peter MacCallum Cancer Centre Ethics Committee, constitutes formal approval by the Ethics Committee.

12 September 2009

Ms Susan Merchant
Curtin University of Technology
PO Box 19325
Southbank VIC 3006

Dear Ms Merchant,

Re: "Exploring the interactions between radiation therapists and cancer patients: An ethnographic study."

RAH PROTOCOL NO: 090905.

Principle Supervisor: Dr Georgia Halkett, Curtin University of Technology

I am pleased to advise Research Ethics Committee EXPEDITED APPROVAL has been given to the above project. Please quote the RAH Protocol Number allocated to your study on all future correspondence.

The following have been reviewed and approved:

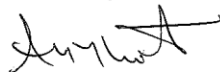
- Protocol, Version 2 (August 2009)
- Patient Information Sheet, Version 2 (22 August 2009)
- Participant Information Sheet for Radiation Therapists, Version 2 (22 August 2009)
- Patient Consent Form, Version 3 (3 September 2009)
- Consent Form for Radiation Therapists, Version 3 (3 September 2009)
- Patient's Interview Questions Guide
- Radiation Therapists Interview Questions Guide

Research Ethics Committee deliberations are guided by the NHMRC National Statement on Ethical Conduct in Human Research 2007.

The general conditions of approval follow:

- For all clinical trials, the study must be registered in a publicly accessible trials registry prior to enrolment of the first participant.
- Adequate record-keeping is important. If the project involves signed consent, you should retain the completed consent forms which relate to this project and a list of all those participating in the project, to enable contact with them in the future if necessary. The duration of record retention for all clinical research data is 15 years.
- You must notify the Research Ethics Committee of any events which might warrant review of the approval or which warrant new information being presented to research participants, including:
 - (a) serious or unexpected adverse events which warrant protocol change or notification to research participants,
 - (b) changes to the protocol,
 - (c) premature termination of the study,
 - (d) a study completion report within 3 months of the project completion.
- The Committee must be notified within 72 hours of any serious adverse event occurring at this site.
- Approval is ongoing, subject to satisfactory annual review. Investigators are responsible for providing an annual review to the RAH REC Executive Officer each year using the Annual Review Form available at:
<http://www.rah.sa.gov.au/rec/index.php>

Yours sincerely,



Dr A Thornton
CHAIRMAN
RESEARCH ETHICS COMMITTEE



Government of South Australia
SA Health

**Royal Adelaide
Hospital**

North Terrace
Adelaide SA 5000
Tel +61 8 8222 4000
Fax +61 8 8222 5939
ABN 80 230 154 545
www.health.sa.gov.au

Research Ethics Committee

Level 3, Hanson Institute

Tel (08) 8222 4139
Fax (08) 8222 3035

Email:
Heather.O'Dea@health.sa.gov.au

Appendix D Ethics approval Curtin University (Gr. Interviews)

memorandum



| | |
|----------------|---|
| To | Georgia Halkett, WACCPC |
| From | Miss Linda Teasdale, Manager, Research Ethics |
| Subject | Protocol Approval RD-13-10 |
| Date | 1 April 2010 |
| Copy | Susan Merchant, WACCPC |

Office of Research and Development
Human Research Ethics Committee
Telephone 9266 2784
Facsimile 9266 3793
Email hrec@curtin.edu.au

Thank you for your "Form C Application for Approval of Research with Minimal Risk (Ethical Requirements)" for the project titled *"The Australian Radiation Therapists: The past, the present, the future"*. On behalf of the Human Research Ethics Committee, I am authorised to inform you that the project is approved.

Approval of this project is for a period of twelve months **24-03-2010 to 24-03-2011**.

The approval number for your project is **RD-13-10**. Please quote this number in any future correspondence. If at any time during the twelve months changes/amendments occur, or if a serious or unexpected adverse event occurs, please advise me immediately.

Miss Linda Teasdale
Manager, Research Ethics
Office of Research and Development

Please Note: The following standard statement must be included in the information sheet to participants:
This study has been approved by the Curtin University Human Research Ethics Committee (Approval Number RD-13-10). If needed, verification of approval can be obtained either by writing to the Curtin University Human Research Ethics Committee, c/- Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth, 6845 or by telephoning 9266 2784 or hrec@curtin.edu.au

CRICOS Provider Code 00301J

Appendix E Invitation to participate (PMac): RT/nurse/admin



“Exploring the interactions between radiation therapists and cancer patients: an ethnographic study”

Dear Colleague

My name is Susan Merchant; I am a radiation therapist and enrolled as a PhD student at Curtin University of Technology, Perth, WA.

