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ACUTE CARE IN OCCUPATIONAL THERAPY
A PACKAGE OF CARE AND THE ESSENTIAL THERAPEUTIC EQUIPMENT NEEDED

ANGELA CHETTY

8934422

Submitted in fulfillment towards a

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DECLARATION

I, Angela Chetty do hereby declare:

i. The research reported in this dissertation unless otherwise stipulated is my original research.

ii. The work that is described in this dissertation has not been submitted to UKZN or any other tertiary institution for the purpose of obtaining an academic qualification.

iii. Where contributions of others are used then they have been acknowledged in the writing and in the reference section and where direct quotations have been used the writing has been placed in quotation marks and referenced accordingly.

iv. All graphics and tables are original unless specifically acknowledged and the source is detailed in the writing and reference section.

v. This work was completed under the guidance of my supervisors.

MRS ANGELA CHETTY _____

DATE: _____

DEDICATION

This research is dedicated to all Occupational Therapists who work so tirelessly in the public sector with dedication and loyalty.

You enable, empower and enlighten. I salute you.

ACKNOWLEDGMENTS

I would like to thank the following people for making this research possible:

1. The occupational therapists and the OT Forum of KZN who dedicate their time to improving the public sector and participated in this research at all phases so willingly. I am privileged to be one of their colleagues.

2. My supervisors whose support, guidance and constant encouragement ensured the completion of this work.

3. My family and friends who constantly encouraged me on, and believed in me.

4. My daughters Megan and Andrea who are a daily inspiration to me, my husband Nathan for his support and endurance through this study with me and my parents, Prem and Sally Jugwanth who have enabled and encouraged me, to be the best I can be.

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OPERATIONAL DEFINITIONS

OCCUPATIONAL THERAPY: Occupational therapy is a client-centred health profession concerned with promoting health and wellbeing through occupation. The primary goal of occupational therapy is to enable people to participate in the activities of everyday life. (WFOT 2012)

ACUTE CARE: Acute care is an inpatient hospital setting for individuals with a critical medical condition. These patients may have experienced a sudden decline in their medical and functional status due to a traumatic event (spinal cord or head injury) or onset of a new condition eg. Stroke. (AOTA, 2012).

THERAPEUTIC EQUIPMENT: Therapeutic devices/equipment is a selection of objects that may assist a patient in daily activities or those that may assist the medical personal in delivering therapeutic services. It may include assistive devices and physical therapy equipment. (Etolen, 2016)

PACKAGE OF CARE: A set of prescribed essential health care activities to deliver quality health services (NDOH, 2007).

ABBREVIATIONS

AOTA	American Occupational Therapy Association
DOH	Department of Health
KZN	KwaZulu Natal
NDOH	National Department of Health
NGT	Nominal Group Technique
NHI	National Health Insurance
NCS	National Core Standards
OT	Occupational therapy/ Occupational therapists
OTASA	Occupational therapy association of South Africa
OSC	Office of Standards Compliance
TB	Tuberculosis
SA	South Africa
WHO	World Health Organisation
WFOT	World Federation of Occupational Therapy
IUSS	Infrastructure unit Support Systems
USA	United states of America

ABSTRACT

Introduction: Occupational therapy, together other clinical services are required by government to describe and outline their services so that minimum standards can be set, to ensure that quality care is delivered to all who use the public health service in South Africa. In KZN, where this study is focused, the vast majority of health institutions deliver acute care services at either a district, regional or tertiary level. Aligning therapeutic services to appropriate clinical service at each level will have an impact on optimal health care. **Aim:** This study focused on developing a package of services for occupational therapy in acute care and outlining an essential therapeutic equipment list. **Methodology:** A mixed methods explorative sequential study with three phases was implemented. The first phase focused on a documentation audit to determine the context, background and any relevant information on the topic. Approximately 13 documents were selected to conduct a thematic analysis and extract pertinent information to answer the research question. The second phase consisted of implementing a survey in KZN with all eligible occupational therapists to determine their opinions on existing information and generate new ideas. This survey was constructed utilizing information from the document analysis. The final phase ensured that consensus was drawn on a package of occupational therapy services and equipment list by conducting a focus group utilizing the nominal group technique. Senior experienced occupational therapists that worked in acute care constituted the expert group.

Results: The documentation audit yielded a rich description of information which set the background on the survey questionnaire. A 78 % response from the survey ensured that the senior experts on the nominal focus group were well informed

when drawing consensus on a final package of occupational therapy in acute care and the essential therapeutic equipment and assessments needed. **Conclusion**: This study will provide therapists with a baseline standard of care for acute care hospitals and assist them with motivating for appropriate cost effective resources to deliver effective services in KZN.

OVERVIEW OF DISSERTATION

Chapter One: Introduction comprises the background and context of the study, overview of relevant literature, a problem statement highlighting concerns, the research question, aims and objectives as well as general methodology and ethical considerations.

Chapter 2: Manuscript One: (*Package of Care and Therapeutic Equipment List for Acute Care in OT in the Public Sector of KZN. Part One: A Documentation Audit)*. This manuscript focuses on an analysis of documents relating to a package of acute care in OT and any proposals for equipment within the public health system in SA. The manuscript is formatted according to the guidelines for the South African Journal of Occupational therapy (SAJOT). This includes the abstract, introduction, methodology, results and discussion and conclusion. Tables and figures are embedded within the text to allow for ease of reading.

Chapter Three: Manuscript Two *(Consensus on a Package of Acute Care in Public Hospitals in KZN and a therapeutic equipment list for OT Service Delivery***).** This manuscript focuses on developing consensus for a package of acute care at different levels of care and developing a supportive therapeutic equipment list by means of a survey and NGT focus group of experts. The

manuscript is formatted according to the guidelines for the South African Journal of Occupational therapy (SAJOT). This includes the abstract, introduction, methodology, results, discussion and conclusion. Tables and figures are embedded within the text to allow for ease of reading.

Chapter Four: Synthesis includes a summary of the research including the significance and implications of the study, conclusion and recommendations.

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND AND CONTEXT OF THE STUDY

With the developing nature of the health system in South Africa, occupational therapy (OT) as with other professions are forced to move towards outcomes based, focused, cost effective and relevant services at different levels of care as defined by the National Department of Health (Robinson & Botha, 2013).

The provision of OT services in public health institutions are currently being guided by the National Core Standards which is a quality control measure implemented by the Department of Health (DOH, 2011). These activities are considered to be critical and essential in providing a minimum essential service (DOH, 2011). Human resources, infrastructure and basic equipment, amongst other criteria, are all highlighted as minimum standards to deliver an optimal service (Whittaker, Shaw, Spieker, Linegar, 2011). These audits are currently conducted on all the National Health Insurance (NHI) pilot sites, in all provinces, to ensure compliance to essential criteria before the NHI can be rolled out for all public health facilities (DOH, 2011).

Research into the minimum standards for basic OT assessment and therapeutic equipment at different levels of acute care in the South African NDOH remains unfound. The general minimum standards document used in the NHI has been criticised for being inappropriate to assess and audit OT services (NDOH OT

Forum, 2014). A draft norms and standards document for human resources in OT has been proposed to the KwaZulu Natal (KZN) DOH (KZN DOH, 2015) and a guide for facilities have also been proposed at a national level (IUSS, 2014). However, assessment and therapeutic equipment needed to provide an effective service at all levels of care, have been neglected at both a national and provincial level.

The need for equipment norms is supported by goal two in the Framework and Strategy for Disability and Rehabilitation Services in SA 2015-2020 (NDOH, 2015) which was finalized in July 2015 by the Minister of Health. It has been circulated for input by all stakeholders including OTs. It outlines the context within which improved access to rehabilitation and disability services can be delivered. The document also clearly outlines hospital based services in terms of rehabilitation service provision.

It is with this in mind, the need for developing an essential list of assessment and therapeutic equipment for KZN hospitals at the different levels of care becomes relevant. The levels of care as defined by the NDOH constitute district, regional, tertiary and central hospitals (NDOH, 2015). This research is delineated by a focus on general acute hospitals with the exclusion of specialized hospitals. Specialised hospitals as defined by the NDOH include mental health, tuberculosis (TB) facilities, long term facilities, and rehabilitation hospitals (NDOH, 2015).

The need to unpack OT services at different levels of care and identify a minimum assessment and therapeutic equipment list may enrich the norms and standards document in KZN, guide therapists in prioritizing an equipment list in line with

services they are mandated to follow at different levels of care, and serve to motivate finance structures to deliver on these basic needs in order for an effective and comprehensive service. This research study focuses on acute district, regional and tertiary hospitals in the province as the majority of state hospitals in the province currently fall into this category. This research may also guide the NDOH in revising their National Core Standard quality evaluation tools with respect to the package of care delivered and the required equipment needed. This information can also be used as a benchmark for other provinces as aforementioned, to assist in realising goal two of the Framework for Disability and Rehabilitation which calls for norms on infrastructure, equipment and human resources to be finalized by 2017(NDOH, 2015).

1.2 PROBLEM STATEMENT

A defined package of care for OT at all levels of acute care in public health in SA and a list of essential assessment and therapeutic equipment to deliver quality services at district, regional and tertiary level is an important factor in auditing OT services, guiding the developing therapist in quality care and motivating for the allocation of essential resources.

Currently there are no defined guidelines for acute care in public health or the essential equipment needed to provide services for OT. This has a significant impact on OT services when the current health system demands accountability, norms , standards and outcomes in order to prioritize resources (NDOH, 2007). OT as with all other rehabilitation services have been historically under resourced

and their scope of practice has not been defined or aligned to other clinical services. Defining the role of OT in acute services and the resources it requires will validate the service by outlining how it impacts health and wellness and allow managers to allocate reasonable budgets for resources needed. This research study is limited to OT services in the province of KwaZulu Natal in South Africa and focuses on district, regional and tertiary acute physical hospitals.

There is no known research to compare methodology or process with regards to investigating the package of care of OT at each level and developing consensus for an assessment and therapeutic list of equipment in SA. The researcher therefore undertook to triangulate data from three sources (namely, a documentation audit, a survey amongst therapists and a nominal group with an expert group of therapists) in order strengthen the findings of this research.

1.3. RESEARCH QUESTIONS, AIMS AND OBJECTIVES

1.3.1 Research question

What are the essential assessment and therapeutic equipment required by OTs to deliver OT services at a district, regional and tertiary level of care, in KZN acute hospitals?

1.3.2 Aim

To develop an essential assessment and therapeutic equipment list for OT services at a district, regional and tertiary level of care in KZN acute hospitals, that is aligned to a package of OT services in order to provide optimal therapeutic services.

1.3.3. Objectives

1.3.3.1 To define and describe current OT services at acute provincial hospitals by a document analysis at district, regional and tertiary level.

1.3.3.2 To generate an initial equipment list for occupational therapy from a document analysis.

1.3.3.3 To describe and profile OT services at the district, regional and tertiary level of acute care by OTs in KZN through use of a survey

1.3.3.4 To generate an essential equipment list for district, regional and tertiary hospitals by OTs in KZN through use of a survey.

1.3.3.5 To gain consensus on the definition of OT services at the different levels of care and the essential assessment and therapy equipment at each level of care by an expert panel of OTs in KZN via a nominal group consensus process.

1.4 OVERVIEW OF THE LITERATURE

The World Federation of Occupational Therapy (WFOT) defined occupational therapy as a “client-centered health profession concerned with promoting health and wellbeing through occupation” (WFOT, 2013,Pg 2). The primary goal of occupational therapy is to enable people to participate in the activities of everyday life.

The main goals of OT according to Sodderback (2008, pg. 20) are to "help clients learn or relearn activities they require for daily living, help persons adapt effectively to their disability, provide environmental adaptations that enable participation in their social circle, promote health and wellness, and prevent disease and trauma." This definition clearly outlines that OT has an active role in preventative, promotive, rehabilitation, remedial and palliative care at all levels of health care, to improve quality of life of individuals.

Moreover, OTs have suitable knowledge and skills in acute care and are able to facilitate early mobilisation, restore function, and co ordinate care in a comprehensive manner (Bondoc, Lashgari, Hermann, Finnen, Frost & Alexander, 2012), aiding in earlier discharge and improved function (Brahmbhatt, Murugan, Milbrandt, 2010). Assessment and effective intervention is therefore supported as a valid method to ensure good patient outcomes (College of Ontario, 2013). The use of relevant assessments and therapeutic equipment is considered essential for good treatment planning, intervention and establishes the boundaries of care (Latham Trombley et al, 2008, Pg 45).

OT specific guidelines in acute care are not available in SA and therapists utilize their own skills and experience to determine the type of service they will deliver at each level of care. Less experienced therapists depend on the mentorship of more seasoned therapists, and at times, the OT Forum, to assist with service delivery issues in the province (KZN OT Forum, 2014). To prevent the frustration of providing comprehensive therapy for short term hospital stays and effective discharge, it was found that describing and defining OT practice can assist the therapist, and team members with guidelines for the provision of effective

services (Shiri, 2006). Guidelines for acute care do exist in first world countries like the USA (Bondoc et al, 2012), and Ireland (Fraser, Mearns, Millar, Murray, Wardlaw, 2005) to assist with OT management and effective treatment and discharge. This also guides the developing therapist in the selection of assessment and treatment modalities (Bondoc et al, 2012). In SA, there are no available guidelines that support occupational therapy in acute care and subsequently a supporting recommended therapeutic equipment list is also not available . Whilst the use of appropriate assessments and intervention methods are supported as minimum standards in the Standards of Practice for OT in South Africa (Beukes, HPCSA, 2004), access to appropriate equipment and assessments remain a challenge in the public health system due to various constraints such as limited budgets, inadequate knowledge, poor prioritization, amidst others (NDOH OT Forum, 2014) especially in rural based hospitals as reported by the KZN province (KZN OT report 2014) and national OT Forum (2015).

The SA NDOH defines acute hospitals as district, regional, tertiary, and central services so that health concerns can be addressed at an escalating degree of expertise, ranging from basic health care at district level to advanced specialized care at a tertiary level. OTs as with other rehabilitation professionals work at all levels of care. Each level of acute care is clearly defined in national health policies with a district hospital providing the most basic diagnostic and therapeutic generalist service (DOH, 2002). A range of clinical services may be offered at this level, including medicine, obstetrics and gynaecology, mental Health, occupational health, rehabilitation, casualty, surgery, paediatrics, geriatrics,

forensic medical services and outpatient services (Cullinan, 2006). Rehabilitation services are described as the provision of assistive devices and rehabilitation, as two defined concepts (KZN DOH 2003). A regional hospital provides services requiring the intervention of both specialists and general practitioners and needs to provide at least five specialties of the possible eight, namely, surgery, medicine, orthopaedics, paediatrics, obstetrics and gynaecology, psychiatry, diagnostic radiology and anaesthetics (Cullinan, 2006).

Tertiary hospitals provide only specialist and sub specialist care. They provide a large range of specialties with at least 34 service areas named ranging from anaesthetics, burns, dermatology, orthopaedics, paediatrics, plastics and reconstruction, to trauma, vascular and urology services (Cullinan, 2006).

OT therefore needs to align its services to that, which is being offered at each level of care in order to be relevant and effective. There is also support from the national policy for quality care in SA (NDOH, 2007) to create a relevant and appropriate package of care for all clinical services.

The NDOH have implemented quality assurance initiatives in the form of clinical audits called National Core Standards for all clinical services (NDOH, 2011). This document outlines minimum standards for OT in public health; however it has been criticized for not describing the scope of practice of OT adequately and proposing irrelevant equipment and assessment processes that are more consistent with physiotherapy scope of practice (NDOH OT Forum, 2014, 2015). This demonstrates a critical gap for OT services as it is unable to meet compliance with the national audit in its current form , nor is it able to describe

what services it actually provides and therefore not be able to motivate for appropriate resources. Other health professionals have utilized the audit to improve the quality of their services and meet optimal standards for effective services as prescribed by the NCS document (NDOH, 2011 Pg. 14). Various recommendations however, have been made for an improvement in the measure of OT services with respect to equipment as well as a description of assessment and treatment guidelines (NDOH OT Forum, 2015). The Office of Standards compliance (OSC) is a government health organization that is responsible for carrying out inspections of all health establishments and ensuring compliance to the prescribed regulations. The OSC have indicated their flexibility to review the document with input from OTs (NDOH, 2014). There have also been unpublished guidelines (McAdam, 2000) to assist OTs in developing a department with suggested equipment lists for the service. These documents may assist new therapists in starting a service, but need to be reviewed within the current context of the health system. They do not make provision for new rehabilitation policies, developing trends in the OT service and are not aligned to a defined level of care. The most recent proposal for a general equipment list for OT was included in a draft proposal made to the DOH by the Infrastructure Unit Support Systems (IUSS) in March 2014 where equipment and consumables are proposed for physical acute facilities however this has not been aligned to a package of care for each level of care (IUSS,

2014, pg. 33). The IUSS is a structured collaboration between the NDOH, Development Bank of South Africa (DBSA), Council for Scientific and Industrial

Research (CSIR) and other stakeholders extending from October 2010 to March 2015 whose shared objective was optimizing the acquisition and management of SA's public healthcare infrastructure (IUSS online, 2017).

In KZN, the Provincial DOH as aforementioned, has spearheaded a norms and standards document for all rehabilitation personnel but therapeutic equipment has been omitted currently. The Occupational Therapy Association of South Africa (OTASA) has also attempted to develop a package of services for OT in response to a call from the NDOH, however this draft document was not utilized in its format and is currently not aligned to a clear consulted package of care for each level (OTASA, 2014). Again there is criticism for poor consultation with public health OT services (National OT Forum, 2015).

The policy for Health and Disability in KZN (KZN NDOH, 2010) as well as the Rehabilitation Policy (NDOH, 2000) demonstrates support for rehabilitation services, however these are not implemented nor prioritized within the KZN province with regards to funding for provision of resources.

1.4.1 Rehabilitation Services in KZN

KZN comprises of eleven health districts and includes both rural and urban districts. There are approximately 227 OT staff working within the KZN DOH (National OT Forum Minutes, 2016) providing services in all eleven districts. There are approximately 37 district hospitals, 14 regional hospitals, two functional tertiary hospitals and one central hospital in KZN. There are also various other specialized hospitals including mental health, TB and long term facilities. The province services at least 10.9 million people and according to Census 2011,

8.4% have a recorded disability in KZN (Stats SA, 2011). OT services are provided in both rural and urban hospitals with a greater distribution of therapists in the urban districts. There continues to be budget constraints for equipment, infrastructure and assistive devices (KZN OT Report, 2016).

1.5 METHODOLOGY

1.5.1 Study design

This research followed a mixed method sequential explorative approach (Creswell, 2009, pg 211). This approach was adopted in order to gain comprehensive understanding around the needs of therapeutic equipment and assessment tools within the South African context and subsequently in the province of KZN.

The nature of a mixed methods approach allowed the researcher to explore, describe and analyse occupational therapy at different levels of care and then explore the equipment needed to provide therapy at each level. Utilising three different strands within the design, allowed the researcher to conduct a detailed inquiry that enhanced the validity and credibility of the study. Examining information gained through this multiple methods, also allowed the researcher to verify findings and reduce the impact of any biases that may have existed in the study (Bowen, 2009).

1.5.1.1 Rationale for Study Design

The explorative sequential method allowed for a qualitative explorative method to inform or develop the quantitative method of data collection, especially as there

was no guiding framework or measures available to support the quantitative collection of data (Creswell, 2009, pg. 215). This method best suited the research as there was no set theory or policy on what the defined service areas of occupational therapy are, at each level of care in the public sector, or a defined list of OT equipment for each level, in SA. The researcher was able to use the information gathered in the qualitative phase of study to develop an informed survey instrument to explore participant's views on OT package of care as well as their views on essential equipment needed for each level of care.

Documentation analysis was chosen as the qualitative method in phase one as "it is a systematic procedure for reviewing or evaluating documents both printed and electronic" and also provides background, context, additional questions to be asked, supplementary data and tracks changes as well as verifies findings from other data sources (Bowen, 2009). The literature also supports documentation analysis as being used in combination with other qualitative research methods as a means of triangulation as it allows the researcher to corroborate and converge evidence through the use of different data sources and methods (Bowen, 2009).

In this research, documents were chosen for analysis, to deduce a package of care for OT at each level of care and to outline any equipment that was prescribed for use in hospitals. This analysis allowed the author to develop a quantitative survey prior to developing a process for consensus for the package of care of OT at all levels of care and subsequently developed a list of essential assessment and therapeutic equipment required for OT services at each level of care. The

sequential nature of the research is highlighted in the use of this method as one phase was used to develop the next phase of the research.

Phase Two utilised survey methodology to generate opinions and new ideas on the definition of levels of care and OT services as well as to gather the opinions and ideas for essential equipment needed at different levels. The descriptive survey design was chosen as it is a method that that allowed the researcher to explore the opinions of therapists currently working at these different levels of care. A survey was able to reach all relevant therapists in the KZN province and allowed for a larger sample of therapists to provide opinions and thoughts in a shorter period of time with decreased cost to the researcher (Kelly, Clarke, Brown & Sitzia, 2003).

The survey assisted with gathering information from the sample by structured and predefined questions utilising likert scales for the packages of care and the need for equipment at different levels. The responses to these questions produced a set of data that were analysed in phase three.

Phase Three of the research was built from phase two, by presenting the data gained from phase two to an expert group. The expert group utilized this information, to develop final consensus on a package of care at different levels of acute care for OT services as well as the essential equipment needed to perform therapy at each level of care.

The nominal group technique (NGT) was selected as it is a consensus group process that allows for an expert panel, in this case, a group of therapists, to both generate additional ideas on equipment needed at different levels of care and

discuss findings of the quantitative survey to draw consensus for an OT package of care and an essential equipment and therapy list at different levels of care for acute hospitals. Vella et al (2000) stated that this technique allows for shared interest in a subject to be collated, so that areas of consensus and priorities are established for change. The collaborative nature of this focus group is also said to increase stakeholder's ownership of the research and therefore also influence policy change (Harvey and Homes, 2012). This technique is structured and allows for all members to participate on equal status in the group thus allowing for optimum participation of all group members (Harvey and Homes, 2012). Another positive view of NGT is that it allows for a rich collection of data due to formal nature of the focus group, is time considerate and allows for in session completeness so that participants can gain feedback from their input. The researcher was also aware that this technique has been criticised for the use of small groups, but research also indicates that consensus methods don't need large representation but experts who are selected based on the phenomenon of interest (Harvey and Holmes 2012). In this research, the survey in phase two satisfies this limitation as a wider sample would have been consulted.

