QUALITY MANAGEMENT IN OCCUPATIONAL THERAPY

by

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DECLARATION

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I declare that QUALITY MANAGEMENT IN OCCUPATIONAL THERAPY is my own work, and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references, and that this work has not been submitted before for any other degree at any other institution.

Helen Elizabeth Robinson 28th February 2011
I would like to thank the following people for their respective contributions to this dissertation:

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ABSTRACT

Although quality management is used in occupational therapy in South Africa, no comprehensive description or standardisation of it exists. Literature in the context of this topic is scarce. As a consequence of this problem, the purpose of this study was to describe the extent of occupational therapists’ involvement in quality management. A quantitative study in the form of a survey was carried out. A convenience sample of 80 occupational therapists was surveyed, using a structured questionnaire. Results of the study indicate that most occupational therapists have some knowledge of quality frameworks. Standardisation on documentation and its auditing appears to be one of a number of problems. Another challenge is that occupational therapists may work in relative professional isolation making it problematic to implement quality management. Recommendations were made for occupational therapy practice and further research, as well as recommendations for a quality management framework for occupational therapy in South Africa.

KEY CONCEPTS

Quality management, occupational therapy, audit, minimum standards, professional development.
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<tr>
<td>CQI</td>
<td>Continuous quality improvement</td>
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<td>COHSASA</td>
<td>Council for the Accreditation of Health Services in South Africa</td>
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<tr>
<td>CPD</td>
<td>Continuing professional development</td>
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<tr>
<td>EBP</td>
<td>Evidence-based practice</td>
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<td>GP</td>
<td>General Practitioner</td>
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<td>HPCSA</td>
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<td>ICP</td>
<td>Integrated care pathway</td>
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<td>MDT</td>
<td>Multi-disciplinary team</td>
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<td>National Health Insurance</td>
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CHAPTER 1: BACKGROUND AND ORIENTATION TO THE STUDY

1.1 INTRODUCTION

Historically, quality in healthcare has been of concern for almost as long as humans have been providing health-promotive and curative activities. An early example reveals that the Romans reported on the efficiency of their military hospitals. Later in history, Florence Nightingale made systematic observations and utilised information to improve standards of care in nursing, including the use of statistics to show variations in mortality rates (Sale 2000:1); (Graham 1995:5).

McColl and Quinn (1985:570) state that increasing litigation, an emphasis on the consumer in healthcare and the need for fiscal restraint makes quality management an essential component of practice for healthcare professionals, featuring widely in health services. More recently, spiralling healthcare costs globally have highlighted the need to manage the inefficiencies in health services that drain resources. Costly and inefficient health services mean that fewer individuals are able to benefit from them (Koning, Verver, van den Heuvel, Bisgaard & Does 2006:10). Assessing the quality of care has become increasingly important to providers, regulators and purchasers of care, with an increasing focus on evidence-based medicine and cost-effectiveness (Mainz 2003:523). Increasingly, allied health professionals, such as occupational therapists (OTs) are exposed to the necessity of explaining and demonstrating the value they bring as experts and professionals. This means that the interventions that therapy professionals provide must have a strong base of evidence of their effectiveness, and outcomes should be measurable (Malby 1995:3).

In South Africa, lack of human resources in rehabilitation services, within which occupational therapy (OT) plays a significant role, remains a major constraint to service delivery in the public sector. The shortage of rehabilitation personnel means that rehabilitation becomes a forgotten part of health service delivery, especially at primary care level (Philpott 2006:272). This creates an environment where disabling conditions from chronic, traumatic and infectious causes, many of which have the potential to be ameliorated by OT and other rehabilitation-orientated health
professions, end up consuming significant other health and social care resources. With reference to services for disabled children, for example, Philpott (2006:275) highlights that services for disability remain discretionary and subject to competing priorities. Such a climate means that it is essential to ensure that therapy and rehabilitation services available are of high quality and provide discernable positive outcomes for those receiving them.