I am interested in exploring the interactions between radiation therapists and cancer patients. I will be observing the day to day activities within the radiotherapy department over several months and will also be conducting interviews with patients and radiation therapists.

The knowledge gained will be of major significance to future communication skills and education. It will provide us with information which will increase our understanding of our current supportive patient care practices. It will provide an opportunity for understanding further role development in the future.

I invite you to participate in this study which will involve observing your daily activities.

I will also be inviting several radiation therapists to participate in audio recorded interviews. We can organise a mutually agreed time and place. The interviews will be approximately 45-60 minute duration. During the interview you can decline to answer any question and request that the audio recorder be switched off. No names will appear on the transcribed interviews. Extracts of interviews may be used in the research report, but you will not be identified in any way. Participation is voluntary and consent can terminate at any time.

If any unsafe practices are observed during this study it will be my ethical responsibility to report to senior management/unit manager.

If there are any questions you have regarding this research, please do not hesitate to contact me or my supervisor.

Researcher: Susan Merchant

Mobile: xxxxxxxxxx

Email: susan.merchant@postgrad.curtin.edu.au

Supervisor: Georgia Halkett
Curtin University of Technology, Perth, Western Australia
Mobile: xxxxxxxxxx
Email: G.halkett@curtin.edu.au

Alternatively: Ethics Coordinator Peter MacCallum Cancer Centre: 03 9656 1699

This study has been approved by the Curtin University Human Research Ethics Committee (approval number HR 164/2008). The committee is comprised of members of the public, academics, lawyers, doctors and pastoral carers. Its main role is to protect participants. If needed, verification of approval can be obtained either by writing to Curtin University Human Research Ethics committee, c/- Office of Research and development, Curtin University of technology, GPO Box U1987, Perth, WA 6845 or by emailing hrec@curtin.edu.au

This study has also been approved by the Peter MacCallum Cancer Centre Ethics Committee [project no: E08-09]

recording will be kept confidential as with any data obtained during observations or interview. I will be the only person with access to the audio recorded data which will be de-identified and stored on a password protected computer.

Participation

Participation in any research project is voluntary. If you do not wish to take part, you do not have to. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage.

At any time you do not want me to enter the treatment room or decide that you do not wish me to observe you I will remove myself from the room or treatment area.

Your decision whether to take part or not, or to take part and then withdraw, will not affect your relationship with the researcher or with Peter MacCallum Cancer Centre.

Consent to Participate

There are 2 parts to this study with 2 sections on the consent form. A signature will be needed to allow me to observe and a second signature if you are consenting to an interview.

When you have signed the consent form I will assume that you have agreed to participate and allow me to use your data in this research.

Possible Risks of Participation

No physical harm will result from participating in this study, nor any financial burden. However, you may find some of the questions that you are asked distressing. If you do, please advise the researcher. If you are really distressed by the questions that are being asked and no longer wish to participate in the study you are free to withdraw your participation. If you become distressed during the interview process you will be given the opportunity to refer to the treating team involved in your care for additional support.

Other resources available are: **Patient Advocate ph: 03 9656 1870**

Confidentiality

The information you provide will be kept separate from your personal details, and I will be the only person who has access to this. The interview transcript will not have your name or any other identifying information on it and in adherence to university policy, the interview recordings and transcribed information will be kept in a locked cabinet for 5 years, before it is destroyed.

The research results will be published in international peer reviewed journals and presented at conferences.

A summary of the results will be made available to the Peter MacCallum Cancer Centre and you will be able to access these results from the radiotherapy department. Alternately if you would like a copy of the results sent to you this can be arranged with me.

Further Information

If you would like further information about the study, please feel free to contact me:

Mobile # xxxxxxxxxx and leave a brief message or by email:

susan.merchant@postgrad.curtin.edu.au.