Data from all three methods were triangulated sequentially as described in the design so that there was a flow from one method to the next, where phase one builds participation in phase two towards the focus group in phase three in developing consensus by analysing results from phase two as well as generating additional ideas in the group work.

Explorative Sequential Design

Qualitative Method ⟶ Quantitative Method ⟶ Qualitative/ Quantitative

Documentation Analysis Survey questionnaire Nominal Group Technique

1.5.2 SETTING

The study was located in the province of KwaZulu-Natal in South Africa and was focused on the KZN Department of Health's acute general hospitals at district, regional and tertiary levels of care. It has a population of 10.92 million people which is the second most populated province in the country. Surprisingly it is the second smallest in size indicating that it is densely populated. There are approximately 227 OT staff working within the KZN DOH, comprising occupational therapists, OT technicians, OT assistants and community service therapists (National OT Forum Minutes, 2016). Of these 122 are permanent occupational therapists.

There are approximately 37 district hospitals, 14 regional hospitals of which 10 are functional , two functional tertiary hospitals and a central hospital in the province (KZN OT Report, 2016). These hospitals are distributed throughout the 11 health districts of the province with both tertiary hospitals and the central hospital situated in two urban districts. The hospitals that were eligible for the study included:, 20 district hospitals, 9 regional hospitals , two tertiary hospitals and 1 central hospital that provides tertiary services. These hospitals provide acute occupational therapy services with occupational therapists who have at least 2 years of experience .

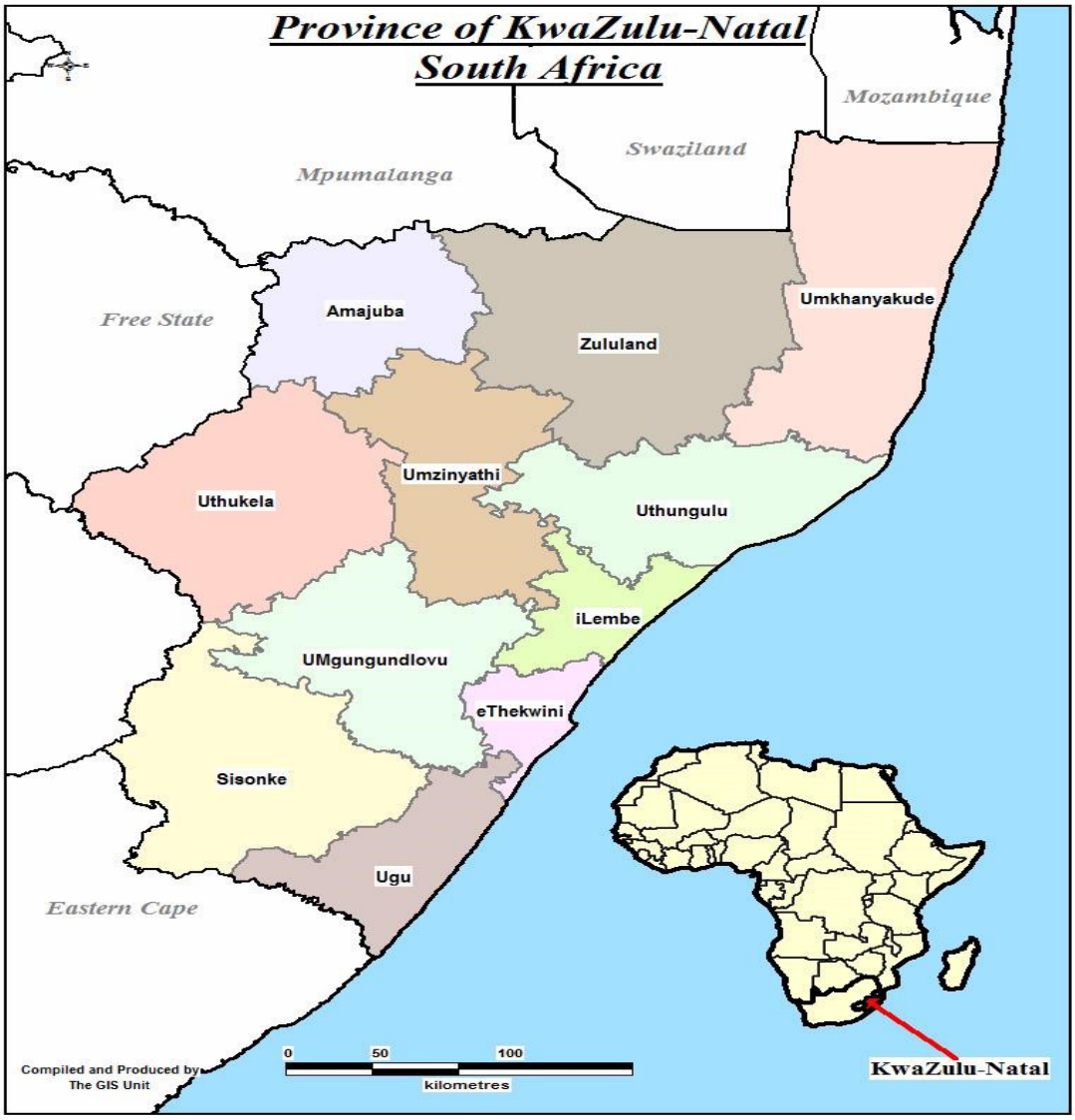

Figure 1.1 Map outlining KZN in relation to Africa with the 11 health districts

(*DOH, Geographical Information Systems, 2015)*

1.5.3 PHASES OF THE STUDY

The study comprised three phases which are outlined in Table 1. The target population, recruitment and selection of the sample as well as a description of the data collection tools and analysis are presented under each phase.

Table 1.1 Overview of the Study

OBJECTIVE	METHOD	SAMPLE	SELECTION CRITERIA	DATA COLLECTION INSTRUMENTS	ANALYSIS
Define OT service at district, regional and tertiary level of care in acute hospitals in KZN	Document analysis	13 documents N=13	Documents that outline levels of care in SA hospitals, package of OT services and equipment needed.	Tabulation to extract information.	Thematic Analysis of information by coding and identifying themes around the research topic.
Generating an initial equipment list	Document ation analysis	Approximately 13 documents. N = 13	Documents that outline package of OT services and equipment for Occupational therapy	Tabulation and lists of equipment	Thematic analysis of information by coding for assessments, therapeutic equipment, therapeutic assistive devices, etc.
Define OT services at district, regional and tertiary level of care in acute hospitals	Survey	n= 77	Therapists who currently work in the Public sector and have at least 2 years of experience.	Survey questionnaire with open and close ended questions.	Descriptive stats for close ended questions. Thematic analysis for open ended questions.
Identify essential equipment needed at different levels of care and generate own ideas.	Survey	n = 77	Therapists who currently work in the Public sector and have at least 2 years of experience.	Survey questionnaire with ordinal ranking of equipment.	Descriptive stats with frequency and percentage. Thematic analysis for open ended questions.

Consensus on package of OT services and the essential assessment and equipment needed at each level of care	Nominal Group Technique	Expert group n= 12	Therapists who have at least 5 years of experience and work in the public sector. Therapists who are active with district and National matters.	Workshop to conduct focus group.	Questions answered by developing consensus.

1.5.3.1 Phase One: Document Analysis

1.5.3.1.1 Retrieval and Selection of Documents

1.5.3.1.1.1 *Sample*

The sample included any documents that addressed levels of care for hospitals in South Africa, package of care for occupational therapy and any proposals of equipment needs for occupational therapy. All documents found were considered to be part of the sample provided it met the criteria set above.

1.5.3.1.1.2 *Retrieval and Selection Process*

Documents were selected by searching the governmental database, retrieving documents on the OT website, retrieval of documents on the OTASA website, searching websites for OT package of care and reviewing documents

disseminated at meetings and accessing hard copies of policies, circulars, guidelines and other governmental documents that were distributed within the DOH. The inclusion criteria comprised of any policies, minutes, public reports, proposals as well as draft documents awaiting ratification, documents that were relevant to the South African context for levels of care and documents that outlined a package of OT services, levels of care of government hospitals, recommended list of equipment and other related information. Documents that were excluded included all material that did not address the South African context of health pertaining to levels of care, occupational therapy and proposals for therapeutic equipment.

The researcher identified approximately 13 documents for the audit :
The researcher identified approximately 13 documents for the audit:

(i) Package of Services at the Institutional Level in KwaZulu- Natal, KZN DOH, August 2003

(ii) Health Services in SA: A basic introduction, by Kerry Cullinan, Health e News Service, January 2006.

(iii) Service Delivery Package: Occupational Therapy , Occupational therapy association of South Africa(resource document January 2014)

(iv) Norms and standards for Occupational Therapy Human Resources, KwaZulu Natal Department of Health Angela Chetty and KZN OT Forum, January 2015

(v) Framework and strategy for disability and rehabilitation services in South Africa 2015 – 2020 National Department of Health, Pretoria, 2015

(vi) Reference Document: Integrated Disability Management and Rehabilitation Pathways of care as a Life Course Perspective (includes clinics and community levels; hospitals and specialised rehab units), Maryke Behuizdenhout, National DOH, 2015

(vii) Setting up a primary health care occupational therapy service, Jennie McAdam, National OT Forum, Dec 2002

(viii) National Rehabilitation Policy 2000, National Department of Health, Pretoria, 2000

(ix) Integrated National Disability Strategy, White Paper, November 1997, Chapter 3, Office of the President, Pretoria, 1997

(x) KZNDOH Policy for Disability and Rehabilitation, KZN DOH, KZN, 2008

(xi) Setting up a secondary – tertiary OT service, National OT Forum Western Cape, 2005

(xii) Infrastructure and Support Systems (IUSS) Health Facilities Guides: Adult inpatient accommodation [Discussion draft 1]18 March 2014 , IUSS March 2014, Infrastructure Unit support Systems.

(xiii) National Core Standards, NDOH, Pretoria, 2011, 2014

1.5.3.1.2 Data Collection Instrument

A tabulation of documents to extract common concepts was selected as an instrument as it clearly outlined all data collection. A code book was developed, identifying codes that related to the research questions, aims and objectives.

These codes were tabulated for easy reference, comparison, and simplification. The codes included: i) name of document, ii) district hospital statements, iii) regional hospital statements iv) tertiary hospital statements, v) general statements about rehabilitation , vi) statements about OT, vii) any proposals for equipment.

1.5.3.1.3 Data analysis

Thematic Analysis was utilised to analyse all documents. This entailed drawing common themes or ideas from the document that related to the research. It is a form of pattern recognition within the data where emerging themes become categories for analysis (Fereday and Cochrane, 2006). The coded analysis assisted the researcher in defining a package of care for OT at different levels of care and proposing a generic equipment list for further analysis. This was supported by research where it was deduced that data analysis interprets various aspects of the research topic (Boyatzis (1998) as cited by Braun & Clarke, 2006). Specific features of the data set was selected for coding and performed manually. Coding around the level of care of district, regional and tertiary hospitals, package

of OT services for these hospitals and any recommended equipment lists available were developed by means of a code book and further explored. Themes were centred around those codes only and tabulated to highlight information gathered. The data was worked systematically to refine the themes, reduce duplication, simplify statements and categorise the data accordingly. Whilst the researcher recognised the benefits of flexibility , summarising large bodies of data and informing policy amongst others , the researcher was also cautious in ensuring that analysis and data matched each other, interpretation was coherent and made sense, and that all documents were coded clearly and carefully (Braun & Clarke, 2006).

1.5.3.1.4 Trustworthiness

To ensure reliability and validity, the concept of trustworthiness was considered. Trustworthiness in quality studies have been equated to similar concepts of reliability and validity in quantitative studies (Golafshani, 2003). According to the earliest researchers like Guba (1981) trustworthiness in a qualitative study includes concepts of credibility, transferability, dependability and confirmability (Shenton, 2004). Credibility was achieved by allowing for detailed descriptions of the documentation selected. The researcher ensured that all facts relating to the codes were tabulated in the first part of the audit. Although this created an exhaustive list of detailed information, it allowed the researcher to categorise and refine the codes considering a wide range of information. Abstraction is a process of emphasising descriptions and interpretations on a higher logical level. Some

examples of abstraction included the creation of codes, categories and themes on various levels (Granaheim & Lundman, 2004). A code book was established emphasizing key areas of the research problem e.g. Levels of care, rehabilitation, equipment and occupational therapy and emerging themes for package of care and equipment were easily identified. Another way to demonstrate credibility was to show representative quotations from the transcribed text, or agreement among experts. (Granaheim and Lundman, 2004). The researcher was able to transcribe statements very easily from the text and these were familiar within the scope of occupational therapy. This also satisfied the concept of transferability where the findings of this study could be transferred to another context. Dependability addressed issues of being able to obtain the same results in the same context with the same methods (Shenton, 2004). Documentation analysis allows for the description of documents and easy referencing of items therefore the utilisation of the code book would generate the same results. The researcher also ensured that all documents for analysis were relevant to the research questions and could be retrieved from the sources outlined. Finally confirmability addressed the researcher's concern for objectivity. This was achieved by ensuring that there were strict inclusion and exclusion criteria, referencing and motivations for inclusion of any document into the study. Triangulation of data also promoted confirmability and reduced investigator bias (Shenton, 2004).

1.5.3.2 Phase Two: Survey with OTs

1.5.3.2.1 *Recruitment and Selection of Sample*

The population identified for the survey were all occupational therapists who working in acute governmental hospitals in KZN . Occupational therapists were invited to participate in the study by email, telephonically, through the Provincial Occupational Therapy Forum and verbally. Approximately (n= 80) permanent occupational therapists work in district, regional and tertiary hospitals and all therapists were invited to be part of the study provided they met the inclusion criteria. Emails, telephonic contact, OT provincial meetings, and other work contact was used to convince the population to volunteer as participants. The survey was cross sectional and attempted to gain participants in all eleven districts of Kwa Zulu Natal .

The inclusion criteria included KZN occupational therapists that had at least 2 years of clinical experience in an acute government hospital and who were currently working in an acute hospital. Therapists who had less than 2 years of experience in acute care, or worked in other fields of occupational therapy (chronic, mental health or specialised care), and private practitioners were excluded from the study.

1.5.3.2.2 Data Collection Instrument

Surveys are a quantitative method that allows the researcher to collect information from the subjects by asking them structured and predefined questions. A survey was considered to be the best cost effective, time sensitive instrument to collect a large amount of data from therapists in KZN (Kelly, Clarke,

Brown, & Sitzia, 2003). A self-administered questionnaire was utilised and sent by email, post and hand delivery to reach therapists in all parts of the province.

The questionnaire was developed by the researcher and all the fields of enquiry were informed by the coded information that was extracted and analysed in phase one . See Annexure 8. Section A allowed for the collection of biographical data to ensure that the respondents met all criteria and to inform the researcher of details such as district, level of hospital, and years of experience. Section B defined three packages of OT care for district, regional and tertiary acute hospitals. The information was extracted from the documentation audit, simplified into statements and listed for consideration. A five point likert scale (strongly agree, agree, neutral, disagree, strongly disagree) was used to measure the degree of consensus for each statement. Factual information on South Africa's expected level of clinical care for district, regional and tertiary hospitals were clearly outlined in Section B to assist the therapist in aligning their answers accordingly. A therapist was also asked to list any additional statements that he/she thought was necessary and rate it accordingly. If they disagreed with a statement, they were asked to provide a reason.

Section C comprised a detailed equipment list that was extracted from the documentation audit. All items that were defined as assessment and therapeutic equipment were included in the survey. Items were individually listed, simplified into a generic description and categorised according to areas of function in occupational therapy to assist therapists in considering all aspects of the service. Therapists were asked to select on what level (district, regional or tertiary), they

thought the equipment was expected to be, based on their selection of statements in Section B and whether the equipment was considered to be “Essential”, “Nice to have, but not essential” or “ Not needed”. Therapists were also asked to include any other items they felt were necessary.

1.5.3.2.3 Pilot Study

Piloting the survey assisted with identifying the lack of clarity on items and reconstruction of an improved survey, subsequently improving content validity (Rattray and Martyn, 2005).

The survey was sent to ten occupational therapists that did not meet the criteria to be included in the final survey. This was done to preserve the sample of qualified therapists in order to improve the response rate of the questionnaire. The aim was to ensure that at least 10% of the population tested the survey instrument. Most of the respondents were from mental health facilities or long term facilities. At least 50% of the pilot sample had more than 5 years of experience and were able to comment from an experienced perspective. 80% of the respondents sent back their consent and evaluation forms within the two week allocation period. The adequacy of the survey , the construction/ wording of the questions whether it was reader friendly, grammar, content, flow and general layout of the survey were all evaluated to ensure content and face validity. All suggestions were utilised to make amendments to instructions, information provided, grammar and flow of the survey accordingly. Content validity was also ensured by allowing co- researchers to review the survey. A final amended survey was produced based on all the feedback received.

1.5.3.2.4 Data Collection

The survey was sent to all 70 eligible therapists who met the minimum criteria from all 11 health districts in the province. Email, hand delivery and colleagues were utilised to distribute the surveys throughout the province. All participants were given one month to complete the final survey, consult with the researcher if needed and send back in a delivery mode that was most convenient to them (email, post, fax, hand delivery)

1.5.3.2.5 Data Analysis

Descriptive statistics was used to summarise the data and make clear any trends and patterns (Hole, 2000). This type of analysis allowed the researcher to include absolute frequencies or raw counts for each category, relative frequencies or percentages and represent them on a table for a clear picture of the distribution for all sections in the questionnaire. Ordinal data collection was used to construct a frequency distribution of scores in Section C where equipment consensus was needed. Constructing a frequency table with percentages revealed a clear picture of the opinions and additions of the sample population. Thematic analysis was done for all open ended questions and this was converted to existing codes, aligned to the survey and quantified or remained as “stand alone “items in some cases.

1.5.3.2.6 Reliability and Validity

Reliability tells us that if a measure is repeatable then we should get the same result and internal reliability indicates the extent to which the tool actually measures the same thing. Inter rater reliability and internal consistency reliability

could not be achieved on the survey as this was a newly developed tool based on a documentation audit that does not have another comparison rating tool. The time constraints did not allow for the researcher to test and retest outcomes, to determine if the same results would be achieved on a pilot study.

Validity according to Joppe (2000) is determined by how well the instrument allows researcher to answer the research question (Golafshani, 2003).

Priest et al (1995) confirms that content validity can be improved by generating items from a number of sources and a review of associated literature. Oppenheim (1992) also stated that revisiting the research questions frequently will ensure that the items on the questionnaire remain relevant (Rattray and Martyn, 2005). The survey satisfied this part of validity as it generated the questions and statements from the documentation analysis in phase one, thus reinforcing the content of the survey questionnaire. The researcher also revisited the research questions frequently to ensure that the fields of enquiry were relevant to the statements listed ensuring that face validity was improved.

1.5.3.3 Phase 3: Focus Group using Nominal Group Technique

1.5.3.3.1 *Recruitment and Selection of Sample*

The population consisted of occupational therapists in public service in KZN. The sample consisted of occupational therapists who met the selection criteria for the nominal focus group. Inclusion criteria included occupational therapists that worked at acute district, regional and tertiary hospitals and had at least 5 years of working experience. They also had to be members of the KZN OT Provincial Forum who assisted with policy development, guidelines and various task teams

related to occupational therapy public services. A final requirement was that they were senior therapists, who actively contribute to developing OT services, in their districts and in the province eg. Managers of OT services at hospitals. Therapists who were excluded from the sample were those therapists that were not actively involved in the development of OT services in their districts, and had less than five years of experience working at a district, regional or tertiary hospital. The researcher also attempted to include therapists who met the criteria from different districts in the KZN province so that there would be a fair distribution of therapists that represented both rural and urban districts. There are eleven health districts in KZN. Therapists from five of the eight qualifying districts (urban and rural) were available, willing to attend and met the criteria to be included in the focus group. It must be noted that at least 3 districts had only junior therapists that did not meet the selection criteria and did not qualify to be part of the sample.

1.5.3.3.2 *Data Collection Instrument*

A focus group in the form of a workshop was convened, inviting all expert group participants in October 2016. The purpose of the focus group was outlined on the invitation so that participants were aware of the expectations. Each participant was also telephoned to explain the nature and duration of the focus group so that they were well informed before agreeing to participate. A register and consent form was signed on the day of the focus group (Annexure 5). Reading material relevant to the levels of acute care in South Africa was also emailed to each participant to set the background and expectations for the focus group. The Nominal Group Technique was chosen to conduct this focus group

as it was deemed the best method to reach group consensus, as aforementioned under study design.

The researcher adopted the prescribed structured steps as outlined by Potter et al (2004).These included:

(i) Introduction and explanation of the topic and research questions,

(ii) Silent generation of ideas on a worksheet for each level of care based on statements produced from the documentation audit. This was a paperwork exercise.

(iii) Sharing of ideas- round robin where each participant shared their own ideas, their selection of existing statements and considered the results of the survey. This step also allowed the convenor to set ground rules and negotiate the consensus threshold at 70%. When addressing equipment for each level, the group was provided with the existing list of equipment from the documentation audit, the results of the survey and they were requested to evaluate all information and share any individual recommendations that were not included in the information provided.

(iv) Discussion and clarification where all members could now seek clarification, discuss, reorganise, simplify, reword and discuss the findings of the survey for inclusion or rejection, before final consensus was reached.

(v) Voting and ranking where all members voted in a new revised ordered list of statements which defined a package of OT care at each level of acute care and a categorised essential equipment list for each level of care .

Approximately one hour per question was assigned, however the process proceeded much quicker for subsequent questions, once participants of the group were familiar with the group technique. The assistance of an administrative clerk was also employed to ensure that all administrative tasks of the focus group were managed adequately, information was systematically collected and filed, amendments were made accordingly to the work board and photographs were taken during the focus group process

1.5.3.3.3 Data Analysis

In total consensus was reached for six questions using the NGT:

(i) A package of care for occupational therapy at a district level of acute care
(ii) A package of care for occupational therapy at a regional level of acute care

(iii) A package of care for occupational therapy at a tertiary level of acute care (iv)

An essential therapeutic equipment list for district acute services.