Quality processes are now utilised and applied widely across the clinical care spectrum, from nursing and medical care, allied health, pharmacy and emergency care, and, with increasing prominence, in the management and administrative aspects of providing healthcare. Quality activities in healthcare have seen a shift from quality assessment, to quality assurance, to quality improvement, to quality management (Graham 1995:3). Quality activity continues to grow, from being profession-specific with the focus on clinical care, into a management concept in healthcare, critical to evaluating and maintaining efficacy and efficiency (Graham 1995:3); (Muller & Flisher 2005:141). OTs are not immune to these processes, and the therapy and rehabilitation professions have their own unique challenges when ensuring quality of care.

1.2 BACKGROUND TO THE PROBLEM

Burns and Grove (2005:277) cite Donabedian’s assertion that a practitioner has a legitimate responsibility to apply knowledge in the management of a dysfunctional state. This comprises of identifying the dysfunction or diagnosis, making a decision on intervening, choosing objectives or aims of treatment, determining how to achieve those objectives, and skilfully executing techniques to achieve the objectives. To ensure quality in this patient care process, a quality framework with effective quality tools and measurement techniques is required. There is a general lack of evidence as to which frameworks and quality methods are most effective, and research is scarce (Ovretveit 2005:15); (Grol, Berwick & Wensing 2008:74). The last two decades have seen the rise and fall of a number of different concepts and models in healthcare improvement. Accreditation, i.e. an inspection-based quality improvement approach, appears to be one methodology that has persisted (Walshe 2009:153-154).
Donabedian’s structure–process–outcome framework has largely been interpreted as an inspection-based approach to quality evaluation (Norman & Redfern 1995:5), a key example of which in South Africa is that of the Council for the Accreditation of Health Services in South Africa (COHSASA).

Sale (2000:281) cites Limongelli’s assertion that healthcare services and institutions who have achieved accreditation have sought to be measured against high professional standards on a voluntary basis and are substantially compliant with them. As accrediting bodies, COHSASA, as well as the Department of Health’s Core Standards initiative have identified and adopted broad standards for use in healthcare services.

There is evidence that public health sector OT departments that have not been involved in formal accreditation procedures have utilised other quality-management methods. For example, the Gauteng Provincial Health service developed its own standards and audit tools used throughout government hospital OT services and other therapy services in Gauteng (Foote, Lamont, Burger & Leishman 2006:10); (Gauteng Department of Health 2007). These minimum standards and audit tools were developed from within the services and were not tested for validity or reliability. In the Western Cape, a study of OTs in leadership roles revealed that 95.8% of respondents were involved in quality assurance as a leadership function, although the research does not detail what this involvement entailed (Mostafa 2007:90).

The board for occupational therapy of the Health Professions Council of South Africa (HPCSA) publishes minimum standards for care (HPCSA 2006). These standards cover direct and indirect services. However, guidance on how practitioners should monitor these standards is not provided.

In the private sector, methods that measure outcomes are being utilised in rehabilitation units as part of quality management (Our outcomes based therapy...2009). In the education sector, where OTs are also employed, outcomes measurement is under development for a number of clinical fields of OT.
1.3 RESEARCH PROBLEM

Walshe (1995:232) stated that it is poorly managed organisations that are usually the most in need of quality improvement but, paradoxically, it is these organisations that have the most difficulty in establishing it. It is the observation of the researcher that in public health services in South Africa different healthcare workers often work in considerable professional isolation. This is particularly true in rural or historically underserved areas, especially since the introduction of compulsory community service. OT departments are generally line managed by their institution or health district with varying levels of professional support, and patient access to OT services remains difficult in many areas. This can present challenges to the implementation of high-quality, effective OT interventions, despite the public health service being determined to place quality management high on the agenda.