Alternately, you can contact my supervisor:

Dr Georgia Halkett,

Curtin University of Technology, Perth, Western Australia

Mobile: xxxxxxxxxx

Email: G.halkett@curtin.edu.au

If you have any complaints about any aspect of the project, the way it is being conducted or any questions about being a research participant in general, then you may contact the Peter MacCallum Human Research Ethics Coordinator on 03 9656 1699

This study has been approved by the Curtin University Human Research Ethics Committee (approval number HR 164/2008). The committee is comprised of members of the public, academics, lawyers, doctors and pastoral carers. Its main role is to protect participants. If needed, verification of approval can be obtained either by writing to Curtin University Human Research Ethics committee, c/- Office of Research and development, Curtin University of technology, GPO Box U1987, Perth, WA 6845 or by emailing hrec@curtin.edu.au

This study has also been approved by the Peter MacCallum Cancer Centre Ethics Committee [project no: E08-09]



“Exploring the interactions between radiation therapists and cancer patients: an ethnographic study”

CONSENT FORM

- I understand the purpose and procedures of this study.
- I have been provided with the participation information sheet.
- I understand that this study may not directly benefit me.
- I understand that my involvement is voluntary and I can withdraw at any stage.
- I understand that audio recording equipment may be used.
- I understand that no personal identifying information e.g. name and address will be used and all information will be securely stored for a minimum of 5 years before being destroyed.
- I have been given the opportunity to ask questions.
- I agree to participate in the study outlined to me.

Name _____

Signature _____

Date _____

Researcher _____

Signature _____

Additional Consent for Interviews

- I understand the interview process
- I freely agree to participate in an interview conducted by the researcher, Susan Merchant, for the purpose of the study outlined in the Information sheet.

Signature _____ Date _____

Researcher's Signature _____ Date _____



“Exploring the interactions between radiation therapists and cancer patients: an ethnographic study”

CONSENT FORM

- I have been provided with the participation information sheet and I understand the purpose, procedures and risks of this study.
- I understand that I have been asked to take part in the study as I am over 18 years of age, English speaking and I am currently receiving radiotherapy treatment
- I have been able to have a family member or friend with me while I was told about the study and given the opportunity to ask questions about the study
- I understand that this study may not directly benefit me.
- I understand that my involvement is voluntary and I may withdraw at any time without reason.
- I understand my decision whether to take part or not, or to take part and then withdraw, will not affect my future medical care or the researcher’s responsibilities.
- My participation in the study does not affect any right to compensation, which I may have under statute or common law.
- I understand that audio recording equipment may be used only with my consent.
- I understand that no personal identifying information e.g. name and address will be used and all information will be securely stored for a minimum of 5 years before being destroyed.
- I understand I will have access to the results of the study from the radiotherapy department

- I freely agree to participate in the study outlined to me. I understand that I will receive a signed copy of this document to keep.

If you are unclear about anything you have read in the Patient Information Sheet or this Consent Form, please speak to your doctor before signing this Consent Form.

Signature _____ Date _____

Witness Signature _____ Date _____

Additional Consent for Interviews

- I understand the interview process
- I freely agree to participate in an interview conducted by the researcher, Susan Merchant, for the purpose of the study outlined in the Information sheet.

- I agree / I disagree to the use of audio recording equipment during the interview process.

Signature _____ Date _____

Researcher's Signature _____ Date _____

Appendix I Invitation to participate (RAH): RT/nurse/admin



Government of South Australia

Central Northern Adelaide
Health Service

Royal Adelaide Hospital

“Exploring the interactions between radiation therapists and cancer patients: an ethnographic study”

Dear Colleague

My name is Susan Merchant; I am a radiation therapist and enrolled as a PhD student at Curtin University of Technology, Perth, WA.

I am interested in exploring the interactions between radiation therapists and cancer patients. I will be observing the day to day activities within the radiotherapy department over several months and will also be conducting interviews with patients and radiation therapists.

The knowledge gained will be of major significance to future communication skills and education. It will provide us with information which will increase our understanding of our current supportive patient care practices. It will provide an opportunity for understanding further role development in the future.

I invite you to participate in this study which will involve observing your daily activities.

I will also be inviting several radiation therapists to participate in audio recorded interviews. We can organise a mutually agreed time and place. The interviews will be approximately 45-60 minute duration. During the interview you can decline to answer any question and request that the audio recorder be switched off. No names will appear on the transcribed interviews. Extracts of interviews may be used in the research report, but you will not be identified in any way. Participation is voluntary and consent can terminate at any time.