(v) An essential therapeutic equipment list for regional acute services

(vi) An essential therapeutic equipment list for tertiary acute services

The focus group took on a workshop type discussion to factor two breaks so that the needs of the participants and time constraints could be realised to ensure optimal participation and fair distribution of time for each research question. Hard copies of the paperwork exercise were collected and filed before consensus was reached. Photographs of final consensus on the work boards were taken to document the changes based on final voting and consensus, see Annexure 10 for graphics of the NGT focus group. The researcher was able to compile a table

of recommended services for acute district, regional and tertiary occupational therapy services . This table also demonstrates common service areas across all levels as well as differences for each level of care as outlined in manuscript two, chapter 3. A prescribed list of essential assessment and therapeutic equipment list has also been formulated to align with the prescribed package of care. This equipment list clearly shows what equipment is prescribed for all levels and what equipment is specific to each level, as outlined in results of manuscript two, chapter 3.

1.5.3.3.4 Trustworthiness

Trustworthiness as aforementioned is equated to reliability and validity in qualitative studies. Concepts like credibility, confirmability, dependability and transferability are concepts to consider (Shenton, 2004). Credibility was achieved by adopting a well established method in a structured nominal focus group technique and ensuring that the researcher familiarized herself with the topic which was achieved by the documentation audit and by means of a survey. To ensure validity and credibility, the facilitator of the group also had to caution in overcoming diversity of opinion by creating artificial consensus (VanTeijlingen, Pitchford, Bishop, Russel, 2006). The researcher ensured that therapists from different levels of acute care both from rural and district hospitals in different districts of the province constituted the group to ensure diversity in the group and allow a number of different perspectives. These clinicians were able to consider all the concepts presented and develop mutual consensus within the

structured process, thereby preventing artificial consensus from being obtained. Researcher bias was reduced by ensuring a face to face meeting which allowed for first hand information to be collected (Harvey and Holmes, 2012). A rich discussion of ideas, sharing of information and final consensus from the group enhanced validity of the findings as it allowed the group to conduct the final evaluation and produce a final result. The facilitator also ensured that she did not lead or direct the group but rather facilitated the process of the group to prevent bias in the consensus (VanTeijlingen, et al, 2006). This also meets the need of confirmability where the researcher ensured that the findings are those of the group and not of her own influence. Allowing the group to evaluate and document the findings reduced any bias.

Triangulation of data from the documentation analysis, survey and final results of the nominal focus group further enhanced the validity and credibility of the findings.

The following figures show process of the nominal focus group. For more graphics, refer to Annexure 10.

Figure 1.2 Nominal Focus Group: Silent Generation of Ideas

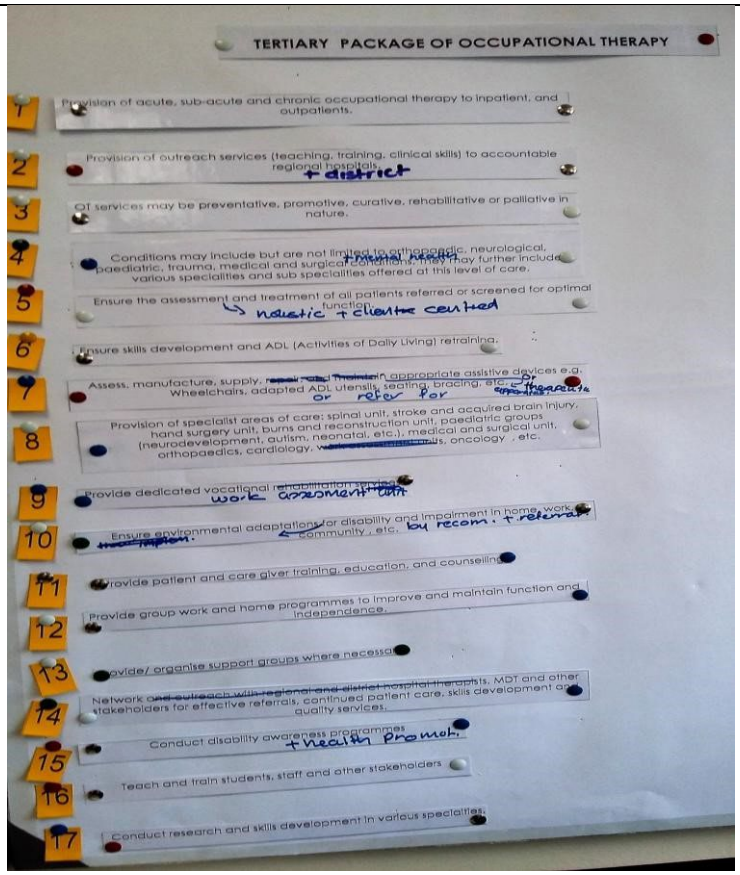

Figure 1.3 Brainstorming and voting in a package of care

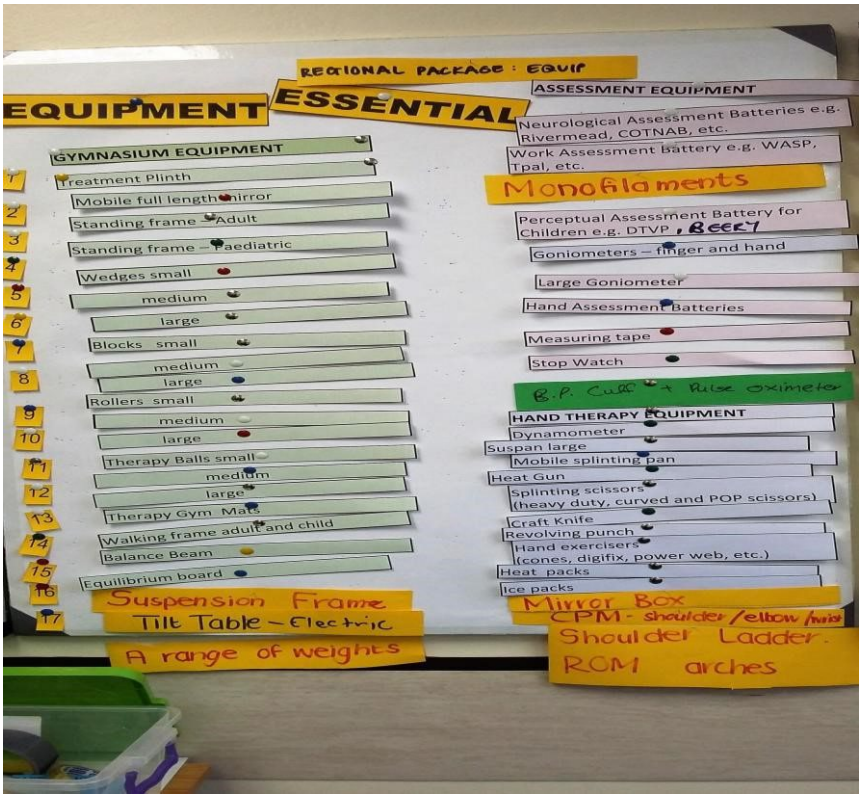

Figure 1.4 Brainstorming an Essential equipment list for a regional package of care

1.6 Ethics

In ensuring all ethical considerations, the researcher ensured the following:

(i) Completion of an online certificate from the National Health Institute in August 2015 (Annexure 11).

(ii) Ethical approval from UKZN Biomedical Research Ethics Committee (Annexure 1)

(iii) Ethical approval granted by the gatekeepers of the Provincial DOH Ethics Committee (Annexure 2)

With this being a mixed methods study encompassing both qualitative and quantitative research a number of ethical considerations were noted.

(i) Informed Consent: Drew and Hardman (2008) stated that for informed consent to occur it must include capacity, voluntariness and information. All participants were identified as occupational therapists who have worked in the public sector in KZN therefore it was assumed that all therapists have basic knowledge of occupational therapy and its processes and were able to make a choice on whether they want to be in the study. The researcher also ensure that all participants in both the survey and the focus group had a clear understanding of the purpose and the methods that were used in the study. They were made aware of the time constraints and what type of participation was required of them eg. Interactive discussion, etc., as well as how the data accumulated will be utilised (Annexures 3, 4, 5).

In the study, the introduction page of the survey ensured that the purpose of the study was clearly outlined as well as the requirements of the participants eg. Approximately how much of time will be required and the process of returning the survey to the researcher. See Annexure 4.

When conducting the focus groups, the researcher first ensured that all participants who had been identified as potential participants were sent an invitation to be in the focus group and outlined the purpose of the research, how the focus group will assist in developing consensus as well as the requirements from the participants for the group work. See Annexure 5. Participants who

agreed to participate in this phase of the research signed a document that attained their consent as well as permission to take photographs. See Annexure

5. All participants were aware that they could withdraw from the study whenever they wished as consent was not permanent.

(ii) Harm/ Maleficence: The researcher ensured that none of the participants were harmed in any way. As the subject was not of a personal nature, there was no concern that the participants could be harmed in a physical or emotional way. The researcher did however ensure however that there was no cost attached to any of the participants in both the survey and focus group process. The focus group was conducted in a comfortable , central and easily accessible venue for all participants.

(iii) Privacy and Confidentiality: the researcher did not have any concerns with privacy of the data as the information gathered was not of a sensitive nature. However to ensure maximum participation and concentration in the focus group a private venue for the focus group was utilised. The researcher also ensured the anonymity and confidentiality of all participants to protect them from potential harm. This was conveyed to all participants. Names of participants were protected from any public documentation and secured in the researcher's files. Photographs that were used with consent did not directly revealed full identity of the participant.

(iv) Deception: In this context, the researcher ensured that she did not mislead the participants by omitting or fully informing the participants about any

aspect of the study. In this research participants will be fully informed on all phases of the research and how they build on to each other.

(v) Voluntariness and Inclusiveness: All occupational therapists that worked in public acute hospitals and met the inclusion criteria were given the opportunity to participate in the study. During the survey phase, all of these therapists were invited to volunteer their participation. For the focus groups, the researcher screened all therapists who met the inclusion criteria in the province, and ensured a fair distribution of therapists from all districts to be part of the final focus group deliberations.

(vi) Consent for documents: The researcher was aware that if documents were not of public note like policies, position papers, etc., then consent to utilise these documents were attained from the source before conducting the documentation analysis in Phase one. The researcher noted however that all documents considered were of a public nature and consent was not necessary for that phase of the research.

(vii) Beneficence: The study aimed to benefit the KZN department of Health in that it may inform norms and standards for the province, and be a resource document in developing further package of services for rehabilitation. It also aimed at having direct impact on the participants as all participants work at a governmental hospital and the results will assist them in prioritising budget, procurement of equipment and ensuring appropriate services for occupational therapy at different levels of care.

CHAPTER 2

MANUSCRIPT 1

CONSENSUS ON A PACKAGE OF ACUTE CARE IN PUBLIC HOSPITALS IN KZN AND A THERAPEUTIC EQUIPMENT LIST FOR OT SERVICE DELIVERY

2.1 SUMMARY

Guided clinical care is an integral part of effective and efficient services in the public sector. This manuscript draws on past documents to describe the role of occupational therapy in the public sector and specifically to determine its role in acute care as defined by the policies of national health in SA. Further it extracted equipment proposals that have been documented to determine its relevance and alignment with acute service delivery currently. This study has served as a foundational phase to a three part study where a survey of OTs and a nominal focus group will conclude consensus on guidelines for acute care in the public sector for occupational therapy and the essential equipment needed.

2.2 JOURNAL DETAILS

The South African Journal for Occupational therapy is the only journal dedicated to Occupational therapy in South Africa. It is the official journal of the Occupational therapy association of SA and is a leading publication for research

into OT in Africa. SAJOT publish and disseminate articles that contribute to the knowledge of the profession with emphasis to service delivery in Africa.

2.3 MANUSCRIPT

This manuscript was formatted according to the specifications outlined for authors in the South African Journal for Occupational Therapy. Tables and figures have been embedded in the manuscript to allow for ease of reading.

Authors names have been removed.

PACKAGE OF CARE AND THERAPEUTIC EQUIPMENT LIST FOR ACUTE CARE IN OT IN THE PUBLIC SECTOR OF KZN

PART ONE: A DOCUMENTATION AUDIT

Abstract

Background*:* All clinical services including OT are required to describe relevant minimum standards of service to become accountable prior to the roll out of the national health insurance in the public sector. Resources are allocated accordingly. **Aim**: The study thus sought to describe occupational therapy in acute care at all levels of care in SA and detail all relevant proposals for essential equipment. ***Method*****:**

A mixed methods explorative sequential study was used comprising of three phases. The first phase is reported in this paper**.** A qualitative documentation audit was completed by selecting 13 documents through a rigorous data search of SA documents that related to levels of acute care, OT services and any proposals on OT therapeutic equipment. Thematic analysis was utilised to generate relevant information, from which consensus could be drawn towards the development of a comprehensive, consulted package of care and essential equipment needed in occupational therapy. **Results**: The document analysis yielded a baseline list of statements for district, regional and tertiary levels of care and a generic equipment and assessment list for occupational therapy. **Conclusion:** This baseline list serves as a rich foundational resource for the refinement of occupational therapy services in the public sector. The author acknowledges that a credible and validated package of care with an equipment list for all levels of acute care can only be validated through consensus of OTs , therefore surveying OTs and conducting a focus group of senior experts was needed to finalise a proposal in the next phase of study.

Key words: Package of care, acute care, therapeutic equipment, assessments in occupational therapy

INTRODUCTION

The public health system in South Africa is mandated to deliver effective and quality services to all its citizens, however resources remain a challenge. Occupational therapy (OT) as with all other services have been forced to move towards outcomes based, focused, cost effective and relevant interventions at different levels of care as defined by the National Department of Health[1].

There have been various quality control measures put in place as described by the national policy on quality health care in South Africa (2007) e.g. quality assurance teams in each hospital, clinical audits, patient satisfaction surveys, provincial monitoring teams and so on, with the most current being the National Core Standards for National Health Insurance (NHI) compliance[2]. However, none of these documents have defined a current, relevant package of care for OT services nor the essential equipment needed to deliver therapy at various levels even though this is one of the recommendations in the policy for all clinical services in order to improve access to services[3].

The levels of care as defined by the National Department of Health (NDOH) constitute district, regional, tertiary/central hospitals. Unpacking OT services at different levels of care and identifying an essential assessment and therapeutic equipment list may enrich a norms and standards document for OT in KwaZulu Natal (KZN), and may guide therapists in prioritizing an equipment list in line with services that they are mandated to support at different levels of care and motivate finance structures to procure basic equipment to deliver an effective and comprehensive service. Moreover, it may assist in validating the profession at various levels of care and provide a core foundation for the

motivation of other resources required, for example, infrastructure and human resources. It may also assist with the quality audit of OT services in the public domain.

The objectives for this phase of the study were to define current OT services at district, regional and tertiary hospitals and to generate an initial equipment list from a documentation analysis.

LITERATURE REVIEW

Overview of Occupational Therapy in Acute Care

An overview of OT in the hospital setting is focused on the patient's ability to improve and resume his life roles[4] as well as to access outpatient follow up care. OT plays an important role in early mobilization, restoration of function, prevention of further illness or impairment, coordinated care, appropriate referral and effective discharge[5] . This demands that clinical reasoning is applied efficiently to each patient in the form of screening, various assessments, treatment planning, intervention, monitoring, and discharge[6].The OT should be then be able to use the relevant assessments and therapeutic equipment to provide a detailed assessment and an effective treatment plan taking into account all factors of occupational performance. Notwithstanding this, physical, financial, and personnel resources will influence the assessment tools and methods used and establish the informal boundaries of the discipline's contributions[4:45] .

Guidelines are available in various first world countries like the USA[5] (, UK and Ireland[7] (to assist therapists in managing their patients optimally in acute hospital settings and outline interventions in critical care, medical, neurological, orthopaedic and paediatric care. This enables therapists to select the appropriate assessment and therapeutic equipment needed to enable intervention in each specialty. These guidelines provide support that packages of care or guidelines are needed to define the role that OT will deliver at various stages or levels of care. A description of services allows the therapist

to ensure that all aspects of care are considered and delivered effectively at the correct level of care and in so doing, will ultimately improve the quality of care. This is supported by the South African national policy on quality health care (2007), where a package of care for all levels, as well as norms are standards are recommended to ensure equity of services, measuring of services and distribution and rationalization of resources for all clinical services[8].

Assessment has been noted as the "core" for the OT clinical reasoning process, therapeutic interventions and recommendations[9]. The role of a wide range of evaluation or assessment tools in OT as well as therapeutic equipment are essential to achieve positive outcomes for patients[4].

Western industrialised countries take the lead in the development of many standardized, formal assessments and intervention protocols. Just over 600 assessment and intervention procedures are documented for the use of therapists[10] as they have defined guidelines for acute care as described above. There is strong support for the effective use of standardized assessments together with other formal assessment and therapy procedures and the focus is on evidence based outcomes[11]. Measuring impairment, as well as making meaningful intervention through the use of therapeutic equipment among other means is part of the Standards of Practice in the USA[6] as well as in South African standards of practice[12]. OT is relatively new in the middle European countries[13:31]. The World Report on Disability[14:104] reports that in countries like Croatia, Hungary, Slovakia and the Czech Republic, there is a lack of primary, regional and tertiary level services and access to rehabilitation is significantly limited. The report also indicated that African countries show a developing trend to OT which is strongly influenced by the cultural, political and economic climate of each country. The report further consolidated that research in African countries focused on the

limitations of resources, creative use of existing resources and studies on living conditions of people with disabilities in African countries like Zimbabwe, Zambia, Namibia, etc. However, resources at all levels are limited[14: 101-104] .

South African OTs have adopted the use of many of the western standardized assessments, and are trained to adapt assessments and therapeutic interventions to accommodate the culture specific and African context at an undergraduate level at all universities in South Africa[15]. Training in the use of assessments and therapeutic equipment is also done at an undergraduate level and is one of the competencies of a new graduate[16] . The use of appropriate assessments and intervention methods are supported as minimum standards in the Standards of Practice document for OT in South Africa[12] Access to therapeutic equipment is easily available through medical suppliers in South Africa; however the public health system face many challenges (budget, process, prioritization, knowledge, etc.) in adequately procuring appropriate equipment for OT services[17].

In the province of KZN of South Africa, it has been reported that there are many hospitals especially in rural districts that are under resourced with basic therapy equipment. It must also be noted, however, on the contrary that there are many hospitals in urban areas of KZN that are equipped with adequate equipment to provide an efficient OT service [18] .

The South African Context of Health and Rehabilitation Services

The SA NDOH has developed and categorized hospital health services to include district, regional, tertiary, central and specialized institutions so that preventative and complex health concerns can be addressed optimally. Each level of care is clearly defined in their policies:

A district hospital is the first level of referral institution and provides basic diagnostic and therapeutic services[19]. These hospitals should provide generalist services.

A regional hospital provides services requiring the intervention of both specialists and general practitioners. A regional hospital needs to provide at least five specialties of the possible eight namely, surgery, medicine, orthopaedics, paediatrics, obstetrics and gynaecology, psychiatry, diagnostic radiology and anaesthetics[20]. KZN province has the most number of regional hospitals in the country. They have approximately 14 hospitals in total of which ten are functional.

Tertiary hospitals provide only specialist and sub specialist care. They provide a large range of specialties with at least 34 service areas named ranging from anaesthetics, burns, dermatology, orthopaedics, paediatrics, plastics and reconstruction, to trauma, vascular and urology services[20].

OTs are expected to practice at all levels of acute care and to provide a comprehensive service to its patients[21,22]. The need for adequate and basic equipment as well as expertise in human resources has been envisioned to improve quality and evidence based care[22].

Supporting quality improvement initiatives from the DOH include the NHI's audit tool (National Core Standards) which outlines minimum standards for OT [2] although it has been criticized for amalgamating all rehabilitation professionals into one audit and this has not met the basic needs for occupational therapy [17]. The Infrastructure Unit: Support Systems (IUSS), have proposed guidelines for infrastructure and made recommendations for general occupational therapy equipment in physical rehabilitation in the hospital setting[23]. These developing documents indicate that rehabilitation services are included with other clinical services in the NDOH initiative to ensure growth and standardization.

There are various policies and governmental guidelines like the Health and Disability in South Africa, Rehabilitation Policy (2000)[21] and the Framework for Disability and

Rehabilitation (2015)[22] that show clear support for rehabilitation services; however they are not fully implemented nor are they prioritized in the KZN province with regards to funding for the provision of resources.

Rehabilitation Services in KZN

KZN has 37 district hospitals, ten functional regional hospitals and four hospitals providing tertiary care in 2015[24]. Not all hospitals provide an OT service due to the lack of resources. There is a distribution of rehabilitation services and specifically OT services in both rural and urban districts. There are a total of eleven health districts in the province and there are a minimum of at least two therapists in each district[18]. It has been noted that the rural hospitals appear to lack basic rehabilitation equipment among other resources more so than hospitals that are situated in urban areas, and are not equipped to perform basic therapy[25] .

Whilst norms and standards for rehabilitation human resources exist, there are no guidelines for acute care or a list of therapeutic equipment for each level in KZN. OTASA developed a reference document in response to the NDOH that outlines a generic package of care but this has not been widely consulted with the public sector due to narrow timelines or aligned to a clear package of acute care[26, 27,]. This document has not been used by the NDOH for their recent policies[22, 26, 27] .

The need to therefore define a package of care for OT and a minimal essential therapeutic and equipment list is vital in providing an effective, quality and cost effective service.

METHOD

Design: This study is situated in a broader explorative sequential mixed methods design. This phase followed a qualitative approach with use of a document audit. In this study,

there is no formal theory, policy or guideline on what the defined service areas of OT are at each level of care in the public sector or a defined list of OT equipment to support each level of care in South Africa. The information gathered in this qualitative phase of the study will be used to develop a survey to explore the majority of OTs views on an essential package of a care and essential equipment and assessments needed for each level of care in the public sector.

Documentation analysis "is a systematic procedure for reviewing or evaluating documents both printed and electronic"[28]. The literature supports documentation analysis as a relevant method that can be used in combination with other qualitative research methods as a means of triangulation, as it allows the researcher to corroborate and converge evidence through the use of different data sources and methods[31]. In this study, documents are sourced to provide background, context, and supplementary information, identify track changes, developments, and to determine similarities and verify findings[29].

Sampling: Documents for consideration included all documents related to South African National Health and Rehabilitation, documents related to a package of care for OT in acute South African hospitals and documents that proposed any assessment or therapeutic equipment lists for OT. Documents were excluded if the South African context of health for levels of care in hospitals were not addressed.

Data Collection: The data collection instrument included a codebook with relevant focus areas (themes). Documents were analysed thematically. Codes were identified in line with the aims of the study around a general level of district regional and tertiary hospitals, any package of OT services that were proposed, any generalised rehabilitation (physiotherapy, occupational or speech therapy) services proposed and any specific equipment lists proposed. These codes would also inform and strengthen the fields of the survey questionnaire in phase two of the research. Fereday and Cochrane (2006),

showed that data could be analysed by pattern recognition which could finally become categories for analysis[29].