Some consensus exists as to what constitutes quality in the patient care process in OT (HPCSA 2006). Despite this, as a review of the literature will further highlight, there is a paucity of valid and reliable measurement techniques, lack of definition of key indicators for quality in OT both locally and internationally, and very few guidelines on methodology regarding quality management.

Evidence exists globally of increasing awareness of and participation in quality management activities, such as audit and accreditation, in medical and nursing care (Johnston, Crombie, Alder, Davies & Millard 2000:23); (Khunti, Baker, Rumsey & Lakhani 1999:221); (Sunol, Nicklin, Bruneau & Whittaker 2009:27); (Mainz 2003:523). Given the number of healthcare institutions that are involved in quality management, it is likely that quality management frameworks, quality improvement methods, and quality measurement techniques are utilised by therapists. However, extensive search of the literature provides very limited information on quality management in OT, particularly in the South African setting. Even less information is available on the reliability, validity and standardisation of existing methods.

It is the observation of the researcher that OTs are being encouraged to take ownership of many aspects of quality management in the profession, in a dynamic healthcare system, whether this is under the umbrella of accreditation procedures,
within other frameworks, or independently. From this it can be deduced that quality-management frameworks are being used, as well as methods for measuring and improving quality in OT. The problem is, however, that there is no comprehensive description of them, and no standardisation of their use.

1.4 PURPOSE AND OBJECTIVES OF THE STUDY

The purpose of this study is to describe the extent of OTs’ involvement in quality management.

The objectives of the study are to:

- Describe the extent to which OTs are involved in quality management activities
- Describe the methods that OTs are using when improving quality
- Make recommendations for the implementation of quality-management programs for use in OT

1.5 SIGNIFICANCE OF THE STUDY

As the literature will further reveal, quality management has the potential to impact positively on the quality of healthcare delivery and on health outcomes, both generally in healthcare, and more specifically in professions where rehabilitation is an important aspect, including OT. However, there are a number of barriers to its effective implementation. Gaining information on OTs’ current use of quality methodology will enhance understanding of the barriers and challenges faced in implementing quality management in the profession in its role in the current healthcare system. It will also provide a basis upon which consensus can be sought to standardise techniques and disseminate technical knowledge, in order to facilitate quality-management processes for OTs engaged or planning to engage in such processes. As Gnanalingham, Gnanalingham & Gnanalingham (2001:289) point out, a regular ‘audit of audits’ helps to ensure that time and money spent in such activities is well spent.
The significance of this study is as follows:-

- By sharing the results of the study and stimulating discussion it will lead to awareness that standardisation of quality-management methods and tools is essential to improve quality in OT
- To contribute to the body of knowledge regarding quality management in OT
- A foundation for evaluating the effectiveness of quality management in the profession could be provided

1.6 DEFINITION OF KEY CONCEPTS

The last two decades has seen the rise and fall of a number of concepts, ideas and methods in healthcare quality improvement (Walshe 2009:153). The content of most quality-management methodologies is broadly similar, despite changing and often confusing terminology. There is considerable inconsistency in the literature in the way common terms are used in quality management and there is a continuing need for conceptual clarity (Norman & Redfern 1995:1); (Arah, Westert, Hurst & Klazinga 2006:12). This emphasizes a need for careful conceptual and operational definitions.

1.6.1 Quality

It is not necessary to define quality in operational terms, as this study does not seek to measure quality itself. However, in order to provide context, it is worth noting that Donabedian (2005:692) observed that “quality of care is a remarkably difficult notion to define”. The notion of quality has been further described as “elusive and dynamic” (Norman & Redfern 1995). Donabedian (2005:692) clarifies further by describing quality as “a reflection of the values and goals current in the medical care system and in the larger society of which it is part”. Ovreteit (1992:2) provided a definition that continues to be relevant in healthcare today, stating that quality is “fully meeting the needs of those who need the service most, at the lowest cost to the organisation, within the limits and directives set by higher authorities and purchasers”. More recently, attempts to define quality emphasise aspects such as patient safety, effectiveness of treatment, efficiency and the need to be patient-centred (Minkman, Ahaus & Huijsman 2007:90).
1.6.2 Quality management