If any unsafe practices are observed during this study it will be my ethical responsibility to report to senior management/unit manager.

If there are any questions you have regarding this research, please do not hesitate to contact me or my supervisor.

Researcher: Susan Merchant

Mobile: xxxxxxxxxx Email: susan.merchant@postgrad.curtin.edu.au

Supervisor: Georgia Halkett
Curtin University of Technology, Perth, Western Australia
Mobile: xxxxxxxxxx Email: G.halkett@curtin.edu.au

Alternatively:

Chairman, Research Ethics Committee, Royal Adelaide Hospital on 8222 4139.

This study has been approved by the Curtin University Human Research Ethics Committee (approval number HR 164/2008). The committee is comprised of members of the public, academics, lawyers, doctors and pastoral carers. Its main role is to protect participants. If needed, verification of approval can be obtained either by writing to Curtin University Human Research Ethics committee, c/- Office of Research and development, Curtin University of technology, GPO Box U1987, Perth, WA 6845 or by emailing hrec@curtin.edu.au

This study has the Royal Adelaide Hospital Ethics Committee expedited approval [RAH Protocol No: 090905]

This study has also been approved by the Peter MacCallum Cancer Centre Ethics Committee [project no: E08-09]

Appendix J Information sheet (RAH): patient



Government of South Australia
Central Northern Adelaide
Health Service

Royal Adelaide Hospital

Participation Information Sheet

My name is Susan Merchant. I am currently completing my PhD at Curtin University of Technology.

Purpose of Research

The purpose of this study is to explore the interactions between radiation therapists and cancer patients undergoing radiotherapy. This research is expected to contribute to patient care and education in radiotherapy in the future.

This Participation Information sheet and consent form tells you about the research project. It explains what is involved to help you decide if you want to take part.

Please read the information carefully. Ask questions about anything that you don't understand or want to know more about.

I will be available to discuss the study or answer any questions on [day and date to be inserted]

Alternately if you have any questions please call me on mobile # xxxxxxxxxx and leave your name and contact details for me to return the call.

Before deciding whether or not to take part, you might want to talk about it with a relative, friend or your local health worker.

This is a research project and you do not have to be involved. If you do not wish to participate, your medical care will not be affected in any way. Also, you may withdraw from the project at any time after you have commenced.

If you decide you want to take part in the research project, you will be asked to sign the consent section. By signing it you are telling us that you:

- Understand what you have read;
- Consent to take part in the research project;
- Consent to be involved in the procedures described;
- Consent to the use of your personal and health information as described.

You will be given a copy of this information and consent form to keep.

Your Role

You are invited, as a current patient attending for radiotherapy, to take part in this research project. This is because I would like to find out about your experiences during your course of radiotherapy and your interactions with radiation therapists during this time. I am asking patients over 18 years of age and English speaking who are currently undergoing radiotherapy and the radiation therapists providing the treatment to consent to me observing their interactions and the delivery of the radiotherapy treatment over several weeks.

It is for these reasons I would like to observe you while you are having treatment in the radiotherapy department.

As there are two parts to this study I may also ask you to consent to answer some questions about your experiences in the radiotherapy department. This interview process will take approximately 30-60 minutes. Audio recording equipment maybe used in this part of the study. You do not have to agree to its use. Any audio recording will be kept confidential as with any data obtained during observations or interview. I will be the only person with access to the audio recorded data which will be de-identified and stored on a password protected computer.

Participation

Participation in any research project is voluntary. If you do not wish to take part, you do not have to. If you decide to take part and later change your mind, you are free to withdraw from the project at any stage.

At any time you do not want me to enter the treatment room or decide that you do not wish me to observe you I will remove myself from the room or treatment area. Your decision whether to take part or not, or to take part and then withdraw, will not affect your relationship with the researcher or with The Royal Adelaide Hospital.

Consent to Participate

There are 2 parts to this study with 2 sections on the consent form. A signature will be needed to allow me to observe and a second signature if you are consenting to an interview.

When you have signed the consent form I will assume that you have agreed to participate and allow me to use your data in this research.

Possible Risks of Participation

No physical harm will result from participating in this study, nor any financial burden. However, you may find some of the questions that you are asked distressing. If you do, please advise the researcher. If you are really distressed by the questions that are being asked and no longer wish to participate in the study you are free to withdraw your participation. If you become distressed during the interview process you will be given the opportunity to refer to the treating team involved in your care for additional support.