The identified codes for document analysis included the name of document, any descriptions for district, regional and tertiary hospital services, any descriptions for general rehabilitation services, any specific mention of occupational therapy services, and any recommended equipment lists for occupational therapy. This documentation audit analysis revealed seven pages of summarised, common themes, specific and generalised statements that would assist the authors in selecting common and progressive statements in the fields of enquiry for the development of the survey questionnaire in the next phase of the study. In this phase any rehabilitation statements and OT statements were collapsed into a common code so that a final document on OT services at district, regional and tertiary services could be identified with a proposed list of equipment. Phase three of the audit demanded that the authors consider the explanations and summarise, condense and form common codes within the broader ones in order to prevent duplication, group common items together, and identify common statements made across the levels of care. Some examples included a range of paediatric services, or vocational services. These were summarised into one global statement. The equipment list was also then categorised according to common codes that were suggestive in the documentation audit. The outcome was a condensed and summarised list of statements that could be classified to each level of care. It showed common suggestions and progressive statements. It was also evident that the equipment list needed to be further analysed to define equipment, assessment batteries, furniture and consumables as often there was a combined suggested list. The first author then deemed it necessary to define these concepts and further categorise equipment. It must be noted that all information from all documents were utilised regardless of the age of the document or if the documents showed any duplication or referencing of each other

in order that all information could be considered in the analysis. The analytic procedure entailed finding, selecting, appraising and synthesising data in various documents as guided by Labuschagne (2003)[30].

When analysing the data according to the codes identified above, the researcher was very aware that in ensuring reliability and validity, concepts of credibility, transferability, dependability and confirmability were considered in all documents reviewed[31]. This was achieved by ensuring that detailed descriptions of data was first selected for analysis and by means of abstraction (themes and codes) data was categorised accordingly[32]. In some documents, representative quotations were also utilised in the final analysis and formed the baseline list that was generated from the audit. Dependability was ensured as the codes were easy to understand and information was clear enough to ensure that this exercise would yield the same results if redone and confirmability addressed the need for objectivity by forcing the researcher to validate the inclusion of information into predetermined codes. Whilst the authors acknowledged a degree of flexibility in the collection of data, it was ensured that analysis and data matched each other and interpretations were verified by rechecking each document and refining the analysis from broad statements to specific codes[33].

RESULTS

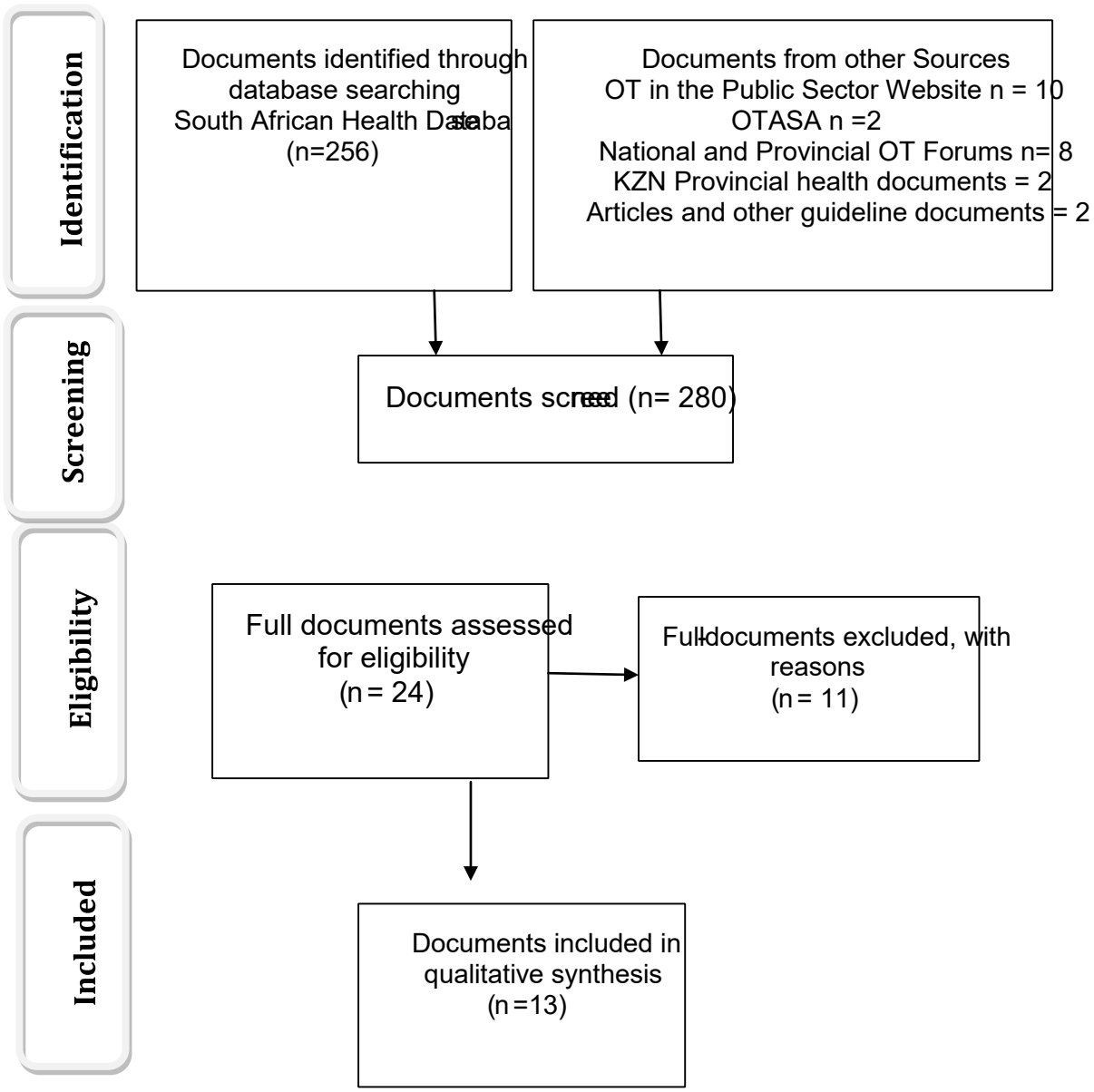

Figure 1 Selection of Documents for Inclusion

A description of each of the included documents is presented in Table 1.

Table 1 Description of documents included in this study (with author description)

	NAME OF DOCUMENT	AUTHOR AND YEAR
1.	Package of Services at the Institutional Level in KwaZulu- Natal	Dr PD Ramdas, Kwa Zulu Natal Department of Health , August 2003
2.	Health Services in SA: A basic introduction	Kerry Cullinan, Health –eNews Service, January 2006
3.	Service Delivery Package : Occupational Therapy	Occupational therapy association of South Africa (resource document January 2014)
4.	Document : Norms and standards for Occupational Therapy Human Resources, KwaZulu Natal Department of Health	Angela Chetty and KZN OT Forum, January 2015
5.	Framework and strategy for disability and rehabilitation services in South Africa 2015 – 2020	National Department of Health, Pretoria , 2015
6.	Reference Document :Integrated Disability Management and Rehabilitation Pathways of care as a Life Course Perspective (includes clinics and community levels; hospitals and specialised rehab units)	Maryke Behuizdenhout, National DOH, 2015
7.	Setting up a primary health care occupational therapy service	Jennie McAdam, Dec 2002, National OT Forum
8.	National Rehabilitation Policy 2000	National Department of Health, Pretoria, 2000
9.	Integrated National Disability Strategy, White Paper, November 1997, Chapter 3,	Office of the President, Pretoria, 1997
10.	KZNDOH Policy for Disability and Rehabilitation	KZN DOH, KZN, 2008
11.	Setting up a secondary –tertiary OT service	Western Cape 2005 National OT Forum

12.	Infrastructure and Support Systems (IUSS) Health Facility Guides: Adult inpatient accommodation [Discussion draft 1]18 March 2014	IUSS March 2014, Infrastructure Unit support Systems.
13	National Core Standards	October 2014

Approximately 32 pages of items were extracted from various documents and they were recorded either by direct extraction, summarised when duplication was evident, or converted into simpler text if sentences were long and complex. Items were coded according to the name of the document, definition of clinical and support services, any reference to rehabilitation services (where OT, speech therapy and physiotherapy were generalised), reference to OT services and any equipment that was suggested for the profession.

This was done individually for district, regional and tertiary services. The author and dates of all documents were also tracked to determine if there were any time developments or progressions in the documents.

The data were further analysed to refine the themes by summarising information , condensing long statements and finding the most suitable categories to place them in. Phase two in the documentation audit narrowed the codes to suitable themes that would explore OT at different levels of care and show any proposals for equipment, etc. The refined codes included district OT services, regional OT services, tertiary OT services and therapeutic equipment.

A list of suggested OT services that could be offered at district, regional or tertiary level care is proposed following the document analysis as depicted in table 2. A generic therapeutic equipment list has also been generated by the amalgamation, condensation, simplification and categoristion of equipment for easy reference as shown in table 3.

TABLE TWO: DESCRIPTION OF OT SERVICES AT DISTRICT, REGIONAL AND TERTIART LEVEL OF CARE		
DISTRICT OT SERVICES	**REGIONAL OT SERVICES**	**TERTIARY OT SERVICES**
1. Inpatient, outpatient and community service. 2. Education and training of caregiver 3. Compensation strategies 4. Assess, provide and maintenance of assistive devices 5. Work skills development: job readiness, work hardening, work capacity, etc. 6. Address impairment by remediation and compensation. 7. Counsel and support 8. MDT approach 9. Group and home programmes 10. Assessment and treatment of paediatrics for developmental delay, facilitation of play, seating and positioning, barriers to learning, etc. 11. Basic ADL skills training 12. Assessment, management and treatment of patients in MDT 13. Safe discharge and home visits 14. Assessment with medical records, grants, disability grants, etc. 15. Health promotion. 16. Healthy lifestyle for geriatrics 17. Preventative, promotive, curative, rehabilitative and palliative.	1. Inpatient, outpatient and community service. 2. Education and training of caregiver 3. Compensation strategies 4. Assess, provide and maintenance of assistive devices 5. Referral to district services or up and down. 6. Assess, provide and maintain assistive devices. 7. Vocational rehabilitation by screening, assessment and work readiness, etc. 8. Address impairment 9. counsel and support 10. MDT approach 11. Group and home programmes. 12. Assessment and treatment of paediatrics . Children with acute, sub acute and chronic illness, behavioural , neonates at risk of developmental delay or disability. 13. ADL skills training. 14. Assessment, management and treatment of patients. 15. Safe discharge and home visits 16, Disability grants assessments, child grants, etc. 17. Health promotion and disability prevention. 18. Healthy lifestyle for geriatrics. 19. Prevention, promotion, curative, rehab and palliative services. 20. Acute, sub acute services, long term, awareness and prevention. 21. Basic and Specialist services: spinal unit, stroke, hands unit, etc. Multiple trauma, amputees, neurological injuries, diseases, etc.	1. Inpatient and outpatient service. 2. Outreach to drainage area. 3. MDT work together. 4. Service to include ICU and regional level of care. 5. Assess, provide and maintain Assistive devices. 6. Vocational rehabilitation: prevoc, work hardening, work assessment, set up and management of work placement. 7. Early intervention rehab and remediation. 8. Counselling and support. 9. Group and home programmes. 10. Specialist services in paediatrics : neurodevelopment, ad Developmental delay, specialised seating, high risk baby , KMC, disability. 11. Specialist assessment, advice, intervention and management of plans for individual patients. 12. Medico legal work. 13. Teaching and training and consulting with the drainage area. 14. Healthy lifestyle promotion with geriatrics. 15. Prevention, promotion, curative, rehabilitative, palliative. 16. Specialist services : hand unit, burns and reconstruction, stroke cardiology, oncology,

	22. Assessment, measure fitting and training in orthotics/ prosthetics where needed. 23. Psychosocial , vocational, social rehabilitation.	paediatrics, spinal , pain, ICU, CCU, PICU, NICU, renal unit, seating clinics, neuro, medical, surgical, multiple impairments etc. 17. Specialist assessment, advice, intervention and management plans on an individual basis in the MDT clinics. 18. Structured home programmes and follow up specialist clinics to monitor progress. 19. Group classes where relevant. 20. Healthy lifestyle for geriatrics.

TABLE 3: GENERIC EQUIPMENT LIST GENERATED FROM DOCUMENTATION AUDIT			
EQUIPMENT			
GYMNASIUM EQUIPMENT 2 x rollers Therapy mat/carpet Plastic ball Equilibrium board Plinth Full length mirror Suspension frame Wedges (small medium large) Tilt table Standing frame Mini trampoline Tilt board Gym balls (various sizes) Skate / scooter board Balance beam Bobath rolls (small, medium and large) Push-up blocks Equilibrium board Walking / standing frame adult and child	**ASSESSMENT EQUIPMENT** goniometer Relevant adult physical and psychiatric assessment battery e.g. Rivermead, neuro assess. Relevant Paediatric assessment batteries e.g. Beery, DTVP Relevant standard tests Patella hammer Goniometer - finger goniometer Dynamometer Measuring tape Stopwatch Standardised cognitive-perceptual assessment and treatment - LOTCA, Rivermead Perceptual Assessment battery, COTNAB, Rivermead Behavioural Memory Valpar 1, 3, 4, 5,6,8,9,10,11,15,201,202,203, 204 Rivermead Cotnab Minnesota Clerical Test Jacobs Prevocational skills assessment Thurstone Questionnaire Relevant adult physical and Psychiatric assessment battery E.g., Cognitive Assessment of Minnesota	**HAND THERAPY** double adaptor extension cord splinting pan eyelet punch revolving leather punch splinting scissors heat gun Stanley knife POP scissors Pliers FEPS Stanley knife Edge bevels Hand exercisers (power web, theraballs, therapy putty, cones, digifix) Upper limb air splints (medium and large; left and right) Assorted hand function activities Assorted fine and gross motor activities ITS machine Mobile limb balancer FEPS Massager (vibrator) – large and small Wax bath Splinting scissors x 4 * Mirror box Metal ruler Craft knife x 3 *	**PERSONAL MANAGEMENT** Sink Hair dryer Basic equipment **WOODWORK** Basic woodwork equipment e.g. saw, pliers, vice, tool set, try square, mallet, screwdriver set, chisel, plane, spanners etc. Carpentry - relevant materials and equipment **COGNITIVE AND PERCEPTUAL** Perceptual games Various games and activities for perceptual deficits (specific list will need to be submitted) Various games and activities for cognitive deficits (specific list will need to be submitted) Map book **SPORT EQUIPMENT** Basic sporting equipment WORK Computer and printer Telephone Fax Copy machine Overhead projector Simulated work tasks Access to real task

Dumbbells of various weights (0.5-10kg) Re-education board Multi function work station Bolster	**PAEDIATRIC EQUIPMENT** Wooden blocks Rattle	Different-sized handheld punch (dynamic splints) Desensitisation kit **GENERAL**	Access to clerical equipment and clerical tasks equipment large plastic basin Kitchenette (ADL kitchen) - kettle, toaster, fridge, stove, microwave, mixing bowls, measuring cups and utensils,

Hammock **ASSISTIVE DEVICES** Wheelchairs Walking frame / stick Crutches - Long-handled reacher - Long-handled sponge - Dressing stick - Button hook - Tap turner - Sock aid - Kettle tipper - One-hand chopping board - Commode with wheels - Bath board - Bath seat - Bath step - Raised toilet seats (different sizes) **KITCHEN** Home management - relevant materials and tools	Squeaky toy Form board Kids scissors Simple puzzle Coloured bead and cords for threading Perceptual toys Balls Boys and girls toys Toy car set Swing **CRAFT** Arts and Crafts - relevant equipment and materials Metal work - relevant materials and equipment	MTA radio / tape-deck Hydraulic table Sewing machine Posture mirror Ice packs Blood pressure unit Resuscitation trolley TV Video machine Radio/CD Machine Needlework (Heavy Duty) First aid box	electric mixer **GARDENING** Gardening - relevant materials and equipment **CONSUMABLES** Pencil grips Thera putty Crayons Paper Cardboard Pritt Bostik Towel Blanket Leisure/craft activity supplies Special left / right scissors **FURNITURE** desk chairs metal stationery cupboards filing cabinets Children: plastic chairs children's table Bed Pigeon hole shelf Pinboard with hooks for patterns kitchenette Notice board Ceiling net for storage of balls Chairs - Office without armrests Chairs - Office with armrests

			Work tables

DISCUSSION AND IMPLICATIONS

The documentation analysis yielded an array of descriptive data extracted from the various documents. These ranged from brief explanations to detailed generic descriptions for rehabilitation services. The main contributors to the documents were from the National Department of Health, OTASA and the National OT Forum. The significant contributors to the package of OT services in South Africa was a comprehensive draft document produced in 2014 by OTASA for general occupational therapy services. This document was not utilised in the final formulation of the policy for the Framework of Rehabilitation and Disability that was produced in 2015 and was criticised for the lack of public sector input[26]. The Integrated Disability Management and Rehabilitation Pathways of care as a Life Course Perspective reference document was the final document that accompanied the framework for disability and rehabilitation and details the roles of OT among other rehabilitation professionals that may contribute therapeutically, at various developmental stages of life[34]. This is an extensive and comprehensive rehabilitation document that combines the roles of all rehabilitation professionals but does not allow OT an individual platform to define its role. Other documents describe briefly rehabilitative services as umbrella statements.

Where documents referred to rehabilitation services in national health documents, it included physiotherapy, occupational therapy and speech therapy as a unit together. It was therefore assumed that all statements concerning rehabilitation could also be dedicated to the occupational therapy service, specifically, if they pertained to the scope of practice. These statements were classified under the code of occupational therapy services in the final analysis. The development and age of the documents were not considered for exclusion as the aim was to gather all information on the topic for the analysis due to the limited documentation that operationalises this for the profession of OT. There were a number of cross references between documents with repetition of

descriptions also noted. This is evidence that a few documents were referenced to create other national guidelines and policies. This could have influenced proposals in policies and guidelines and given credibility and support for one original document. While it is evident that rehabilitation services are recognised within various policy, guideline and reference documents and supported by NDOH, there are concerns with the short or inadequate descriptions outlined in policies or the lack of detailing professional specific services, specifically OT. This may be suggestive of a neglect of adequate professional consultation and prioritisation of these services, in the finalisation of health documents.

In a health system where validation of resources is necessary and quality of care is priority, one can only attribute the lack of detail around allied health services as lack of planning, lack of consultation or lack of attention on the government's priority health action list due to the other critical factors e.g. TB and HIV that have been given priority funding. On a ground and functional level, this has significant implications for the day to day running of a public health OT department and the challenges that therapists are faced with in order to deliver effective and appropriate services. A typical example of inadequate preparation of health documents include the National Core Standards audit document for OT as discussed above. An inadequate description of services according to the National OT Forum (2013)[35] and a generic equipment list for physiotherapy, OT and speech therapy was initially prepared by the Office of Health Compliance. It has since been retracted and under review when officials realised that the professions could not meet requirements of an audit document where the equipment list, documentation checklist and assessment checklist did not fit within the scope of each of the specific professions. It is criticised for being more a physiotherapy than occupational therapy list. This has set back the profession significantly in that will not meet the national audit requirements for NHI in line with other professions as budgets have not been allocated or set aside to ensure compliance due to the inappropriate

tool.

It is noted that there are numerous equipment lists proposed from various formal and informal documents over the last ten years. Some lists were brief and others were detailed and descriptive about quantity and size of equipment, furniture, consumables, etc. None of these were a widely consulted list but was rather produced for the purpose of guiding the set up of OT departments within the public sector for the developing therapist, in some provinces. A formal, current and consulted list has not been generated to guide therapists in the selection of equipment at a specific level of care or to assist them with an adequate audit of basic equipment they would be required to develop an OT department. The equipment list that has been generated from the documentation audit will thus be utilised as a baseline in a survey questionnaire to allow for provincial wide consensus and expert analysis in KZN, to generate an essential basic therapeutic equipment and assessment list based on the services they will provide. It is envisioned that this work will describe OT services for acute care, create a base line measure for the type of services that should be offered and a list of equipment will create a guideline for therapists to use in motivating for budgets and resources. This study may also be used as a benchmark for other provinces and the National Department of Health to assist in the revision of their norms and standards in quality audits.

CONCLUSION

A document analysis allowed for the review of proposals for occupational therapy services for the public health sector in South Africa including an essential therapeutic equipment or assessment list for OT. A total of 13 documents were accessed that met the inclusion criteria. The information from these documents have resulted in a list of statements for a comprehensive proposed package of care for occupational therapy services through three levels of care and has assisted in the development of a

comprehensive list of essential therapeutic equipment needed for OT practice. This list will serve as the baseline checklist for a provincial survey of public service occupational therapists in KZN prior to moving onto gaining consensus on a package of care and therapeutic equipment list for OT in KZN.

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CHAPTER [1]

MANUSCRIPT 2

CONSENSUS ON A PACKAGE OF ACUTE CARE IN PUBLIC HOSPITALS IN KZN AND A THERAPEUTIC EQUIPMENT LIST FOR OT SERVICE DELIVERY

3.1 SUMMARY

Consultation and consensus with stakeholders and experts on a clinical package of care will allow for greater invested interest and they are more likely to adopt the findings. This manuscript focused on occupational therapists who work in acute care within the DOH in KZN. They were consulted for their working experience and current practice as well as to validate the findings of phase one of the study which was a baseline documentation audit to construct a survey for this phase of the study. A group of senior occupational therapists finalized this study by developing consensus on a package of acute care for occupational therapy and the essential therapeutic equipment that would be needed. The

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[1] .2 JOURNAL DETAILS

The South African Journal for Occupational therapy is the only journal dedicated to Occupational therapy in South Africa. It is the official journal of the Occupational therapy association of SA and is a leading publication for research

manuscript proposes guidelines for a package of acute service delivery and a list of therapeutic equipment to support it.

into OT in Africa. SAJOT publish and disseminate articles that contribute to the knowledge of the profession with emphasis to service delivery in Africa.

3.3 MANUSCRIPT

This manuscript was formatted according to the specifications outlined for authors in the South African Journal for Occupational Therapy. Tables and figures have been embedded in the manuscript to allow for ease of reading. Authors names have been removed.