The terms ‘quality’, ‘quality improvement’, ‘quality assurance’ and ‘quality management’ are frequently confused or used interchangeably. For the purpose of this research ‘quality’ is an attribute of health services or healthcare. ‘Quality management’, ‘quality assurance’ or ‘quality improvement’ refers to a process of achieving quality. They have slightly different meanings in relation to the stage of the healthcare process that quality intervention occurs (Moullin 2002:36). However, the terms are so frequently used interchangeably that for the purposes of this study, the term ‘quality management’ will be used predominantly. In this study, it then refers to any process that OTs utilise that has been initiated with the explicit purpose of managing or improving quality of care or service provision.

1.6.3 Occupational therapy

According to the Occupational Therapy Association of South Africa (OTASA), OTs use scientifically chosen, meaningful activities to assist diverse clients with a range of problems to maximise their functioning, and an occupational therapist is a practitioner of the profession of OT (Definition of Occupational Therapy 2009). According to the World Federation of OTs, OT is a profession concerned with promoting health and wellbeing through occupation (Definition 2004). In South Africa, OT is recognised as a profession allied to medicine, and all practitioners of OT are registered with the HPCSA.

1.7 RESEARCH METHODOLOGY

The research design is a plan or structured framework of the research process intended to solve the research problem (Babbie 2001:647). In this study, a survey is carried out to investigate OTs’ involvement in quality management. It is a descriptive study because it describes existing quality-management methods used. It is a cross sectional study as it studies the phenomenon in question at a specific point in time (Babbie 2001:92). A quantitative approach is used as data are handled numerically and potential sources of error considered (Babbie 2001:49).
The population of interest is OTs working in South Africa at the present time. Convenience sampling is used, due to some inherent difficulties in establishing a comprehensive list of OTs in South Africa, making random sampling challenging.

1.8 SCOPE AND LIMITATIONS

A key limitation identified beforehand was that there may have been a tendency for OTs not to participate if they were not working with well-established quality methods or if they did not have confidence in their knowledge.

Using a convenience sample of OTs rather than conducting a random sample, means that generalisation (i.e. external validity) has limitations and findings cannot be generalised.

1.9 ORGANISATION OF THE REPORT

Chapter 1 introduces the study by outlining the background, purpose and aims of the study, as well as a brief introduction to the methodology. Chapter 2 is the literature review, providing further direction to the study. Chapter 3 introduces the study design and methodology, including sampling and questionnaire design. Chapter 4 presents the analysis and research findings. Chapter 5 concludes the study, discusses limitations and makes further recommendations.

1.10 SUMMARY

This introductory chapter lays the basis for the study by introducing the problem of a lack of comprehensive and cohesive information about the nature of quality activities in the practice of OT in South Africa. The background to this problem has also been described. The purpose of the research has been given along with explicitly stated objectives. The research design has been introduced along with an overview of the intended methodology. The following chapter will further inform the rationale and design of the study by reviewing the available literature.
CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

In this chapter an overview of the literature is presented with the following aims:

- To provide a conceptual framework for the study
- To explore key aspects of quality-management methodology
- To discover how the research problem has been previously researched

2.2 CONCEPTUALISING QUALITY MANAGEMENT IN HEALTHCARE

Most conceptual and operational frameworks for quality management in healthcare are derived from quality management in the industrial sector. The healthcare sector has ‘borrowed’ a number of quality-management concepts from other sectors and adapted them to suit the nature of healthcare, notably continuous quality management and total quality management. This section will describe the quality cycle as well as quality frameworks specifically developed to meet the drive for quality management in healthcare. Ovretveit (1992:10) states that in order to raise quality, a health service must have a quality framework and strategy for introducing quality methods – an overall ‘approach’ to quality. Ovretveit (2005:12) describes frameworks as “models of steps to follow in diagnosing and resolving a quality problem”.