Confidentiality

The information you provide will be kept separate from your personal details, and I will be the only person who has access to this. The interview transcript will not have your name or any other identifying information on it and in adherence to university policy, the interview recordings and transcribed information will be kept in a locked cabinet for 5 years, before it is destroyed.

The research results will be published in international peer reviewed journals and presented at conferences.

A summary of the results will be made available to the Royal Adelaide Hospital and you will be able to access these results from the radiotherapy department.

Alternately if you would like a copy of the results sent to you this can be arranged with me.

Further Information

If you would like further information about the study, please feel free to contact me:

Mobile # xxxxxxxxxx and leave a brief message or by email:

susan.merchant@postgrad.curtin.edu.au.

Alternately, you can contact my supervisor:

Dr Georgia Halkett,

Curtin University of Technology, Perth, Western Australia

Mobile: xxxxxxxxxx

Email: G.halkett@curtin.edu.au

If you wish to speak to someone not directly involved in the study about your rights as a volunteer, or about the conduct of the study, you may also contact the Chairman, Research Ethics Committee, Royal Adelaide Hospital on 8222 4139.

This study has been approved by the Curtin University Human Research Ethics Committee (approval number HR 164/2008). The committee is comprised of members of the public, academics, lawyers, doctors and pastoral carers. Its main role is to protect participants. If needed, verification of approval can be obtained either by writing to Curtin University Human Research Ethics committee, c/- Office of Research and development, Curtin University of technology, GPO Box U1987, Perth, WA 6845 or by emailing hrec@curtin.edu.au

This study has the Royal Adelaide Hospital Ethics Committee expedited approval [RAH Protocol No: 090905]

This study has also been approved by the Peter MacCallum Cancer Centre Ethics Committee [project no: E08-09]

Appendix K Consent form (RAH): RT/nurse/admin



Government of South Australia
Central Northern Adelaide
Health Service

Royal Adelaide Hospital

“Exploring the interactions between radiation therapists and cancer patients: an ethnographic study”

CONSENT FORM

- I understand the purpose and procedures of this study.
- I have been provided with the participation information sheet.
- I understand that this study may not directly benefit me.
- I understand that my involvement is voluntary and I can withdraw at any stage.
- I understand that audio recording equipment may be used.
- I understand that no personal identifying information e.g. name and address will be used and all information will be securely stored for a minimum of 5 years before being destroyed.
- I have been given the opportunity to ask questions.
- I agree to participate in the study outlined to me.

Name _____

Signature _____

Date _____

Researcher _____

Signature _____

“Exploring the interactions between radiation therapists and cancer patients: an ethnographic study”

Additional Consent for Interviews

- I understand the interview process
- I freely agree to participate in an interview conducted by the researcher, Susan Merchant, for the purpose of the study outlined in the Information sheet.

Signature _____ Date _____

Researcher’s Signature _____ Date _____

Appendix L Consent form (RAH): patients



Government of South Australia
Central Northern Adelaide
Health Service

Royal Adelaide Hospital

“Exploring the interactions between radiation therapists and cancer patients: an ethnographic study”

CONSENT FORM

- I have been provided with the participation information sheet and I understand the purpose, procedures and risks of this study.
- I understand that I have been asked to take part in the study as I am over 18 years of age, English speaking and I am currently receiving radiotherapy treatment
- I have been able to have a family member or friend with me while I was told about the study and given the opportunity to ask questions about the study
- I understand that this study may not directly benefit me.
- I understand that involvement is voluntary and I may withdraw at any time without reason.
- I understand my decision whether to take part or not, or to take part and then withdraw, will not affect my future medical care or the researcher’s responsibilities.
- My participation in the study does not affect any right to compensation, which I may have under statute or common law.
- I understand that audio recording equipment may be used only with my consent.
- I understand that no personal identifying information e.g. name and address will be used and all information will be securely stored for a minimum of 5 years before being destroyed.
- I understand I will have access to the results of the study from the radiotherapy department
- I freely agree to participate in the study outlined to me. I understand that I will receive a signed copy of this document to keep.

If you are unclear about anything you have read in the Patient Information Sheet or this Consent Form, please speak to your doctor before signing this Consent Form.