CONSENSUS ON A PACKAGE OF ACUTE CARE IN PUBLIC HOSPITALS IN KZN AND A THERAPEUTIC EQUIPMENT LIST FOR OT SERVICE DELIVERY

ABSTRACT

Background: There is a need in South Africa to develop guidelines and prescribed resources to ensure that service delivery is optimal. OT in the public sector does not have acute guidelines and motivation for resources remain a challenge in a developing health system. **Aim**: To develop consensus for an acute package of OT services at all levels of care and propose an essential therapeutic equipment list in KwaZulu Natal of SA. **Method**: This paper reports on phases two and three of a three phase mixed methods explorative sequential design study. Part one outlined a documentation audit whereby thematic analysis was utilized to extract relevant background information for levels of care and lists of equipment for occupational therapy in South Africa. An informed survey was developed from the audit and disseminated to all eligible therapists in the KZN province to determine a degree of consensus for existing information and propose new ideas. An expert nominal focus group utilized data from the survey and the audit to draw consensus on a final package of care for OT services in KZN and the therapeutic equipment and assessments needed at each level of acute care. **Conclusion**: It is envisioned that these guidelines will validate the role of OT services at all levels of care and provide a supportive foundation for resource allocation, audits and benchmarking with other provinces.

Key words: Package of care, acute care, therapeutic equipment, service delivery

INTRODUCTION

For occupational therapy (OT) to thrive and flourish in an accountable and audited South African Public health system, there needs to be standards and guidelines that are professional specific, to measure service delivery, outcomes, and motivate for adequate and essential resources.

Currently in South Africa, OT is grouped together with other allied health services in national health documents or there are informal reference guidelines[1234] .This has biased OT significantly in the current National Health Insurance (NHI) audit tool called the National Core standards (NCS) where a shared equipment and service delivery document exists for OT and physiotherapy[2] as this does not allow for adequate improvement of each specific service. Aligning OT services to the levels of acute care as outlined in policy in the public sector will assist in developing sound standards and guidelines against which resources can be allocated, motivated for and supported by managers and decision makers in the health system. Developing an essential equipment and assessment list will also guide the new and inexperienced therapist with prioritisation of resources where budgets are limited and ensure alignment of services, to the level of acute care being offered.

This paper reports on the latter phase of a larger study on a package of care for acute services at district, regional and tertiary level as well as the essential equipment and assessments needed.

The first phase (unpublished) described a documentation audit that comprised of generic rehabilitation documents and occupational therapy guidelines. A list of equipment and assessments in addition to items for packages of care for each level of service provision, namely, district, regional and tertiary were extracted.

This provided the foundation for phase two in which the authors firstly sought to describe and profile OT services at different levels of care in addition to the therapeutic equipment and assessments required by OTs in the public sector in KZN, and secondly, to gain consensus on these packages of care and therapeutic equipment by key stakeholders within the province.

The core content of occupational therapy encompasses adaptive and recovery interventions, interventions using teach-learning processes and measures of health promotion and risk assessment[5:20]. In the acute hospital setting, this role is essential as research has shown that early assessment and intervention improves functional outcomes in patients[6]. Assessment is a foundational skill upon which interventions, adaptations and discharge is built on and the use of relevant assessment and therapeutic equipment is an integral factor in ensuring good patient outcomes[7].

The South African Context

In South Africa, the National Department of Health has made many endeavours to improve the health system and ensure equitable resources are distributed for all of its citizens[8]. Whilst policies and standards exist for the entire health system, redress and implementation for allied health services and specifically occupational therapy remains a challenge in most provinces with the main reason being prioritization of funding[3, 9]. In 2011 only 55% of hospitals in the country had the required equipment to perform occupational therapy[10]. As outlined above, allied health services (physiotherapy, occupational therapy and speech therapy) are always grouped together with little differentiation between the specifications of the professions. Perhaps the specific understanding of how each of the professions can impact the burden of disease and illness in South Africa, by defining a package of care, will provide more insight in the value of the allied professions, specifically occupational therapy.

In South Africa, there are no guidelines for acute care and the only formal guideline is a generic OT document[11] which is based on the American and British standards, to serve as general guide to any therapist or the reference document produced by OTASA on a general package of OT services[12]. The audit tool for OT within the National Core

standards has since been retracted in 2015 due to it being an inappropriate measure for the profession and is currently under review[9]. This is evidence to show that there is a need to develop a comprehensive package of care for occupational therapy for all levels of services in the public sector and make recommendations for appropriate resources (equipment, staffing, consumables and infrastructure) to be allocated in order to support current policies, to offer quality outcome based and cost effective services. This is supported strongly by the Framework for Disability and Rehabilitation[3] (NDOH, 2015) where allied health services are targeted to become current, relevant and develop minimum standards to ensure effective allocation of resources. The national policy for quality health care[13] specifically supports the need for a package of care at all levels as this is one measure of quality of services and equitable distribution of services.

Acute clinical services are divided into district, regional and tertiary services in line with National Health Policy[1]. Occupational therapists work in all levels of care in all provinces of South Africa. . District hospitals offer the most basic care and are a first line service, whilst regional hospitals provide general and a range of specialist services and tertiary care provides a wide range of specialist and subspecialist clinical services[14]. KZN has approximately 10.92 million people with 11 health districts with a fair distribution of both urban and rural districts. It currently has 37 district hospitals, ten functional regional hospitals and four hospitals providing tertiary care as reported on the KZN Health Website, 2016[15]. Occupational therapy is provided in most hospitals in the province with a bigger distribution of therapists in the urban districts as compared to the rural districts. Lack of basic equipment has historically been a complaint in the province for most rural based districts and these services have made little improvement in the past few years[16]. KZN Health has an active rehabilitation and disability unit at their Head Office who has supported the development of documents to support the improvement of services; however implementation lends itself to “red tape” issues of authorization from decision

makers, priority programmes and budget allowances in KZN. The Framework for disability and rehabilitation, 2015 has enabled all rehabilitation professions and specifically occupational therapy to align itself with priority goals in the province and it is envisioned that this will profile services across all health programmes[3]. The need to develop a recommended package of care for all levels of care and a proposed equipment list is an identified goal of the rehabilitation directorate in KZN, to support the framework for disability and rehabilitation (2015) and ultimately assist with measuring services, motivating for resources and aligning OT services to the clinical services.

METHOD

This study followed a mixed methods sequential design, with the use of a survey and nominal group in an attempt to understand acute OT packages of care in service provision, in the public sector of KZN. This also included therapists' opinion of what constitutes essential equipment and assessments for optimal and effective service delivery. There are currently no formal professional specific policies or guidelines to serve as a benchmark from which OT services can be measured against. Therefore, data from a previous phase (a documentation audit) served as a baseline for the development of a survey[17:215] used amongst OTS in KZN and that was subsequently exposed to scrutiny by an expert panel, in a nominal group towards final consensus.

Phase 1: Survey

A survey was selected as this was an appropriate method to reach a larger sample of OTs over a wider geographical area over a short period of time with decreased cost implications[18] .

The survey was designed to ensure that details of the respondents were captured, information on a package of care for each level and specifications on assessment and

OT equipment were collected. The survey comprised of three sections. Section A included biographical details such as years of experience, age, type of hospital and district they worked at, and years of qualification. Section B included predefined statements on a package of care for district, regional and tertiary services and requested participants feedback on a five point likert scale (strongly agree, agree, neutral, disagree, strongly disagree). Section C included a proposal of therapeutic equipment and assessments where a tick box defined at which level the equipment would be relevant (district, regional, tertiary) and whether they were essential, “nice to have” or not needed. For both sections B, and C there was space for additional comments, proposals and space for reasons in the event of disagreement with a statement. The survey was developed from proposals made in the documentation audit on levels of care and a generalised equipment list and amended taking into account all relevant comments made on the construct evaluation of the questionnaire.

Piloting of the Survey

An evaluation of the questionnaire was conducted to test the adequacy of the survey questionnaire with respect to content and face validity and to determine if the construction/ wording and understanding of the questions were clear and reader friendly. Therapists were required to scrutinize the survey document and comment on grammar, language, content, and flow of the entire document. The survey was sent to ten occupational therapists that were excluded from the original sample in order to preserve the sample of eligible therapists and ensure a good response rate on the final questionnaire. These therapists were mainly from mental health institutions, long term facilities or had less than two years of experience. At least 50% of the pilot group had more than five years of experience and were able to contribute from an experienced level. Respondents were given two weeks to respond and an 80% response rate for the

pilot was achieved. All suggestions were utilised to improve the content and design of the survey to ensure that it met content and face validity.

Sampling for final survey: Only therapists who had a minimum of two years of experience and who worked in acute district, regional or tertiary hospitals were selected for participation. All therapists who worked in specialised hospitals, chronic or other facilities and had less than two years of experience were excluded from the sample. All OTs who agreed to participate signed a consent form

Data Collection: The questionnaire was sent to all 70 eligible therapists from all 11 health districts in the province by email, hand delivery, and through OT district representatives from the OT Forum. Participants were given one month to answer the final amended survey, consult with the researcher and send back in a delivery mode that was most convenient to them (email, post or personal collection).

Data Analysis: Descriptive statistics were used to measure and determine the essential equipment and the "nice to have but not essential equipment".

PHASE TWO: NOMINAL GROUP

The nominal focus group is described as an effective and efficient method to develop consensus by means of a structured focus group encouraging face to face participation[19]. The strength lies in that it is time and money efficient and there is little preparation for the participant, lending to a greater response rate[20]. This design allowed for collaboration, discussion and a final voting, for consensus to be valid and a greater sense of ownership of the information produced which was important for the practical implications of this study**.**

Sampling for the Nominal Group: A nominal group was convened with a group of 12 senior OTs in the province. They were identified by the first author based on specific

inclusion criteria. Therapists with (i) 5 or more years of experience, (ii) currently working in the public sector (iii) representing either district, regional or tertiary level of care (iv) and who have been actively contributing members of the public sector in OT, were included in the study. An invitation was sent to 14 identified senior therapists and 12 responded positively. Therapists were excluded if they did not meet all of the listed criteria above.

Data Collection: A workshop was convened in October 2016, where informed consent was signed by each participant. Prior to the workshop, each willing participant was emailed an information package on policy documents related to definition of levels of care to assist them with background information and prepare them adequately for the expectations at the workshop. The prescribed structured steps were utilised to ensure optimal participation of the group[19]. These included:

1. Introduction and explanation of the topic and research questions.

2. Silent Generation of Ideas: The group was given individual statements for the package of care from the documentation audit and also allowed to generate their own ideas on an A3 piece of paper. This was a paper work individual exercise.

3. Sharing of ideas: The group was then allowed to share their ideas in a round robin way and consensus for inclusion of ideas was set at an *a priori* threshold of 70% given the small sample size. At this stage, the results of the survey were made available to each of the members so that additional ideas could be generated for inclusion into the final document prepared for the consensus process. At the stage of selecting essential equipment, the group was provided with a list of existing equipment per level of care, with the results of the survey and each of the participants were asked to evaluate the results of both and vote on a final recommended list based on the statements chosen for the level of care.

4. Discussion and clarification: The group were allowed to discuss their ideas, modify/reword or reorganise existing statements, clarify the meaning of ideas and discuss the results of the survey questionnaire for inclusion or rejection.

5. Voting and consensus**:** The group then voted for the existing statements and new statements that were generated in the group to create a final package of OT care and a final essential equipment list based on the information that was presented to them.

The nominal group spanned five hours and the group were given two breaks with refreshments to allow for optimum participation. Consensus on six areas were achieved by the group, namely, a package of care for occupational therapy at district level acute care, (i) a package of care for occupational therapy at regional level of acute care, (ii) a package of care for occupational therapy at tertiary level of acute care, (iii) an essential equipment list for district services, (iv) an essential equipment list for regional services, (v) an essential equipment list for tertiary services.(vi)

The first author enlisted a clerk to assist with the administrative tasks in running of the nominal group, kept a record of the schedule and systematically recorded and filed information through the group process. Photographs were used to document the process and the hard copies of each participants work was also collected and recorded prior to group consensus for each question posed.

Reliability and Validity: Van Teijlingen et al (2006) concluded that with use of a nominal group technique, the “technique has validity however the facilitator must caution in overcoming diversity of opinion to create artificial consensus”[20]. The first author was also able to include clinicians from different levels of acute care and from both urban and rural districts together to provide diversity in the group and allowed for a number of different perspectives within such an expert panel. Participants also worked in various

different districts which enhanced representativity in the province of KZN. These clinicians were able to consider the concepts and develop mutual consensus within a structured process preventing artificial consensus from being obtained. A face to face meeting also allowed first hand information to be gathered [21], sharing of ideas, rich discussions, and finally mutual consensus for each of the questions asked. This process in itself leads to validity of findings as it reduces researcher bias by allowing the group to analysis the information. Further, the triangulation of documentation audit in phase one, the survey and finally consensus from the nominal focus group strengthens the results and reduces researcher bias significantly

RESULTS

Results of Phase 1 - Survey: The survey was sent out to 70 eligible OTs who met the inclusion criteria of which 55 OTs responded, yielding a response rate of 78.57%. Responses were received from ten of the possible 11 districts of KZN.

A description of the respondents are depicted in Table 1.

Table 1 Survey Participants in KZN (n=55)

GENDER		AGE					YEAR OF QUALIFICATION			
Male	Female	20-25	26-30	31-35	36-40	40+	80s	90s	2000s	2010s
9 %	91 %	12.72%	40%	32.7 %	5.45%	9.09%	0	9.09%	49.09%	41.81%

CLINICAL SETTINGS CURRENTLY EMPLOYED AT							YEARS OF EXPERIENCE			
DISTRICT		REGIONAL		TERTIARY			0-5	6-10	11-15	15+
43.63%		32.72%		23.63%			45.45 %	34.54%	10.90%	9.09%
RESPONSES FROM THE 11 DISTRICTS IN KZN										
Amajuba	Ethekwini	Harry Gwala	Illembe	Uthungulu	Ugu	Umgungundlovu	Umzinyathi	Uthukela	Zululand	Umkhanyekhude
0	34.54%	3.63%	3.63%	1.81%	3.63%	23.63 %	3.63%	9.09%	3.63%	12.72%

For each of the packages of care, the five point likert scale from strongly agree to strongly disagree were collapsed into a three point scale (agree, neutral, disagree) to determine acceptance or rejection of a statement for each level of care. “Agree” and “strongly agree” on the likert scale were reduced to “Agree’ and “disagree” or “strongly disagree” were reduced to “Disagree”. The neutral column indicated no choices made. Results showed that there were no disagreements above the threshold of 25% indicating a majority consensus for all statements made. Proposals were made for additional statements or amendments to the original statements. These proposals were categorised and also made available to the expert panel on the nominal focus group for consideration.

Table 2 Level of Agreement for a District Package of Care (n=55)

	STATEMENT FOR DISTRICT HOSPITAL PACKAGE OF OT CARE	PERCENTAGE %		
		AGREE	NEUTRAL	DISAGREE
1	Provision of acute, sub-acute and chronic occupational therapy services to inpatient and outpatients.	92,73	5.45	1,82
2	Provision of outreach services to accountable district hospitals and clinics.	92,73	5.45	1,82
3	OT services may be preventative, promotive, curative, rehabilitative or palliative in nature	100,00	-	-
4	Conditions may include but are not limited to orthopaedic, neurological, paediatric, trauma, medical and surgical conditions.	92,73	-	7,27
5	Ensure the assessment and treatment of all patients referred or screened for optimal function.	98,18	-	1,82
6	Ensure skills development and ADL (Activities of Daily Living) retraining	100,00	-	-
7	Assess, manufacture, supply, repair, and maintain appropriate assistive devices e.g. Wheelchairs, adapted ADL utensils, seating, bracing, etc	98,18	-	1,82
8	Ensure environmental adaptations for disability and impairment in home, work, community, etc	89,09	7.27	3,64
9	Provide patient and care giver education, counselling and training	100,00	-	-
10	Provide group work and home programmes to improve and maintain function and independence	90,91	9.09	-
11	Provide/ organise support groups where necessary	80,00	12.73	7,27
12	Assess and compile reports for medico legal purposes (grants, insurances, WCA, RAF, etc.)	47,27	38.18	14,55
13	Network and outreach with district hospital therapists, MDT and other stakeholders for effective referrals, & continued patient care	98,18	1.82	-
14	Teach and train students, staff and other stakeholders	80,00	16.36	3,64
15	conduct disability awareness programmes	83,64	14.55	1,82

Table 3 Level of Agreement for a Regional Package of Care (n=55)

	STATEMENT FOR REGIONAL HOSPITAL PACKAGE OF OT CARE	PERCENTAGE %		
		AGREE	NEUTRAL	DISAGREE
1	Provision of acute, sub-acute and chronic occupational therapy services to inpatient and outpatients.	98,18	-	1,82
2	Provision of outreach services to accountable district hospitals and clinics.	67,27	14.85	18,18
3	OT services may be preventative, promotive, curative, rehabilitative or palliative in nature	94,55	1.82	3,64
4	Conditions may include but are not limited to orthopaedic, neurological, paediatric, trauma, medical and surgical conditions. They may further include specialities in any of the above mentioned fields of medicine	98,18	1.82	-
5	Ensure the assessment and treatment of all patients referred or screened for optimal function.	90,91	7.27	1,82
6	Ensure skills development and ADL (Activities of Daily Living) retraining	100,00	-	-
7	Assess, manufacture, supply, repair, and maintain appropriate assistive devices e.g. Wheelchairs, adapted ADL utensils, seating, bracing, etc	89,09	9.09	1,82
8	Ensure environmental adaptations for disability and impairment in home, work, community, etc	74,55	16.36	9,09
9	Provide group work and home programmes to improve and maintain function and independence	89,09	10.91	-
10	Provide patient and care giver educational, training and counselling	98,18	1.82	-

11	Provide/ organise support groups where necessary	65,45	23.64	10,91
12	Provision of specialist areas of care: spinal unit, stroke and acquired brain injury, hand surgery unit, burns unit, paediatric groups , medical and surgical unit, orthopaedics, cardiology, work assessment units, oncology, etc	96.36	1.82	1.82
13	Provide dedicated vocation rehabilitation services	72.73	20.00	7.27
14	Assess and compile reports for medico legal purposes (grants, insurances, WCA, RAF, etc.)	81,82	12.73	5,45
15	Network and outreach with district hospital therapists, MDT and other stakeholders for effective referrals, & continued care	81,82	12.73	5,45
16	Conduct disability awareness programmes	85,45	14.58	-
17	Teach and train students, staff and other stakeholders	92,73	5.45	1,82

Table 4 Level of Agreement for Tertiary package of care (n=55)

	STATEMENT FOR TERTIARY HOSPITAL PACKAGE OF OT CARE	**PERCENTAGE %**		
		AGREE	**NEUTRAL**	**DISAGREE**
1	Provision of acute, sub-acute and chronic occupational therapy services to inpatient and outpatients.	90,91	9.09	-
2	Provision of outreach services to accountable district hospitals and clinics.	72,73	3.64	23,64
3	OT services may be preventative, promotive, curative, rehabilitative or palliative in nature	92,73	-	7,27
4	Conditions may include but are not limited to orthopaedic, neurological, paediatric, trauma, medical and surgical conditions. They may further include specialities in any of the above mentioned fields of medicine	100,00	-	-
5	Ensure the assessment and treatment of all patients referred or screened for optimal function.	89,09	9.09	1,82
6	Ensure skills development and ADL (Activities of Daily Living) retraining	94,55	5.45	-

7	Assess, manufacture, supply, repair, and maintain appropriate assistive devices e.g. Wheelchairs, adapted ADL utensils, seating, bracing, etc	89,09	3.64	7,27
8	Provision of specialist areas of care: spinal unit, stroke and acquired brain injury, hand surgery unit, burns and reconstruction unit, paediatric groups (neurodevelopment, autism, neonatal, etc.), medical and surgical unit, orthopaedics, cardiology, work assessment units, oncology , etc	92,73	-	7,27
9	Provide dedicated vocational rehabilitation services	67,27	18.18	14,55
10	Ensure environmental adaptations for disability and impairment in home, work, community , etc.	72,73	9.09	18,18
11	Provide patient and care giver training, education, and counselling.	92,73	3.64	3,64
12	Provide group work and home programmes to improve and maintain function and independence.	74,55	16.36	9,09
13	Provide/ organise support groups where necessary	61,82	18.18	20,00
14	Assess and compile reports for medico legal purposes (grants, insurances, WCA, RAF, etc.)	89,09	5.45	5,45
15	Network and outreach with regional and district hospital therapists, MDT and other stakeholders for effective referrals, continued patient care, skills development and quality services.	90,91	1.82	7,27
16	Conduct disability awareness programmes	76,36	23.64	-
17	Teach and train students, staff and other stakeholders	96,36	1.82	1,82
18	Conduct research and skills development in various specialties.	96,36	3.64	-

Therapeutic Equipment and Assessments

A comprehensive list of equipment was provided to respondents who were required to indicated the equipment categories as either “essential” , “nice to have but not essential”, or “not needed““ for each level of care. Several proposals for additional items were made on the equipment list. Each item was scored and frequencies computed. These results were presented to the expert panel in the nominal group

Results from the Nominal Group

The expert panel comprised senior occupational therapists that were actively involved in the planning and implementing of services in KZN. They were recruited from five of the 8 eligible districts that had eligible therapists and represented both rural and urban districts.

Table 5 Nominal Group Participants in KZN (n= 12)

GENDER		AGE					YEAR OF QUALIFICATION			
Male	Female	20-25	26-30	31-35	36-40	40+	80s	90s	2000s	2010s
0	100 %	0	25%	25%	33.3%	16.6%	0	16.6%	58.3%	25%

CLINICAL SETTINGS CURRENTLY EMPLOYED AT			YEARS OF EXPERIENCE			
DISTRICT	REGIONAL	TERTIARY	5	6-10	11-15	15+
25 %	50%	25%	16.6%	58.3%	8.3%	16.6%

RESPONSES FROM THE 11 DISTRICTS IN KZN										
Amajub	Ethekwir	Harry Gwa	Illemb	Uthungul	Ugu	Umgungundlo	Umzinyatl	Uthukel	Zululan	Umkhanyekhu
0	50%	16.6%	8.3%	0	0	16.6%	0	8.3%	0	0%

The nominal group assisted in affording the expert panel an opportunity to deliberate over existing statements, in generating new ideas, in reviewing the results of the survey, in discussing and in seeking clarification of any statements prior to consensus being established for each OT package of care in acute health service provision, and the therapeutic equipment and assessments required to perform this service. Statements proposed were amended for all levels of care by simplication , additions, subtractions and rewording after the initial silent generation of ideas were completed . The results of the survey as well as discussion around existing statements influenced changes to the final documents for each level of care and the equipment needed, and 100% consensus was reached. The equipment list was also edited significantly by the nominal focus group. Categories were changed for the paediatric equipment and additional items were added to the existing list. The group was able to consider all items in the “essential list’ and “the nice to have list” from the results of the survey, discuss findings and finally conclude on a final list that would best support a final package of care. The entire process was completed in 5 hours and therapists felt that they had contributed constructively to a valid process. Positive feedback was given on the nominal group process as it allowed for all therapists to participate and all ideas and statements were considered. By ensuring consensus through a voting system where a 70% minimum consensus was required, therapists were able to reason, debate and view each other’s points before final group consensus was reached.