2.2.1 Total quality management and the industry-derived models

Total quality management (TQM) as a philosophy for quality in healthcare has its origins in the United States of America (USA), where healthcare is largely delivered in a market orientated fee-for-service health system. Within TQM, quality is a state of mind – a work ethic involving everyone in the organisation. It describes a climate or culture where the customer, or healthcare consumer in the case of healthcare, is the key focus (Blain Wright 2006:406); (Moulin 2002:38). Quality can be defined as meeting or exceeding the customer's expectations at a price that is reasonable to the customer (Graham 1995:80).
When applied to the healthcare setting, TQM is more commonly referred to as continuous quality improvement (CQI). However, a key difference between non-healthcare and healthcare industries is that in healthcare, the ‘customer’ is not the only judge of what is best to meet their needs. For example, patients may be satisfied with the healthcare they have received, even if the health outcome desired by the health professionals or health service (such as cure, decreased mortality rates, or improved quality of life) is not achieved (Brown 2007:1). In other words, the professional knowledge of healthcare practitioners is relied upon to provide quality care, not just the wishes of the patient or ‘customer’. As Ovretveit (1992:61) states, “clients are not the only judges of the quality of a health service”.

TQM introduced the language of statistics into quality management, and TQM’s pioneer, Deming, proposed that by measuring and reducing variation in a process, quality improves (Blain Wright 2006:408). The use of critical pathways, clinical guidelines and service standards in healthcare are attempts at reducing variation in healthcare inputs and outputs, in order to increase quality (Graham 1995:74). They will be discussed later in this literature review. More recently, other industry-borrowed quality models such as Lean Thinking and the Six Sigma approach have gained prominence in some healthcare systems (Walshe 2009:154). These place major emphasis on cost containment through the elimination of wasteful or unnecessary expenditure, and are especially (but not exclusively) relevant to the costly and technologically advanced healthcare systems of developed countries (Koning et al. 2006:10); (Moulin 2002:180).

Shades of the TQM philosophy are seen in the South African government’s ‘Batho Pele’ (‘People First’) approach to public service delivery, and in the Patients’ Rights Charter (see 2.2.8).

**2.2.2 Donabedian as a pioneer in ensuring quality in healthcare**

Avedis Donabedian is considered the ‘father’ of quality in healthcare and his work spanned a number of decades. He successfully translated the elements of quality into an operational framework (Kogan & Redfern 1995:4). His contribution needs to be explored given the prominent role it has played in shaping quality frameworks in healthcare.
Donabedian’s systems-based structure–process–outcome framework forms a dominant paradigm for quality management in healthcare today. Firstly, the structural components of healthcare are considered, such as the environment and facilities that care is provided in, and the adequacy of staffing levels (structure). Secondly, the actual process of healthcare delivery, which includes methods of obtaining information about health status, clinical reasoning and technical expertise in providing health intervention, is considered. Finally, the outcome of healthcare interventions is considered, in terms of mortality, level of disability or by patient attitude and satisfaction (Donabedian 2005:694). Figure 2.1 illustrates Donabedian’s model diagrammatically.

![Figure 2.1 The structure–process–outcome model for quality in healthcare](image_url)

(McDonald KM, Sundaram V, Bravata DM 2007:5)

Continuous in some respects with the TQM philosophy, Donabedian introduced the idea that when judging the quality of healthcare, judgement cannot be made by health professionals alone, but must take into account the views and preferences of the patient and of the society and culture in which the healthcare system operates (Sale 2005:25). Despite this, Donabedian’s emphasis remains on the relationship between patient, professional and clinical effectiveness, and this does not always sit easily with industry borrowed quality models that emphasise customer satisfaction and cost efficiency. The latter approach underestimates the complexities of the relationship between the healthcare practitioner and the healthcare user or population (Norman & Redfern 1995:6).
2.2.3 Accreditation