Signature _____ Date _____

Witness Signature _____ Date _____

“Exploring the interactions between radiation therapists and cancer patients: an ethnographic study”

Additional Consent for Interviews

- I understand the interview process
- I freely agree to participate in an interview conducted by the researcher, Susan Merchant, for the purpose of the study outlined in the Information sheet.
- I agree / I disagree to the use of audio recording equipment during the interview process.

Signature _____ Date _____

Researcher's Signature _____ Date _____

Appendix M Participation & consent form: RT Group Interviews

Dear Radiation Therapist,

Re: Participation in Focus Group

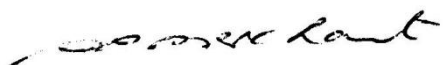
Thank you for agreeing to participate in this focus group. The purpose of this focus group is to gain an understanding of the historical development of the Australian radiation therapist. It will provide valuable information of the culture and its impact on the professional development. It is important to understand for future role development and enhancement if the profession is to embrace the changes in medical approaches, particularly in oncology, where a patient centred model of health is rapidly becoming the preferred approach.

The focus group will take approximately one hour and will be tape recorded. Participation in the focus group is voluntary. The information that you provide will be kept confidential. The results of this study will be published in The Radiographer journal. Any publications produced will not identify individual people or provide information that singles out particular people.

There are no risks to those who participate in the study. Your participation will be beneficial as it will enable the researchers to gain an understanding of patient communication and information provision in radiation therapy. If you have any queries about the study please speak to Dr Georgia Halkett or Susan Merchant.

Thank you for providing your input.

Regards



Dr Georgia Halkett

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Participant Consent

Chief Investigator: Dr Georgia Halkett

Co Investigator: Susan Merchant

1. I have been given clear information (verbal and written) about this study and have been given time to consider whether I want to take part.
2. I give permission to be tape recorded during the focus group.
3. I have had the opportunity to ask questions and these have been answered satisfactorily.
4. I understand that I am free to withdraw from the study at any time, for any reason, and without prejudice.
5. I agree to take part in this research study and for the data obtained to be published provided my name or any other identifying information is not used.

If you are unclear about anything you have read in the Participant Information Sheet or this Consent Form, please speak to the researcher or the research Supervisor before signing this Consent Form.

| | | |
|---------------------|--------------------------|------|
| Name of Participant | Signature of Participant | Date |
|---------------------|--------------------------|------|

| | | |
|--------------------|-------------------------|------|
| Name of Researcher | Signature of Researcher | Date |
|--------------------|-------------------------|------|

The Curtin University of Technology Human Research Ethics Committee has given ethics approval for the conduct of this study. [Protocol Approval **RD-13-10**] If you have any ethical concerns regarding the study, you may contact The Secretary, Human Research Ethics Committee, Curtin University of Technology, GPO Box U1987, Perth, WA 6845; phone (08) 9266 2784; email hrec@curtin.edu.au

Appendix N Interview guide: RT interviews

Radiation Therapists Interview Questions Guide (PMac)

1. How long have you worked in radiotherapy? Where have you worked?
What training did you receive?
2. How do you start your day at work?
3. When you arrive at work what happens?
4. Who works in your area?
5. Are you part of a team?
6. Can you tell me about the team dynamics?
7. How does the team manage the daily workload?
8. Are other staff members involved with your work each day?
9. What tasks are people undertaking?
10. What happens on the first day of a patient's treatment? What happens on the patient's last day of treatment?
11. What role does the nurse have?
12. What sort of information/communication occurs with the patients?
13. Are there particular guidelines, procedures used for any aspect of patient interaction?
14. Are there any times or situations that change the team dynamics or approaches to the work schedule?
15. What sort of information do you feel comfortable giving patients?
16. What other aspects of work are important to you?

Clarification question guide for interview (RT/ PMac)

Where have you worked?

Can you tell me about the team dynamics? Do they impact on interaction with the patients? Are there any times or situations that change the team dynamics or approaches to the work schedule?

What role does the nurse have?

What sort of information do you feel comfortable giving patients?

I am aware that you were involved for quite some time in patient care and information giving so what happened there?

The gowns I have seen quite a few patients wearing them backwards. Do you have any thoughts on this?

The glass doors, what are your thoughts on these?

I have noticed that there seems a barrier between the RTs and nursing, is that true?

Clarification question guide for interview (RT/ RAH)

Do you feel part of the multidisciplinary team?