The final list was revisited by the group at the end of the session to ensure that all statements were consistent and checked against the equipment list that was proposed. Minor adjustments were made taking into consideration the whole package. All group participants were satisfied with the proposed package of care and the therapeutic equipment and assessment lists that were finalised.

	TABLE 6 FINAL STATEMENTS ON A PACKAGE OF ACUTE CARE	DISTRIC	REGIONA	TERTIAR
1	Provide acute, sub-acute and chronic occupational therapy for inpatient and outpatients	✓	✓	✓
2	Provide outreach services (teaching, training, clinical skills) to clinics, accountable district hospitals and to the surrounding community.	✓		
3	Provision of outreach services as needed (teaching, training, clinical skills) to accountable district hospitals and clinics.		✓	
4	Provision of outreach services (teaching, training, clinical skills) to accountable regional and district hospitals.			✓
5	OT services may be preventative, promotive, curative, rehabilitative or palliative in nature	✓	✓	✓
6	Conditions may include but are not limited to orthopaedic, neurological, paediatric, trauma, medical, surgical and mental health conditions.	✓		
7	Conditions may include but are not limited to orthopaedic, neurological, paediatric, trauma, mental, medical and surgical conditions. May further include specialities in any of the above mentioned fields of medicine		✓	
8	Conditions may include but are not limited to orthopaedic, neurological, paediatric, trauma, mental health, medical and surgical conditions. May further include various specialities and sub specialities offered at this level of care			✓
9	Ensure the holistic and client centred assessment and treatment of all patients referred or screened for optimal function	✓	✓	✓
10	Ensure skills development and ADL (Activities of Daily Living) retraining.	✓	✓	✓
11	Assessment, manufacture, supply, repair, & maintain or refer for appropriate assistive devices or therapeutic devices e.g. Wheelchairs, adapted ADL utensils, seating, brace, splinting, etc. for relevant patients	✓	✓	✓
12	Ensure environmental adaptations for disability and impairment in home, work, and community, through implementation or by recommendations & referral	✓	✓	✓
13	Provide patient and care giver education, counselling and training	✓	✓	✓
14	Provide group work and home programmes to improve and maintain function and independence, where necessary	✓	✓	✓
15	Provide or arrange support groups where necessary	✓	✓	✓
16	Network and outreach with district hospital therapists, MDT and other stakeholders for effective referrals, & continued patient care		✓	
17	Network with MDT, community and other stakeholders	✓		

18	Network with regional & district hospital therapists, MDT & other stakeholders for effective referrals, continued patient care, skills development & quality services			✓
19	Conduct disability awareness programmes and health promotion programmes in hospital and community	✓	✓	✓
20	Teach and train students, staff and other stakeholders	✓	✓	✓
21	Ensure the compilation of functional reports by holistic assessment for various medico legal purposes (grants, insurances, WCA, RAF, etc.)	✓	✓	✓
22	Conduct and participate in research within the community and hospital.	✓	✓	
23	Provision of specialist areas of care: spinal unit, stroke and acquired brain injury, hand surgery unit, burns unit, paediatric groups, medical and surgical unit, orthopaedics, cardiology, work assessment units, oncology, etc.		✓	✓
24	Provide dedicated vocational rehabilitation services		✓	✓
25	Conduct research and skills development in various specialties.			✓

Table 7 Proposed Therapeutic Equipment and Assessment List (n=12)

KEY: D = DISTRICT SERVICES R = REGIONAL SERVICES T = TERTIARY SERVICES

NO	ITEM	D	R	T	NO	ITEM	D	R	T
1	Treatment Plinth	X	X	X		**HAND THERAPY EQUIPMENT**			
2	Mobile full length mirror	X	X	X	1	Dynamometer	X	X	X
3	Standing frame – Adult	X	X	X	2	Suspan large	X	X	X
4	Standing frame – Paediatric	X	X	X	3	Mobile splinting pan	X	X	X
5	Wedges small	X	X	X	4	Heat Gun	X	X	X
	Medium	X	X	X	5	Splinting scissors (heavy duty, curved and POP scissors)	X	X	X
	large	X	X	X	6	Craft Knife	X	X	X
6	Blocks small	X	X	X	7	Revolving punch	X	X	X
	Medium	X	X	X	8	Pliers set, bottlenose, and regular	X	X	X
	large	X	X	X	9	Assorted hand activities for all ranges of grip and grasp	X	X	X
7	Rollers small	X	X	X	10	Assorted resistive hand activities	X	X	X
	Medium	X	X	X	11	Hand exercisers (cones, digifix, power web, etc.)	X	X	X
	large	X	X	X	12	Ice packs	X	X	X
8	Therapy Balls small	X	X	X	13	Heat packs	X	X	X
	Medium	X	X	X	14	Wax bath	X	X	X
	large	X	X	X	15	FEPS	X	X	X
9	Therapy Gym Mats	X	X	X	16	Metal ruler		x	X
10	A range of weights	X	X	X	17	Mirror box		x	X
11	Walking frame adult and child	X	X	X	18	Continuous Passive Movement Machine Hand ,Wrist and Shoulder		x	X
12	Treatment Plinth	X	X	X	19	Shoulder ladder		x	X
13	Mobile full length mirror	X	X	X	20	Range of Movement Arches		x	X
14	Standing frame – Adult	X	X	X	21	Rivet Gun		x	X
15	Standing frame – Paediatric	X	X	X					
16	Balance Beam	X	X	X		**ASSISTIVE DEVICES**			
17	Equilibrium Beam	X	X	X	1	Long handled reacher	X	X	X
18	Mobile and fixed suspension frame		x	x	2	Long handled sponge	X	X	X
19	Tilt table Electric		x	x	3	Dressing stick	X	X	X
20	Low bench			x	4	Button hooks	X	X	X
21	Steps			x	5	Tap turners	X	X	X

					6	Nail clipper board	X	X	X

					7	One hand chopping board	X	X	X
					8	Bath board	X	X	X
	ASSESSMENT EQUIPMENT				9	Bath seat	X	X	X
1	Neurological Assessment Batteries e.g. Rivermead, COTNAB, etc.	X	X	X	10	Transfer boards	X	X	X
2	Work Assessment Battery e.g. WASP, Tpal, etc.	X	X	X	11	Raised toilet seats	X	X	X
3	Perceptual Assessment Battery for Children e.g. DTVP,Beery	X	X	X	12	Adapted eating utensils	X	X	X
4	Finger and hand goniometer	X	X	X	13	Plate Guard	X	X	X
5	Hand Assessment Batteries	X	X	X	14	Commode with wheels	X	X	X
6	Large Goniometer	X	X	X	15	Wheelchairs : Adult, Child, Amputee, One arm drive, capstan wheels, etc.	X	X	X
7	Measuring tape	X	X	X	16	Head Mouth pointer	X	X	X
8	Stop Watch	X	X	X		**Cognitive / Perceptual**	X	X	X
9	BP cuff	X	X	X	1	Range of perceptual games and activities puzzles, colours, sizes, sequencing, etc.	X	X	X
10	Pulse oximeter	X	X	X					
11	Monofilaments		x	x		**PLAY TOYS FOR BABIES AND TODDLERS (0- 2 YEARS)**			
	ACTIVITIES OF DAILY LIVING				1	Rattles	X	X	X
	KITCHEN EQUIPMENT				2	Building blocks	X	X	X
1	Basic utensils,	X	X	X	3	Beads	X	X	X
2	baking pans,	X	X	X	4	Wooden puzzles	X	X	X
3	a set of crockery,	X	X	X	5	Balls	X	X	X
4	a set of cutlery	X	X	X	6	Play gym	X	X	X
5	storage containers	X	X	X	7	Musical instruments	X	X	X
6	set of pots	X	X	X	8	Bucket and spade	X	X	X
7	kettle	X	X	X	9	Pulling toys	X	X	X
8	toaster	X	X	X	10	Shape bucket	X	X	X
9	Oven and stove	X	X	X	11	Sensory toys	X	X	X
10	fridge	X	X	X					
11	microwave	X	X	X		**PLAY TOYS FOR CHILDREN (2-12)**			
					1	Transport vehicles of various sizes	X	X	X
	PERSONAL MANAGEMENT				2	Construction Blocks	X	X	X
1	Brush and comb	X	X	X	3	Puzzles	X	X	X
2	Hand mirror	X	X	X	4	Animals	X	X	X

3	Nail clipper	X	X	X	5	Concept books	X	X	X
4	Toothbrushes	X	X	X	6	Logic games	X	X	X
5	Iron and iron board	X	X	X	7	Board games	X	X	X
6	Shaving set	X	X	X	8	Dolls of various sizes and shapes	X	X	X

7	Hair cutting set	X	X	X	9	Toy pots, pans, tea sets	X	X	X
					10	Bead sets	X	X	X
	SPORTS EQUIPMENT				11	Sensory toys	X	X	X
1	Swing ball	X	X	X					
2	Various size balls: netball, volleyball, basketball, etc.	X	X	X		**WORK EQUIPMENT**			
3	Nets	X	X	X	1	Computer and printer	X	X	X
4	Dart board and darts	X	X	X	2	Office equipment (punch, stapler, etc.)	X	X	X
					3	Scanner/ copier	X	X	X
	GARDEN EQUIPMENT				4	Laminator	X	X	X
1	Set of mini garden hand tools	X	X	X					
2	Watering can	X	X	X		**CRAFT EQUIPMENT**			
3	Spade	X	X	X	1	Knitting, crotchet, tapestry needles	X	X	X
4	Pik	X	X	X	2	Set of leather work equipment	X	X	X
5	Hoe	X	X	X	3	Set of painting brushes and accessories	X	X	X
6	Rake	X	X	X		**GENERAL**			
7	Wheelbarrow	X	X	X	1	Weights for arms and ankles of various ranges	X	X	X
					2	Push up blocks for assistive transfers	X	X	X
	WOODWORK EQUIPMENT				3	Range of springs and suspension supports	X	X	X
1	Set of screwdrivers	X	X	X	4	Cardiac resuscitation trolley with 6all legally required equipment	X	X	X
2	Set of pliers of different sizes	X	X	X	5	Sewing Machine and accessories	X	X	X
3	Set of spanners	X	X	X	6	Sewing scissors	X	X	X
4	Set of saws (hacksaw, coping, handsaw, etc.)	X	X	X	7	Sewing accessories (tape measure, etc.)	X	X	X

5	Hammers	X	X	X	8	Radio and CD Deck	X	X	X
6	Hand and electric drill	X	X	X	9	Kids table and chair set	X	X	X
7	Toolbox	X	X	X	10	Pin Board	X	X	X
8	Measuring equipment for woodwork: try square, ruler, set square, etc.	X	X	X	11	Data Projector and screen	X	X	X
9	Electric sander	X	X	X	12	White Board	X	X	X
10	Wood planer	X	X	X	13	Electric carving knife	X	X	X
11	Rubber mallet	X	X	X	14	Hydraulic Table		X	X
12	Hand sander	X	X	X	15	Electric Carving knife		X	X
13	Protective equipment for woodwork: leather apron, gloves, visor	X	X	X	16	Television			X
14	Woodwork bench and vices	X	X	X	17	Camera			X
					18	Video Recorder			X
					19	Overlocker and accessories			X

DISCUSSION AND IMPLICATIONS

The survey, allowed the authors to consult with all eligible therapists (n=70) that worked in public sector facilities, both in rural and urban districts in KZN. This was important to ensure adequate representivity from all districts, all levels of acute care, and a variety of therapists with various years of experience and exposures. A 78.57% response rate within the time frame was achieved with ten out of 11 districts (90.9%) in the province represented. This contributed to the validity and credibility of the results. The results of the survey described OTs level of agreement on each package of care and corresponding equipment list. Whilst it was acknowledged that in a category, the vast majority of respondents (45.5%) had only two to four years of experience, approximately 64,54% of the respondents had a collective of more than 5 years of experience. This reflected that a greater number of experienced therapists responded to the survey. This information was considered to reflect the general consensus of all therapists that are working in acute care

in the public sector and was a good source of information to guide experts in their final decision on a package of care for OT and the essential equipment needed.

The survey yielded a description of statements that refer to packages of care for different levels of service delivery. Reasons cited for disagreement with statements mainly included a lack of resources, lack of expertise in the case of medico-legal services or scope of work within the public health sector e.g. vocational rehabilitation as belonging to the domain of Social Development or clinical teaching to be conducted by the university, etc. The percentage of therapists who disagreed with most of the statements were mainly below the threshold (a maximum of 10% disagreement).

The nominal group of experts were able to work well together even though they represented different districts, different types of hospitals and hailed from different backgrounds. This demonstrated that their common interest in the subject contributed to group cohesion and consensus was reached for all questions asked after discussion, deliberation and clarification. The first author was able to facilitate the group adequately due to her own seniority within the group (with the presence of the co-authors) and her familiarity with public health occupational therapy issues on a provincial and national level.

Overall there was consensus with most statements extracted from the documentation audit from both the survey and the nominal group. Additional statements were added and existing statements were amended. The equipment lists were amended significantly to align to the proposed packages of care. Triangulating data from three phases of the study validated findings and provided support and credibility for the final proposals made. Results were not changed significantly from one phase to the other indicating a general consensus with the information being proposed, however there were some additions, refinement of statements, and simplication of statements. An updated and refined essential

equipment list was finalised taking into account a defined package of OT services for each level. This is the first widely consulted and updated essential equipment list for acute care in South Africa.

CONCLUSION

Eligible therapists within the public service of KZN, proposed a package of acute care for district, regional and tertiary services for occupational therapy and the essential equipment and assessment list needed to perform therapy, by means of a survey that was based on a documentation audit of relevant national documents and reduced through a nominal group technique. Relevant information from the documentation audit, results from the survey questionnaire and the expertise of an expert panel in a nominal group was used to finalise the package of occupational therapy for acute care in the province and a proposal for an essential equipment list. By triangulating data from a documentation audit, the survey questionnaire and nominal group, information was refined, consulted upon by a wide group of therapists and analysed by an expert group to provide the descriptions of acute care in occupational therapy and the essential equipment that occupational therapists would need to perform optimally in their places of work.

The implications of this critical information in acute care can assist the profession and policy makers to develop relevant job descriptions, validate the service at different levels, align it to the described clinical level of care and form a baseline for auditing structures like the national core standards. Finally it will serve as a foundation to motivate for essential resources needed in occupational therapy.

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CHAPTER FOUR

SYNTHESIS

4.1 SYNTHESIS

Occupational therapy is a profession that is well positioned to improve the functional outcomes of clients in a hospital setting and subsequently improve functional status at discharge in acute care (Brambhatt, 2010). Appropriate, early assessment and intervention in occupational therapy is imperative in ensuring optimal functional outcomes (Trombley & Radomski, Pg. 45, 2008). Evaluation of an essential list of assessments and equipment to deliver an acute package of care would guide the profession in ensuring that quality services are offered at all levels of acute care.

The public health system in SA has called for accountable, measurable and cost effective services in a bid to improve the quality of care and ensure equity of services for all it serves (NDOH, 2007). In so doing, national audits, minimum standards, and motivated budgets are being rolled out for all health services (NCS, 2011; NDOH, 2015). Occupational therapy, as with all other clinical services must ensure that its services are current, relevant and aligned to national health policies

in order to validate its role and ensure that appropriate resources are allocated to the services. This is supported by the national health document, Framework for Disability and Rehabilitation (NDOH, 2015), where the need to develop norms and standards for human resources, infrastructure and equipment is supported and outlined as priority goals to achieve.

Whilst norms in KZN exist for human resources and there is generic guidelines on facilities, there are no guidelines for acute care or recommended equipment or assessments nationally or provincially. This has set back the profession in national quality audits like the national core standards where an inappropriate list was recommended and has hindered the ability for occupational therapy staff to motivate and acquire equipment for hospital departments (KZN National Report, 2014, 2015).

This research study aimed to develop a consulted package of care for acute services at a district, regional and tertiary level of care in public health and an essential list of assessments and therapeutic equipment that would be needed to perform effective and efficient OT services. In order to strengthen the research, the researcher undertook to triangulate three sets of data in order to improve the credibility and validity of the study. An explorative sequential mixed method design ensured that a qualitative documentation audit led to the development and execution of a survey for relevant therapists in KZN, and the results of this was then utilised to assist an expert group of occupational therapists to develop consensus utilising the nominal group technique, on a package of acute care and the assessments and therapeutic equipment it would need to ensure effective

services at a district, regional and tertiary level. By utilising both qualitative and quantitative methods, the researcher ensured a wider and comprehensive understanding of the problem statement. Methodological triangulation aims at cross validation and convergence of findings which would ultimately strengthen the reliability of the findings (Yeasmin and Khan, 2012).

The researcher undertook to write two manuscripts to describe in detail the methodology and findings of this research. The first manuscript describes the documentation audit. A documentation audit was conducted using thematic analysis to reduce the data, thus ensuring that all relevant information about occupational therapy in the South African context in public health was extracted to create a foundation from which a package of care for acute services and relevant therapeutic equipment and assessments could be formulated for the KZN province. This valuable phase of the research allowed the researcher to search through a large array of documents and extract relevant material for occupational therapy which would otherwise not be available by a general overview of documents. This information was categorised according to district, regional and tertiary general care and an equipment list was also amalgamated by proposals from various documents. This information formed the foundation for a survey that was conducted on therapists in KZN province.

The second manuscript described the survey process as well as final consensus from an expert group of therapists utilising the nominal group technique. The survey was conducted with all therapists in the KZN province who worked in acute care. The findings of this phase allowed for degrees of consensus by use of a likert scale, towards the development of a proposed package of acute care at different

levels and allowed therapists to generate new ideas or proposals. Therapists were also able to evaluate the equipment list and decide if the generated list of equipment was essential, " nice to have" or not needed at all at each level of care. This analysis gave rise to an equipment list for each level of care indicating which equipment was essential, which would be nice to have and which items were not essential at all. Once again therapists were allowed to also generate ideas of their own and add to the given list. This information proved to be invaluable to the senior expert group of therapists from the KZN province that were able to consider all new ideas, proposals and degrees of consensus from their junior colleagues before refining and finalising a package of care or the essential equipment and assessments that OTs needed. The nominal group technique was employed to ensure that all therapists contributed equally to the process of drawing consensus. It also created an opportunity to discuss ideas, seek clarity and evaluate the findings of the survey. The focus group was an intensive process that sought to evaluate, refine, and finalise a package of acute care for occupational therapy in KZN and the essential equipment and assessments that would be needed. A threshold of 70% was set as a minimum vote for consensus to be reached on any statement or equipment. The group participated with robust discussions and debate as this topic was relevant and affected all group members to some extent. Satisfaction with results from consensus of the focus group indicated that the results of this research could be acceptable to the larger population of OTs and will reflect the opinions of all therapists that are working in public acute hospitals in KZN.

4.2 SIGNIFICANCE OF THE STUDY/ IMPLICATIONS

Developing guidelines for acute care in occupational therapy at different levels of care in KZN and proposing the essential equipment and assessments that may be needed satisfies many goals for occupational therapists and their managers in public health service.

Most importantly it serves as a guideline to the developing therapist and aligns itself to government health policies, supporting clinical services that are offered at each level of care. This in itself allows the document to be utilised as a measure from which OT services can be audited. It also satisfies goals from the national health document the framework strategy for disability and rehabilitation which asks for norms for equipment and could be utilised by KZN health as a supporting document. This research could possibly be utilised to enrich the norms and standards document of KZN, create guidelines for therapists against which they can motivate for resources and be utilised by national health to assist them in improving on their audit tool (NCS) which is currently under review for an equipment list. Lastly it will outline the clinical services that occupational therapy does offer, thus validating the profession and showing its worth and value in patients functional outcomes especially to policy and decision makers. Perhaps it is research that can be used as a foundation to explore at a wider range with other provinces and professional groups to create national consensus on acute care and equipment needed.

However the researcher does caution that health services are dynamic and continually striving to improve its services and therefore the findings of this

research is valid only, for the current prescribed clinical services that are offered on a national health level. Whilst this package of acute care is aligned and relevant to the national health policies currently, there might be quality reviews and changes in national health strategic planning. The researcher therefore suggests that this package of acute care and its essential therapeutic list is reviewed and aligned to: i) any significant quality improvements within the department of national health , ii) any new assessment and treatment trends within occupational therapy, iii) the development and or addition of new services to any level of care and iv) the update of therapeutic equipment that is relevant to the package of care and the scope of occupational therapy.

4.3 LIMITATIONS OF THE STUDY

This study was limited to the province of KZN in acute care only. In order for this to be a widely consulted package of care, it can be extended to all provinces, the professional body of occupational therapy, academics and other stakeholders for input and recommendations. It must also be noted that only the South African context of health and occupational therapy was considered. Benchmarking with norms and standards of other countries could also enrich the findings of the research. Finally, whilst the focus of this research was on acute care, public health also provides occupational therapy services for chronic care and specialised facilities eg. TB, mental health, etc. For occupational therapy to be validated at all levels of care , the role should be explored at all types of public health facilities and at primary health care to ensure effective resource acquisition.

4.4 CONCLUSION

Validating occupational therapy in acute care and outlining its role and scope at all levels of care and necessary equipment needed, will empower therapists to consider all aspects of care, motivate for and prioritise the necessary equipment they may need and provide a uniform provision of care in Kwa Zulu Natal. It also provides a foundation for other therapists to perhaps use this as a benchmarking tool to develop guidelines at various other levels of care eg. mental health facilities.

4.5 RECOMMENDATIONS

4.5.1 It is recommended that a document on the proposed package of care and essential equipment needed is prepared for presentation to the KZN Health department in 2017, and KZN OT Forum for consideration in respect of adopting guidelines and utilising the list to ensure that all acute hospitals in KZN are able to motivate and procure the essential equipment needed in line with the Framework Strategy for Disability and Rehabilitation (2015)

4.5.2. The research findings should also be available to the NDOH OT forum for benchmarking in all provinces in view of developing policies/ guidelines for the DOH when national consensus has been reached.