Accreditation has its roots in the USA as far back as 1913. In 1979, The Netherlands set up a system of accreditation, with New Zealand following in 1987, and Australia and the United Kingdom (UK) in 1989 (Sale 2005:196). The accreditation process is, overtly, a form of ‘ex ante’ review, with broad standards and objectives imposed by the accrediting body (Norman & Redfern 1995:14). However, clinical services being accredited are encouraged to define for themselves many aspects of what constitutes effective or quality care.

The locally devised voluntary accreditation scheme available in South Africa is that of the Council for the Accreditation of Health Services in South Africa (COHSASA). In the developing world COHSASA stands out; however, a number of other countries have utilised foreign accreditors and are also involved in developing their own accreditation procedures (Accreditation of hospitals [s.a]).

Donabedian’s structure–process–outcome framework has been interpreted as an inspection-based approach to quality evaluation, although this is not necessarily what Donabedian intended (Norman & Redfern 1995:5). Prominent examples of such are the Health Quality Service in the UK (previously known as the King’s Fund Organisational Audit) and the Joint Commission in the USA (Kogan & Redfern 1995:5); (The Health Quality Service…. 2011); (About the Joint Commission... 2011).

Professional ownership of measurement techniques is recommended by the accrediting body. This requires therapy professionals and the quality teams working with them to devise or adopt audit criteria of their own, as well as measurement methods for aspects of profession-specific clinical care. An example of this is seen in one of COHSASA’s standards for assessment: “33.5.1.3 Assessments are completed within the time frames established by the occupational therapy service” (COHSASA 2003).

Although there has been a marked increase since the 1980s in the number of countries using accreditation, questions still remain about the value of accreditation and whether it makes a verifiable improvement in healthcare delivery. Research in the area of external evaluation is essential to address these issues and is currently insufficiently
explored in research projects (Sunol *et al.* 2009:27); (Greenfield & Braithwaite 2008:172).

### 2.2.4 Maxwell’s model for assessing and improving quality in healthcare

Maxwell, who originally wrote in 1984 with particular reference to quality improvement in the UK’s National Health Service (NHS), provides a model for assessing and improving quality in healthcare, by breaking quality into six elements:

- Relevance of the service or procedure to the individual’s or population’s need
- Accessibility
- Effectiveness
- Acceptability
- Efficiency
- Equity

These elements can be combined with structure, process and outcome, and applied to any healthcare system to identify inadequacies (Sale 2005:23). Maxwell (1984:1471) acknowledges that quality must be seen holistically, i.e. as a philosophy, not in fragmented parts. This laid the groundwork for the NHS’s move to clinical governance.

### 2.2.5 Clinical governance

Clinical governance is a systematic approach to quality management using a framework that covers a range of quality initiatives. Its purpose is to ensure patients receive ‘best possible care’ (Sale 2005:31). It is based on a number of key ‘pillars’, namely, clinical effectiveness and clinical practice, clinical risk management, patient experience, professional development, management and training (Clinical Governance [s.a.]); (Sealey 1999:264).

The clinical governance model makes use of a number of quality-improvement methods; for example, evidence-based practice, standards of practice, clinical guidelines, clinical audit, use of complaints procedures, risk management and continued professional development (Sealey 1999:264). It appears then that clinical governance is not about new conceptual ideas, techniques or methods of quality management – it is rather a practical framework that organises quality management using a range of known quality methods. In South Africa, Netcare private hospital group
utilises the clinical governance model as its quality-management framework (Clinical Governance [s.a.]).