What sort of team players are RTs?

Do you get represented/ attend at meetings and have an opportunity to be part of other teams within the department?

Do all RTs get to give input to procedures and processes that occur in the department?

Do you think nurses should get the opportunity to attend conferences/courses to enhance their practices? Do you think they should play a part in the radiation oncology conferences?

As an RT how do you interact with the nurses?

Is there rapport/camaraderie between the RTs and nurses?

What sort of Formal/informal interaction takes place?

Is there respect for each other?

Are there any generational or other factors that prohibit/assist the rapport?

Do you think that the relationship of RTs and nurses within the team affects patient care and outcomes?

Is there anything else that you can tell me about the team and dynamics here?

Appendix O Interview guide: patient interviews

Patient's Interview Questions Guide

Before we start I would like to clarify the aims of this interview with you. Have you read the participation letter? Do you understand what you have read? Do you have any questions? Have you signed the consent form?

1. Have you travelled far to get here today?
2. Can you tell me a little about your current situation?
3. How long have you been coming for treatment?
4. Can you tell me about your first visit to the radiotherapy department?
5. How did you feel?
6. What impressions did you have? What about the reception area and waiting areas?
7. Can you tell me about subsequent visits and your feelings?
8. Have there been any particular experiences you wish to talk about?
9. Did you have any questions for the staff? Were they adequately answered?
10. Can you describe any interactions you have had with the radiation therapists?
11. Do you have any comments to make about communication or information?
12. Is there anything else you would like to tell me about your radiotherapy experience?

Appendix P Interview guide: nurses

Clarification questions for interviews (nurses)

Do you feel part of the team?

Do you get represented at or attend meetings?

Do nurses get to give input to procedures and processes that occur in the department?

Do nurses get the opportunity to attend conferences/courses to enhance their practices?

As a nurse how do you interact with the RTs?

Is there rapport/camaraderie between the RTs and nurses?

What sort of Formal/informal interaction takes place?

Are there any generational or other factors that prohibit/assist the rapport?

Is there anything else that you can tell me about the team and dynamics here?

Appendix Q Interview guide: demographics (group interviews)

Demographics Questionnaire:

1. When did you commence practising as a radiation therapist?
2. Are you currently working as a radiation therapist?
3. How many years have you worked as a radiation therapist?
4. How many of these years worked were within Australian centres?
5. What qualifications/education did you obtain to become a radiation therapist?
6. Through which institution was the qualification gained?

Appendix R Interview guide: RTs (exp) group interviews

Radiation Therapists (experienced) Questions Guide

1. What tasks were involved in the role as ‘radiation therapist’ when you entered the workplace?
2. What education was required prior to or when undertaking the position of ‘radiation therapist’?
3. What were the working dynamics? Was team work involved? Were there other professionals involved? [Skill mix]
4. Can you describe the tasks that have changed from when you first entered the profession? Or any tasks that were not part of the role then but have now become part of the daily activities for radiation therapists.
5. What are some of the historical markers that come to mind, that have changed radiation therapy and consequently the role of radiation therapists? Can you name some of the more significant changes that have occurred during your working life?
6. Over the years there have been many technological changes. Has this had any impact on the role of the radiation therapist and the subsequent care given to patients?
7. Have you noticed any changes in the newer ‘generations’ of radiation therapists entering the workforce?
8. Has there been a change in the approach to patient care?
9. Was communication with patients an important element of the role when you started? Have there been any changes or development in communication and supportive patient care?
10. What changes if any would you like to see for the role of ‘radiation therapist’ in the future?

Appendix S Interview guide: RTs (recent) group interviews

Radiation Therapists (recently qualified) Questions Guide

1. What are or what were your expectations in becoming a 'radiation therapist'?
2. Why did you decide to do radiotherapy?
3. What are the working dynamics? Is team work involved? Are there other professionals involved? [Skill mix]
4. Can you describe the tasks that you currently undertake?
5. How would you best describe the focus of radiation therapy and radiation therapists?
6. Do older radiation therapists have different approaches to the work?
7. What areas of radiation therapy do you deem most important?
8. What is the term 'patient care' within radiation therapy?
9. Is communication with patients an important element of the role? Could there be any future changes or development in communication and supportive patient care?
10. What changes if any would you like to see for the role of 'radiation therapist' in the future?

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