4.5.3. It is also recommended that research is done to develop assessment, treatment and therapeutic equipment guidelines for other public health services namely primary health care, specialised services eg. Mental health and community care facilities.

4.5.4. Finally it is recommended that the proposals in this research should be reviewed and aligned with any changes in clinical care offered at various levels of acute care and that there are reviews on the equipment list by the KZN OT forum, so that the document remains relevant and current to the clinical services that occupational therapy supports.

4.6 FINAL CONCLUSIONS

It must also be noted that health care is a dynamic living process designed to change with the burden of disease, the needs of the population that it serves and new trends in the medical and rehabilitation fields therefore this proposal is considered to be a living document that needs to be reviewed in line with the changing needs of the health care system and aligned to changes in policy, clinical care, and innovative equipment.

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Annexure 1 Ethical Approval UKZN

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

25 August 2016

Ms A Chetty (8934422)
Discipline of Occupational Therapy
School of Health Sciences
chettyangela@yahoo.co.za

Protocol: A proposal for an essential occupational therapy assessment and therapeutic equipment list for acute care in the public sector of KwaZulu-Natal.
Degree: M Occupational Therapy
BREC reference number: BE201/16

EXPEDITED APPLICATION

A sub-committee of the Biomedical Research Ethics Committee has considered and noted your application received on 04 March 2016.

The study was provisionally approved pending appropriate responses to queries raised. Your response dated 08 August 2016 to queries raised on 05 July 2016 have been noted by a sub-committee of the Biomedical Research Ethics Committee. The conditions have now been met and the study is given full ethics approval and may begin as from 25 August 2016.

This approval is valid for one year from **25 August 2016.** To ensure uninterrupted approval of this study beyond the approval expiry date, an application for recertification must be submitted to BREC on the appropriate BREC form 2-3 months before the expiry date.

Any amendments to this study, unless urgently required to ensure safety of participants, must be approved by BREC prior to implementation.

Your acceptance of this approval denotes your compliance with South African National Research Ethics Guidelines (2015), South African National Good Clinical Practice Guidelines (2006) (if applicable) and with UKZN BREC ethics requirements as contained in the UKZN BREC Terms of Reference and Standard Operating Procedures, all available at http://research.ukzn.ac.za/Research-Ethics/Biomedical-Research-Ethics.aspx.

BREC is registered with the South African National Health Research Ethics Council (REC-290408-009). BREC has US Office for Human Research Protections (OHRP) Federal-wide Assurance (FWA 678).

The sub-committee's decision will be **RATIFIED** by a full Committee at its next meeting taking place on **13 September 2016.**

We wish you well with this study. We would appreciate receiving copies of all publications arising out of this study.

Yours sincerely

[redacted]

Chair: Biomedical Research Ethics Committee

cc supervisor: Naidoopg@ukzn.ac.za postgraduate office: nenep1@ukzn.ac.za

Annexure 2 DOH Gatekeepers letter

health
Department:
Health
PROVINCE OF KWAZULU-NATAL

330 Langalibalele street,
Private Bag X9051 PMB, 3200
Tel: 033 395 2805/3189/3123 Fax: 033 394 3782
Email: hrkm@kznhealth.gov.za
www.kznhealth.gov.za

DIRECTORATE:
Health Research & Knowledge Management (HKRM)

Reference: **HRKM149/16**
KZ_2016RP11_257

30 May 2016

Dear Mrs A Chetty
(University of KwaZulu-Natal)

Subject: Approval of a Research Proposal

1. The research proposal titled '**A PROPOSAL FOR AN ESSENTIAL OCCUPATIONAL THERAPY ASSESSMENT AND THERAPEUTIC EQUIPMENT LIST FOR ACUTE CARE IN THE PUBLIC SECTOR OF KWAZULU-NATAL'** was reviewed by the KwaZulu-Natal Department of Health (KZN-DoH).

   The proposal is hereby **approved** for research to be undertaken at KZN-DOH districts.

2. You are requested to take note of the following:
   a. Obtain letters of support from each district and make the necessary arrangement with the identified facility before commencing with your research project.
   b. Provide an interim progress report and final report (electronic and hard copies) when your research is complete.

3. Your final report must be posted to **HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200** and e-mail an electronic copy to hrkm@kznhealth.gov.za

For any additional information please contact Ms G Khumalo on 033-395 3189.

Yours Sincerely

[redacted]

Dr E Lutge
Chairperson, Health Research Committee
Date: 31/05/16

Fighting Disease, Fighting Poverty, Giving Hope

Annexure 3 Information and Consent Form (Pilot Study)

An essential assessment and therapeutic equipment list for acute care in the public sector of Kwa Zulu Natal

Dear Participant

Thank you for agreeing to assist in the piloting of the questionnaire.

The aim of this research project is to explore the different levels of care in occupational therapy in the public sector and compile an essential list of assessment and therapeutic equipment for occupational therapy. It is envisioned that it would assist therapists in public service with planning and prioritizing clinical services and motivate for the necessary formal assessments and equipment needed to provide good services here in KZN. It might also assist other provinces as a good resource and reference document.

This pilot will assist the researcher in ensuring that the survey questionnaire is well related to the topic, easy to read, easy to understand and easy to complete.

Please sign the consent form, should you be willing to participate in the pilot study.

Your privacy and anonymity will be ensured in evaluating the effectiveness of this tool.

Many thanks

Angela Chetty
Student number: 8934422
Tel: 033 8973781
Cell: 0837893200
chettyangela@yahoo.
co.za

Supervisors

XXX XXX

Ms Phindile Nene | Postgraduate Administration | Tel: 031 2608280
E-mail: nenep1@ukzn.ac.za

Part II: Certificate of Consent

I have read the information form and fully understand the contents. I have had the opportunity to ask questions about it and any questions I have asked, have been answered to my satisfaction.

I consent voluntarily to be a participant in the pilot study of the survey.

☐ **Yes**

☐ **No**

Participant's name: _____

Signature of Participant: _____

Date: _____

Annexure 4 Information and Consent Form (Survey)

Information Document and Certificate of Consent for the survey

Study Title: A Proposal for an essential assessment and therapeutic equipment list for acute care in the public sector of Kwa Zulu Natal.

Introduction: My name is Angela Chetty and I am undertaking this research in fulfilment of my Master's Degree in Occupational therapy. My supervisor is Mrs Pragashnie Govender and Prof Kitty Uys from UKZN.

Purpose of study: The aim of this research project is to explore the different levels of care in occupational therapy in the public sector and compile an essential list of assessment and therapeutic equipment for occupational therapy. It is envisioned that it would assist therapists in public service with planning and prioritizing clinical services and motivate for the necessary formal assessments and equipment needed to provide good services here in KZN. It might also assist other provinces as a good resource and reference document.

Type of study: The research will include 3 sequential phases. Phase one will be a documentation audit on levels of care in occupational therapy and essential assessment and equipment, this will build on phase two which will be a widely consulted survey with all occupational therapists in the KwaZulu Natal Province who worked in acute care, to assist with their input into the topic and will conclude with a focus group of senior occupational therapists.

Duration of study: The study is expected to be complete within one year.

The study will involve the researcher conducting a documentation audit on relevant documents, approximately 45-50 participants for the survey which will take approximately 20 minutes of time per survey and approximately 10-15 participants for the focus group which will take approximately 5-6hrs in a workshop format.

Procedure: A survey will be sent out to as many occupational therapists who meet the inclusion requirements. Participation in the survey will assist the researcher to gain good knowledge and insight into therapist's views and recommendations. The survey will be sent out by email, mail or handed out to all potential therapists and they will be invited to participate in the research study.

.

The Survey Questionnaire is based on a documentation analysis conducted in Phase One of the study, of all public documents on levels of care, package of occupational therapy services and recommendations for occupational therapy equipment. The proposed package of occupational therapy services and equipment are general statements that you can draw consensus with or negate by your answers.

Further you are required to select or propose assessments and therapeutic equipment that will be needed to provide an essential occupational therapy service.

Explanations and levels of clinical care outlined at the introduction of district, regional and tertiary level of care are not flexible as they are extracted from National health policy that expects all provinces to comply with. The survey will have various sections that will have instructions on how to complete it. A deadline date will be given for all information to reach the researcher and it can be either sent back by email, post or can be picked up by the researcher. The researcher will utilise this information in a workshop type focus group of senior therapists, who will finally ratify occupational therapy services at all levels of acute care and the essential assessment and equipment needed to deliver a service.

Participation: Please read the above information carefully before you decide to partake in this research study. You are welcome to contact me or my supervisors by the contact details provided below, if you would like any further information.

Withdrawal: You will be allowed to withdraw from the survey at any point in time should you feel uncomfortable with answering/sharing your personal opinion. I will discard all information obtained from you even if I have collected your survey form.

Confidentiality: I assure you that I will keep the information collected, confidential throughout the study. Your identity will be kept private at all times and will not be published.

Benefits: There will be no direct benefit to you immediately, but this research may assist you in your practice as an occupational therapist should you continue to serve the public sector.

Your participation will be much appreciated.

Yours sincerely

Angela Chetty
Tel: 033 8973781
0837893200
Email: chettyangela@yahoo.co.za

Ms Phindile Nene
Postgraduate Administration
Tel: 031 2608280 | E-mail: nenep1@ukzn.ac.za

Part II: Certificate of Consent

I have read the information form and fully understand the contents. I have had the opportunity to ask questions about it and any questions I have asked have been answered to my satisfaction.

I consent voluntarily to be a participant in the survey.

☐ **Yes**

☐ **No**

Participant's name: _____

Signature of Participant: _____

Date: _____

Annexure 5 Consent Form for the Nominal Focus Group

A Proposal for an essential assessment and therapeutic equipment list for occupational therapy in acute care in the public sector of KwaZulu Natal

I, _____ hereby confirm that I that I have been informed by the researcher on how the focus group will be conducted and the risks involved and that any questions or concerns I had, have been answered. I understand that the focus group will be audio recorded and that these recordings can be replayed by the researcher at any stage for data collection purposes. I understand that my identity will be withheld in any recordings. I know that all the information given to the researchers as well as audio recordings will be kept confidential and secure. I am fully aware that the findings of the study will be put into a research report that can possibly be published at a later stage. I understand that the researcher may give the information to another researcher to validate the interpretations.

I'm aware that should I have any further concerns or questions that I can raise them directly with the researcher in person, telephonically or via email on the following details:

Angela Chetty
Tel: 033 8973781 0837893200
chettyangela@yahoo.co.za

I am also aware that I can contact the supervisors at any stage in the research as follows: XXX

I'm fully aware of my rights and the responsibilities of the researcher. I have a clear understanding of the study and I understand that my participation is voluntary and that I can withdraw from the study at any moment.

I consent to participate in the study ☐

I consent to discussions being photographed ☐

Participant_____ signature: _____Date: _____

Witness_____ signature: _____ Date:

Annexure 6 Cover letter/ Information form for the Focus Group

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Information Document for the Focus Group

Study Title: A Proposal for an essential assessment and therapeutic equipment list for occupational therapy in acute care for the public sector of KwaZulu Natal

I**ntroduction:** My name is Angela Chetty and I am undertaking this research in fulfilment of my Master's Degree in Occupational therapy. My supervisor is Mrs Pragashnie Govender and Prof Kitty Uys from UKZN.

Purpose of study: The aim of this research project is to explore the different levels of acute care in occupational therapy in the public sector and compile an essential list of assessment and therapeutic equipment for occupational therapy. It is envisioned that it would assist therapists in public service with planning and prioritizing clinical services and motivate for the necessary formal assessments and equipment needed to provide good services here in KZN. It might also assist other provinces as a good resource and act as a reference document.

Type of study: The research will include 3 sequential phases. Phase one will be a documentation audit on levels of care in occupational therapy and essential assessment and equipment, this will build on phase two which will be a widely consulted survey with all occupational therapists in the KwaZulu Natal Province who worked in acute care, to assist with their input into the topic and will conclude with a focus group of senior occupational therapists.

Duration of study: The study is expected to be complete within one year.

The study will involve the researcher conducting a documentation audit on relevant documents, conducting a survey of approximately 45-50 occupational therapists which will take approximately 20 minutes of time per survey and concluding with a focus group of approximately 10-12 occupational therapy participants which will take approximately 5-6hrs in a workshop format.

Phase 3: In this phase, you will be participating in the focus group. Only the group convenor, her assistant and the participants will be present. Please note that the entire process will be recorded by photography, but nobody will be identified by name. The photographs will be secured by myself and the information recorded will

be confidential. No one will have access to the photography except for the researcher, her assistants and the supervisors if needed.

Procedure: The Group convenor will welcome and introduce the group as well as the research topic and the questions. The group will be allowed to ask as many questions around the topic to ensure that all queries are satisfied. All participants will be required to follow structured steps in the workshop as outlined in the Nominal Group Technique.

- The topic will be explained in detail and the research questions.
- The group will be allowed to generate their own ideas in silence around the research questions.
- The next step would allow for the group to share ideas. Consensus thresholds and ground rules will be set. The results of the survey in phase two will also be shared at this point.
- The group will then be allowed discussion and clarification time. The final step will be voting and ranking the items.

There will be two main questions with three sub questions each.

In total 6 questions will be asked and all participants will be requested to go through the same steps outlined above for each of the questions. It is estimated that approximately one hour will be allocated to each of the questions being asked. There is also the possibility that the process might run quicker once the initial concepts are introduced and understood clearly in the first question, then the similar processes for the other sub questions may proceed quicker. Breaks will be scheduled in-between as we proceed through the questions.

All information will be recorded systematically, and all ideas will be ranked according to its acceptance or rejection. Each item for the package of care will be given a choice of acceptance or rejection with discussion around choices.

Each item proposed for the list of equipment will be ranked according to whether it is needed, or not needed. Therapists will be allowed to look at the results of the survey and then either make final consensus on an essential package of care.

Once the process is complete:

- Final consensus for the package of OT services at District, Regional and Tertiary level will be attained and a list of OT services will be drawn up.

- Final consensus on the essential assessment and therapeutic equipment list needed at District, Regional and Tertiary level will be compiled and be drawn up.

Participation: Please read the above information carefully before you decide to partake in this research study. You are welcome to contact me or my supervisors by the contact details provided below, if you would like any further information.

Withdrawal: You will be allowed to withdraw from the focus group at any point in time should you feel uncomfortable with answering/sharing your personal opinion. I will discard all information obtained from your contribution should you request it.

Confidentiality: I assure you that I will keep the information collected, confidential throughout the study. Your identity will be kept private at all times and will not be published.

Benefits: The study will benefit the province as it may be utilised to inform provincial documents on occupational therapy. It may also benefit your practice by providing a guide for level of services and equipment you may need.

Reimbursements: The researcher will reimburse any participant that requests for petrol costs that they may incur and provide refreshments during the workshop focus group. She will also attempt to apply for continuous professional development points for the workshop.

Your participation will be much appreciated

Angela Chetty

Tel: 033 8973781 Cell:

0837893200

chettyangela@yahoo.co.z

a

Ms Phindile Nene
Postgraduate Administration Tel:
031 2608280
E-mail: nenep1@ukzn.ac.za

Annexure 7 Pilot Survey Evaluation Forum

PLEASE COMPLETE THIS EVALUATION FORM BY **MARKING AN X** IN THE BOX OF YOUR CHOICE AND MAKE NECESSARY CHANGES ON THE SURVEY FORM, IF NEEDED.

1. Was the document easy to read, and formatted well enough to ensure a good flow of information?	**YES**	**NO**
If no, please elaborate:		
2. Were the questions clear and understandable in section A ? If no, kindly indicate which questions were ambiguous and give suggestions for refinement. (this can be done on questionnaire as well)	**YES**	**NO**
Question Number: _____		
Question Number: _____		
3. Were the questions clear and understandable in section B ? If no, kindly indicate which questions were ambiguous and give suggestions for refinement. (this can be done on questionnaire as well)	**YES**	**NO**
Question Number: _____		
Question Number: _____		
4. Were the questions clear and understandable in section C? If no, kindly indicate which questions were ambiguous and give suggestions for refinement. (this can be done on questionnaire as well)	**YES**	**NO**
Question Number: _____		
Question Number: _____		
5. The aim of the survey is to determine a package of care at District, Regional and Tertiary acute level of care for occupational therapy and the essential equipment that would be needed to provide for this care. The survey is aimed at therapists who have two or more years of service in the Department of Health and who have worked in a district, regional or tertiary acute hospital.	**YES**	**NO**
Were the fields of enquiry conclusive in Section A, B, and C ?		
If no, can you suggest fields of enquiry to be included?		

Thank You for taking the time to participate in this pilot study.

Annexure 8 Finalised Survey following Feedback from Pilot Study

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OCCUPATIONAL THERAPY PACKAGE OF CARE FOR DISTRICT, REGIONAL AND TERTIARY LEVEL ACUTE HOSPITALS AND THE THERAPEUTIC EQUIPMENT NEEDED

SECTION A: IDENTIFYING DETAILS						
Fill in details and where necessary mark with an x						
AGE		**GENDER**	M	F	**YEAR QUALIFIED AS AN OCCUPATIONAL THERAPIST**	
DISTRICT AREA OF HOSPITAL:						
NAME OF HOSPITAL:						
CLASSIFICATION OF HOSPITAL: **DISTRICT**		**R**	**EGIONAL**		**TERTIARY**	
YEARS OF EXPERIENCE WITHIN THE DEPARTMENT OF HEALTH:						

SECTION B: PACKAGE OF OCCUPATIONAL THERAPY FOR ACUTE HOSPITALS

The aim of this section is to propose an ideal package of occupational therapy services for different levels of acute hospitals in government sector. Three levels of acute Occupational therapy are proposed: District, Regional and Tertiary in Section B according to the National Health classification of hospital services that we work within.
Specialised and Mental Health Facilities are excluded from this survey.
Please read the statements proposed below and mark an X, according to what you think, the ideal package of Occupational Therapy services for that level of care should be. You are required to fill in all levels of care regardless of which type of hospital you currently work in, and then proceed to Section C.
Please note that some statements are similar or may be identical in each hospital package proposed and, there are also additional statements proposed as the hospital level of care increases in complexity.
You can include your own statements to the bottom of each description or make comments as needed.

1. DISTRICT HOSPITAL PACKAGE OF CARE FOR OCCUPATIONAL THERAPY

The statements below are formulated, from an audit of documents (policies, proposals, etc) related to the South African Health System and specifically rehabilitation.

According to the National Health policy**, a District Hospital** must provide the following clinical services: Paediatric health services, Obstetrics and gynaecology, Internal medicine, General surgery & a family physician. These clinical services are supported by rehabilitation, radiology, pharmacy, etc. This includes maternal, child, adult, adolescent and geriatric health

Please read through all statements formulated for an ideal package of care in Occupational therapy for a district hospital and indicate whether you agree or disagree by marking the block with an X. If you disagree or strongly disagree, kindly provide a reason. You can add any additional contributions at the end of the description.

STATEMENT FOR DISTRICT PACKAGE OF OT CARE	Strongly Agree	Agree	Neutral/Unsure	Disagree	Strongly Disagree	Comment
1. Provide acute, sub-acute and chronic occupational therapy for inpatient and outpatients.	1	2	3	4	5	
2. Provide outreach services to clinics and to the surrounding community.	1	2	3	4	5	
3. O.T. services may be preventative, promotive, curative, rehabilitative or palliative in nature.	1	2	3	4	5	
4. Conditions may include but are not limited to orthopaedic, neurological, paediatric, trauma, medical and surgical conditions.	1	2	3	4	5	
5. Ensure the assessment and treatment all patients referred or screened for optimal function.	1	2	3	4	5	
6. Ensure skills development and ADL (Activities of Daily Living) retraining.	1	2	3	4	5	
7. Assessment, manufacture, supply, repair, and maintain appropriate assistive devices e.g. Wheelchairs, adapted ADL utensils, seating, brace, etc. for relevant patients.	1	2	3	4	5	
8. Ensure environmental adaptations for disability and impairment in home, work, community, etc.	1	2	3	4	5	

9. Provide patient and care giver education, counselling and training.	1	2	3	4	5	

10. Provide group work and home programmes to improve and maintain function and independence, where necessary.						
11. Arrange support groups where necessary	1	2	3	4	5	
12. Assess and compile reports for medico legal purposes (grants, insurances, WCA, RAF, etc.)	1	2	3	4	5	
13. Network with MDT, community and other stakeholders.	1	2	3	4	5	
14. Teach and train students, staff and other stakeholders.	1	2	3	4	5	
15. Conduct disability awareness programmes in hospital and community	1	2	3	4	5	
Other suggestions:						

2. REGIONAL PACKAGE OF CARE FOR OCCUPATIONAL THERAPY

The statements below are formulated, from an audit of documents (policies, proposals, etc) related to the South African Health System and specifically rehabilitation.

According to National Health Policy **a Regional Hospital** must provide health services in the fields of internal medicine (cardiovascular, rheumatology, diabetes, gastroenterology, neurology, haematology, dermatology, infectious diseases, respiratory, oncology); paediatrics, obstetrics, gynaecology and general surgery.

They must further offer at least one of the following specialities: orthopaedic surgery, psychiatry, anaesthetics, diagnostic radiology, trauma and emergency services, ophthalmology, and ENT.

They receive referrals from several district hospitals.

Please read through all statements made for the proposed package of care in Occupational therapy for a regional hospital and indicate whether you agree or disagree by marking the block with an X. If you disagree, or strongly disagree please provide a reason. **. You can add any additional contributions at the end of the description.**

STATEMENT FOR REGIONAL PACKAGE OF OT CARE	Strongly Agree	Agree	Neutral/Unsure	Disagree	Strongly Disagree	Comment
1. Provision of acute, sub-acute and chronic occupational therapy services to inpatient and outpatients.	1	2	3	4	5	
2. Provision of outreach services to accountable district hospitals and clinics.	1	2	3	4	5	

3. OT services may be preventative, promotive, curative, rehabilitative or palliative in nature.	**1**	**2**	**3**	**4**	**5**	
4. Conditions may include but are not limited to orthopaedic, neurological, paediatric, trauma, medical and surgical conditions. They may further include specialities in any of the above mentioned fields of medicine.	**1**	**2**	**3**	**4**	**5**	
5. Ensure the assessment and treatment of all patients referred or screened for optimal function.	**1**	**2**	**3**	**4**	**5**	
6. Ensure skills development and ADL (Activities of Daily Living) retraining	**1**	**2**	**3**	**4**	**5**	
7. Assess, manufacture, supply, repair, and maintain appropriate assistive devices e.g. Wheelchairs, adapted ADL utensils, seating, bracing, etc	**1**	**2**	**3**	**4**	**5**	
8. Ensure environmental adaptations for disability and impairment in home, work,	**1**	**2**	**3**	**4**	**5**	

community, etc						
9. Provide group work and home programmes to improve and maintain function and independence	**1**	**2**	**3**	**4**	**5**	
10. Provide patient and care giver educational, training and counselling	**1**	**2**	**3**	**4**	**5**	

11. Provide/ organise support groups where necessary	**1**	**2**	**3**	**4**	**5**	
12. Provision of specialist areas of care: spinal unit, stroke and acquired brain injury, hand surgery unit, burns unit, paediatric groups , medical and surgical unit, orthopaedics, cardiology, work assessment units, oncology, etc.	**1**	**2**	**3**	**4**	**5**	
13. Provide dedicated vocational rehabilitation services	**1**	**2**	**3**	**4**	**5**	
14. Assess and compile reports for medico legal purposes (grants, insurances, WCA, RAF, etc.)	**1**	**2**	**3**	**4**	**5**	
15. Network and outreach with district hospital therapists, MDT and other stakeholders for effective referrals, & continued patient care	**1**	**2**	**3**	**4**	**5**	
16. Conduct disability awareness programmes	**1**	**2**	**3**	**4**	**5**	
17. Teach and train students, staff and other stakeholders	**1**	**2**	**3**	**4**	**5**	
Other suggestions:						

3. TERTIARY PACKAGE OF CARE FOR OCCUPATIONAL THERAPY

The statements below are formulated, from an audit of documents (policies, proposals, etc) related to the South African Health System and specifically rehabilitation.

According to National Health policies a tertiary hospital is to provide specialities and at least 50% of sub specialities.

The range of services includes but is not limited to the following:

Neurology and neurosurgery, Plastics and reconstruction, Cardiothoracic and cardiology ,Paediatric and subspecialties, Maxillofacial, Oesophageal, Ophthalmology,

ENT, urology, endocrinology, rheumatology, haematology, respiratory medicine, gastro nephrology, geriatrics, orthopaedics, oncology, mental health, obstetrics and gynaecology, infectious diseases, medical and surgical subspecialties not specified above. These services are supported by anaesthetics, high care, ICU, radiology, diagnostic services and rehabilitation.

They receive referrals from regional and some district hospitals in their designated drainage area.

Please read through all statements made for the proposed package of care in Occupational therapy for a regional hospital and indicate whether you agree or disagree by marking the block with an X. If you disagree, or strongly disagree please provide a reason. **You can add any additional contributions at the end of the description.**

STATEMENT FOR TERTIARY PACKAGE OF OT CARE	Strongly Agree	Agree	Neutral/Unsure	Disagree	Strongly Disagree	Comment
1. Provision of acute, sub-acute and chronic occupational therapy to inpatient, and outpatients.	1	2	3	4	5	
2. Provision of outreach services (teaching, training, clinical skills) to accountable regional hospitals.	1	2	3	4	5	
3. OT services may be preventative, promotive, curative, rehabilitative or palliative in nature.	1	2	3	4	5	
4. Conditions may include but are not limited to orthopaedic, neurological, paediatric, trauma, medical and surgical conditions. They may further include various specialities and sub specialities offered at this level of care.	1	2	3	4	5	
5. Ensure the assessment and treatment of all patients referred or screened for optimal function.	1	2	3	4	5	
6. Ensure skills development and ADL (Activities of Daily Living) retraining.	1	2	3	4	5	

7. Assess, manufacture, supply, repair, and maintain appropriate assistive devices e.g. Wheelchairs, adapted ADL utensils, seating, bracing, etc.	**1**	**2**	**3**	**4**	**5**	
8. Provision of specialist areas of care: spinal unit, stroke and acquired brain injury, hand surgery unit, burns and reconstruction unit, paediatric groups (neurodevelopment, autism, neonatal, etc.), medical and surgical unit, orthopaedics, cardiology, work assessment units, oncology , etc.	**1**	**2**	**3**	**4**	**5**	
9. Provide dedicated vocational rehabilitation services	**1**	**2**	**3**	**4**	**5**	
10. Ensure environmental adaptations for disability and impairment in home, work, community , etc.	**1**	**2**	**3**	**4**	**5**	
11. Provide patient and care giver training, education, and counselling.	**1**	**2**	**3**	**4**	**5**	

12. Provide group work and home programmes to improve and maintain function and independence.	**1**	**2**	**3**	**4**	**5**	
13. Provide/ organise support groups where necessary	**1**	**2**	**3**	**4**	**5**	
14. Assess and compile reports for medico legal purposes (grants, insurances, WCA, RAF, etc.)	**1**	**2**	**3**	**4**	**5**	
15. Network and outreach with regional and district hospital therapists, MDT and other stakeholders for effective referrals, continued patient care, skills development and quality services.	**1**	**2**	**3**	**4**	**5**	
16. Conduct disability awareness programmes	**1**	**2**	**3**	**4**	**5**	
17. Teach and train students, staff and other stakeholders	**1**	**2**	**3**	**4**	**5**	
18. Conduct research and skills development in various specialties.	**1**	**2**	**3**	**4**	**5**	
Other suggestions:						

SECTION C: ESSENTIAL ASSESSMENT AND THERAPEUTIC EQUIPMENT NEEDED
This section will outline a range of equipment that was identified by the documentation analysis done on SA Health and rehabilitation documents. Kindly select the level of hospital that this equipment is needed in at the top of the column and rate it according to level of need , by inserting a number between 1-3 on how essential you view this equipment to be at that level of care : **1. Essential/ Needed** **2. Nice to have but not essential** **3. Not needed at all**

EQUIPMENT	DISTRICT	REGIONAL	TERTIARY
Example: treatment plinth	3	1	1
GYMNASIUM EQUIPMENT			
Treatment Plinth			
Mobile full length mirror			
Standing frame – Adult			
Standing frame – Paediatric			
Wedges small			
Medium			
large			
Blocks small			

You may add any additional items at the end of the audit section and rate them

according to the key. The first item is an example to guide you.

NB: Each page will start with an abbreviation guide to assist you in your selection:

D= District R = Regional and T = Tertiary

Medium			
large			
Rollers small			
Medium			
large			

Therapy Balls small			
Medium			
Large			
Therapy Gym Mats			
Mobile suspension frame			
Walking frame adult and child			
EQUIPMENT	D	R	T
Tilt Table			
Balance Beam			
Equilibrium board			

Perceptual Assessment Battery for Children e.g. DTVP			
Motor Free Assessments for pure visual perception			
Hand Assessment Batteries			
Large Goniometer			
Measuring tape			
Stop Watch			
Other:			
HAND THERAPY EQUIPMENT			

Other:				Dynamometer			
				Goniometers – finger and hand			
ASSESSMENT EQUIPMENT				Measuring tape			
Neurological Assessment Batteries e.g. Rivermead, COTNAB, etc.				Metal ruler			
				Suspan large			
Work Assessment Battery e.g. WASP, Tpal, etc.				Mobile splinting pan			
Perceptual Assessment Battery for Adults				Heat Gun			

Splinting scissors (heavy duty, curved and POP scissors)				Long handled sponge			
Craft Knife				Dressing stick			
Revolving punch				Button hooks			
Rivet Gun				Tap turners			
Pliers set, bottlenose, and regular				Kettle tipper			
Assorted hand activities for all ranges of grip and grasp				Nail clipper board			

Assorted resistive hand activities			
Hand exercisers (cones, digifix, power web, etc.)			
Ice packs			
Heat packs			
Wax bath			
FEPS			
Other:			
EQUIPMENT	**D**	**R**	**T**
ASSISTIVE DEVICES			
Long handled reacher			

One hand chopping board			
Bath board			
Bath seat			
Transfer boards			
Raised toilet seats			
Adapted eating utensils			
Plate Guard			
Commode with wheels			
Wheelchairs : Adult, Child, Amputee, One arm drive, capstan wheels, etc.			
Other:			

Cognitive / Perceptual			
Range of perceptual games and activities to address all aspects treated: puzzles, colours, sizes, sequencing, etc.			
Other:			

stove			
fridge			
microwave			
Other:			
EQUIPMENT	D	R	T

				PERSONAL MANAGEMENT			
				Brush and comb			
ACTIVITIES OF DAILY LIVING				Hand mirror			
KITCHEN EQUIPMENT				Nail clipper			
Basic utensils,				Toothbrushes			
baking pans,				Iron and iron board			
a set of crockery,				Shaving set			
a set of cutlery				Hair cutting set			
storage containers				Other:			
set of pots							
Kettle							
Toaster				**SPORTS EQUIPMENT**			
electric beater				Table tennis			

Swing ball				Set of pliers of different sizes			

Various size balls: netball, volleyball, basketball, etc.			
Nets			
Dart board and darts			
Other:			
GARDEN EQUIPMENT			
Set of mini garden hand tools			
Watering can			
Spade			
Pik			
Hoe			
Rake			
Wheelbarrow			
Other:			
WOODWORK EQUIPMENT			
Set of screwdrivers			

Set of spanners			
Set of saws (hacksaw, coping, handsaw, etc.)			
Hammers			
Hand drill			
Toolbox			
Wood burning set			
Hand wood carving set			
Measuring equipment for woodwork: try square, ruler, set square, etc.			
Electric sander			
EQUIPMENT	**D**	**R**	**T**
Rubber mallet			
Hand sander			
Protective equipment for woodwork: leather apron, gloves, visor			
Other:			
PLAY TOYS FOR BABIES AND TODDLERS (0- 2 YEARS)			

Rattles			
Building blocks			
Beads			
Wooden puzzles			
Balls			
Play gym			
Other:			
PLAY TOYS FOR BOYS (2YRS – 12 YEARS)			
Transport vehicles of various sizes			
Blocks			
Puzzles			
Animals			
Other:			

Toy pots, pans, tea sets			
Jewellery sets			
Bead sets			
Other:			
WORK EQUIPMENT			
Computer and printer			
Office equipment (punch, stapler, etc.)			
Other:			
EQUIPMENT	D	R	T
CRAFT EQUIPMENT			
Knitting, crotchet, tapestry needles			
Weaving looms			
Set of leather work equipment			

				Set of painting brushes and accessories			
PLAY TOYS FOR GIRLS (2 YRS – 12 YEARS)				Other:			
Dolls of various sizes and shapes								

GENERAL				White Board			
Hydraulic table				Other:			
Stop watch								
Weights for arms and ankles of various ranges								
Push up blocks for assistive transfers								

Range of springs and suspension supports			
Blood pressure unit			
Cardiac resuscitation trolley with all legally required equipment			
Sewing Machine and accessories			
Over locker and accessories			
Sewing scissors			
Sewing accessories (tape measure, etc.)			
Radio and tape Deck			
Video recorder			
Camera			
Television			
Data Projector and screen			

Thank you for taking the time to complete this questionnaire.

Your input is appreciated and valued.

Please feel free to call me for clarification at email or numbers below.

Angela Chetty

Tel: 033 8973781/ 0837893200

Email: angela.chetty@kznhealth.gov.za/

chettyangela@yahoo.co.za

Annexure 9 Nominal Focus Group (Programme)

YOU ARE INVITED TO A FOCUS GROUP WORKSHOP ON THE

ACUTE OCCUPATIONAL THERAPY SERVICES IN THE KZN DEPARTMENT OF HEALTH AND THE ESSENTIAL EQUIPMENT REQUIRED

PURPOSE: This focus group workshop will be conducted for senior occupational therapy experts

currently working in the public sector :

1. To educate/ refresh senior therapists on the latest policies, and related documents on OT services in the public sector and the proposals for adequate equipment for the public sector.

2. To develop consensus on a package of OT services for district , regional and tertiary hospitals in KZN .

3. To develop consensus on an essential equipment list to deliver core services on each level of care .

4 CPD points have been applied for

DATE: **17 OCTOBER 2016**

VENUE: **Inkosi Albert Luthuli Hospital, Seminar Room,**

OT Department , 4th Floor

TIME: **9am – 2.30pm**

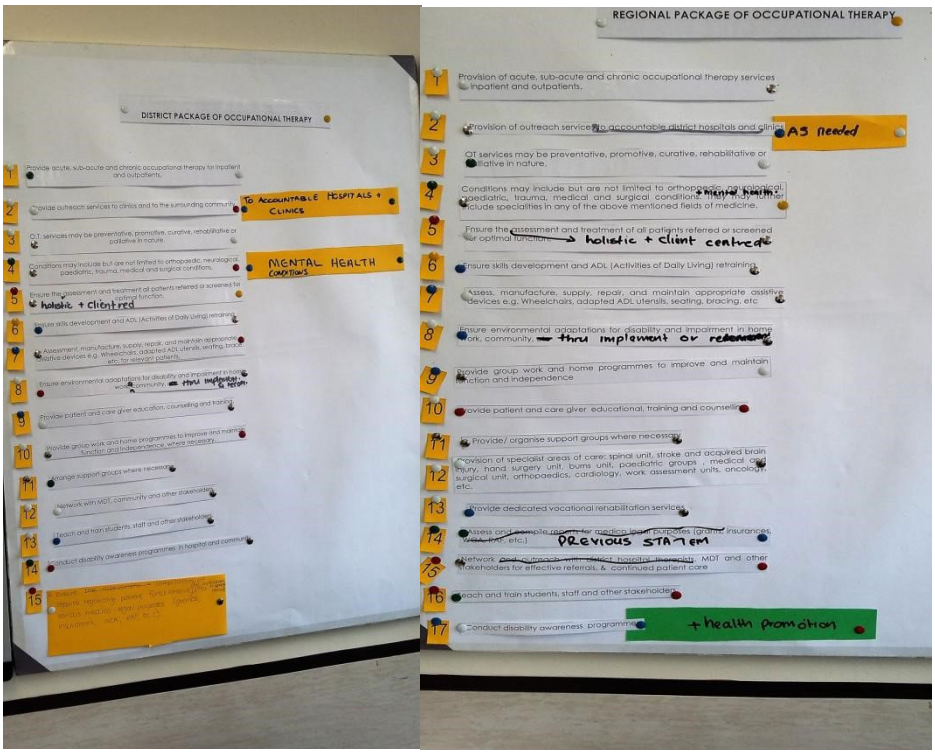
CONVENOR: **ANGELA CHETTY - OCCUPATIONAL THERAPIST**

PROGRAMME

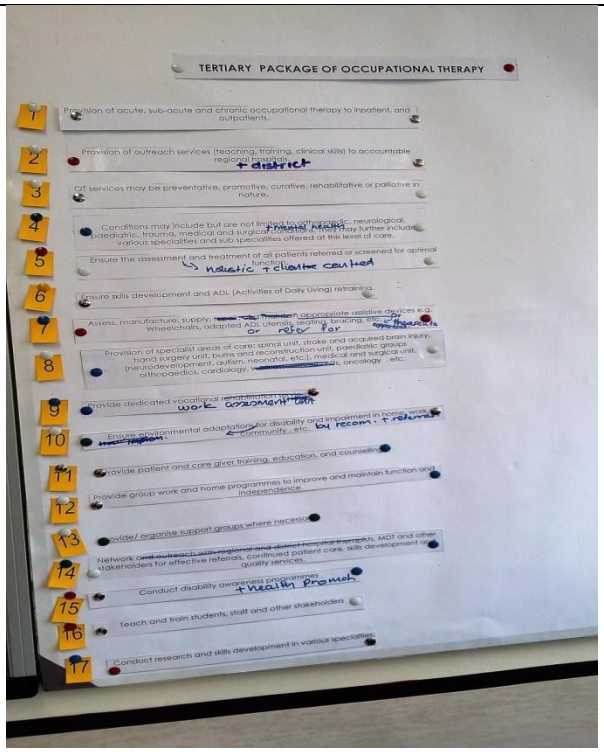
TIME	AGENDA
9am	REGISTRATION AND TEA
9. 30 am	INTRODUCTION OF PACKAGE OF CARE FOR DISTRICT , REGIONAL AND TERTIARY HOSPITALS
9. 45 am	DEVELOPING CONSENSUS ON THE PACKAGE OF CARE FOR DISTRICT, REGIONAL AND TERTIARY HOSPITALS BY MEANS OF FOCUS GROUP
11.00 am	TEA
11.30 am	FINALISING CONSENSUS ON PACKAGE OF OCCUPATIONAL THERAPY CARE FOR DISTRICT, REGIONAL AND TERTIARY HOSPITALS.
12.00	INTRODUCTION OF EQUIPMENT NEEDED FOR DISTRICT, REGIONAL AND TERTIARY HOSPITALS.
12.15	DEVELOPING CONSENSUS FOR THE ESSENTIAL EQUIPMENT NEEDED TO DELIVER A SERVICE AT DISTRICT, REGIONAL AND TERTIARY HOSPITALS
1.15	LUNCH
1.45	FINALISING EQUIPMENT LIST FOR DISTRICT, REGIONAL AND TERTIARY HOSPITALS.

Annexure 10 Focus Group showing process and consensus

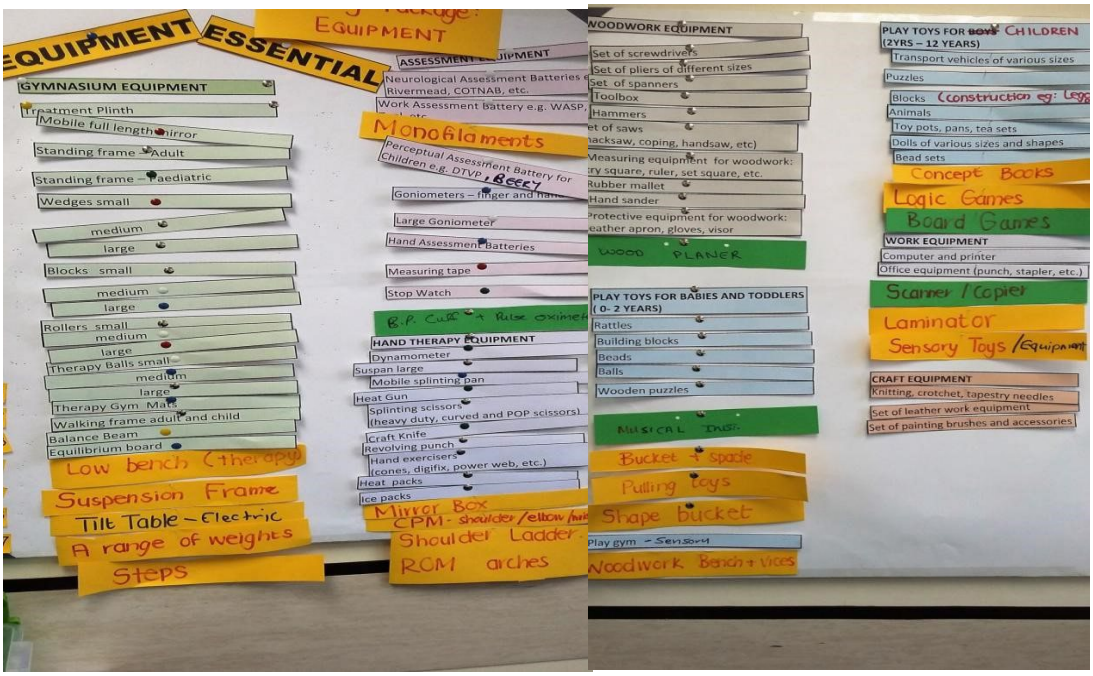
Silent generation of ideas on A3 workboard



Discussion, amendments and voting in of a district and regional package of care

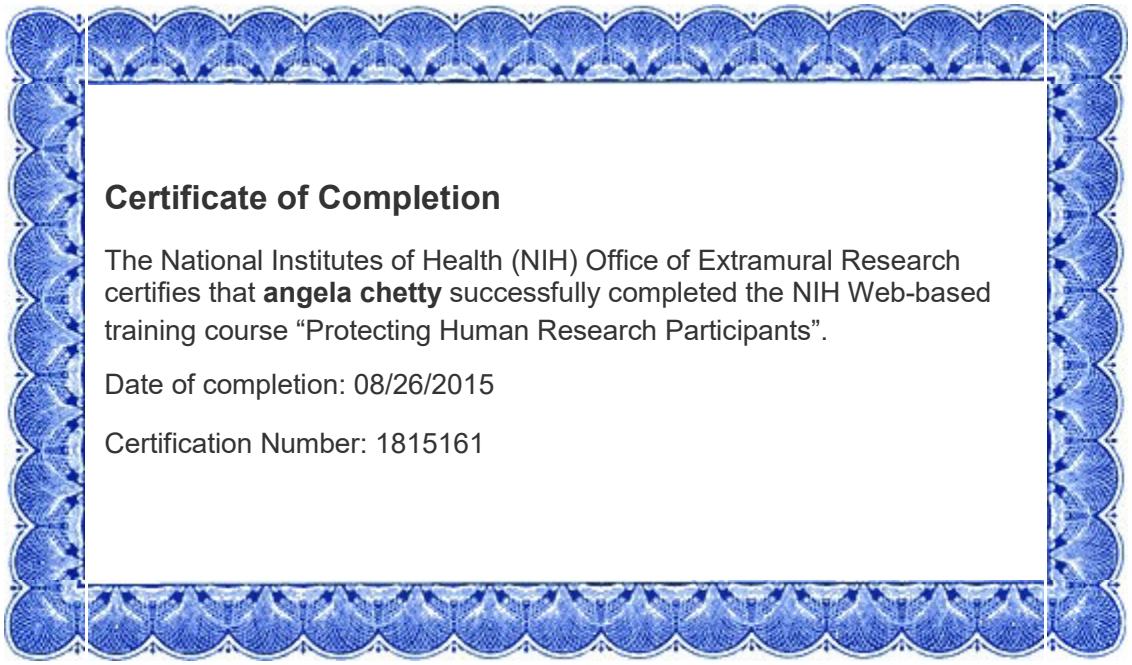


Discussion, amendment and voting in of a tertiary package of care



Proposals, discussion and voting in an essential therapeutic equipment lis

Annexure 11 NIH Certificate



Certificate of Completion

The National Institutes of Health (NIH) Office of Extramural Research certifies that **angela chetty** successfully completed the NIH Web-based training course “Protecting Human Research Participants”.

Date of completion: 08/26/2015

Certification Number: 1815161