2.2.6 The quality cycle

A key theme that is carried through to almost all quality-management frameworks and their methodology is that of a cyclic nature to the quality process. Bradshaw (1995:357) points out that the audit cycle provides a robust structure for something that many healthcare professionals have been doing for many years – analysing and improving care. The quality cycle is seen throughout the literature detailed in slightly differing ways. Some authors refer to a ‘quality-management cycle’. Most recently, the Six Sigma approach defines five phases of a cycle that makes a problem-solving strategy operational (Koning et al. 2006:5). The TQM philosophy makes use of Deming’s ‘plan, do, check, action’ cycle (Moulin 2002:44). It appears that the key components of such cycles are essentially the same.

Figure 2.2 demonstrates the quality cycle and is an interpretation by the researcher from various sources (Bradshaw 1995:357); (Chambers & Wakley 2005:4); (Kogan & Redfern 1995:42); (Malby 1995:6); (McColl & Quinn 1985:571); (Ovretveit 1992:91); (Redfern & Norman 1996:333); (Sale 2005:4).
Stage 1 begins with identifying the overall values and objectives of the organisation. This may include, for example, defining a mission statement, or purpose or objectives of the service or organisation. Secondly, standards and criteria are set. At stage 3 measurement and evaluation are carried out against the explicit standards. Methods of evaluation and assessment are discussed further in this chapter. Stage 4 refers to analysing and interpreting the results of the chosen evaluation methods. A course of action is then plotted and implemented (stage 5).

The audit cycle is also essentially the same cycle, but it is referred to for specifically chosen aspects of clinical care (Sale 2005:52). The audit cycle is shown in Figure 2.3.

**Figure 2.3 The audit cycle**

Stage 1 of the audit cycle involves selecting a suitable topic for audit. Topic selection is discussed further on in this chapter. Once the topic for audit is selected, minimum
standards are decided upon (stage 2), and these are the benchmark against which the audit will be done. Standards (or criteria) need to be measurable, specific, relevant, clearly stated and achievable (Sale 2005:223); (Ovretveit 1992:101); (Moulin 2002:69). Various types of measurement and sampling methods are discussed further in this chapter. Stage 4 refers to data collection, i.e. the audit actually takes place. At stage 5, the data is analysed and interpreted. Stage 6 refers to the process of utilising the information gained from the audit to make changes within the procedure or service that has been audited.

The cyclic nature of both the audit and quality cycles implies that quality management is a never-ending process; quality values are perpetually refined and redefined, and care is improved by systematically moving through the cycles.

2.2.7 Quality circles

The term ‘quality circle’ encompasses any process where staff meet together as a team to use problem-solving techniques to improve quality (Parsley & Corrigan 1994:75). A quality circle may be formed to solve a particular problem, or it may operate on a continuing basis as part of the overall quality framework of an organisation (Blain Wright 2006:415). They usually have a leader with some training in quality management, and participation is voluntary (Moulin 2002:150).

Quality circles are based on a ‘bottom-up’ approach, where members of an organisation at all levels are involved and able to participate. The quality circle method has its roots as a participatory management technique that uses statistical analysis of activities to maintain quality products. They are considered a regular part of the organisation’s activity and not special or additional work. These tenets are central to the TQM/CQI industry-derived approach (Blain Wright 2006:414); (Sale 2005:184). Quality circles work on a cyclic approach whereby a problem is identified, solutions are identified and implemented, and the impact is reviewed (Sale 2005:185).

2.2.8 Quality frameworks in the South African context

Although quality management in healthcare has its origins in first-world, market-driven economies, it has increasingly been recognised that service quality is also essential in
developing countries (Muller & Flisher 2005:142). Writing about standards in psychiatric care in South Africa, Muller and Flisher (2005:142) state that international standards models must be adapted for the South African context but remark that there are few precedents for the development of national standards.

Presently, South Africa, in common with most countries, does not have a quality framework for universal use in its healthcare system. This does not mean that quality in healthcare is not being addressed, and is likely to receive further prominence with currently-planned moves to a National Health Insurance (NHI) model for the health system. Accreditation using non-governmental accreditors has already been extensively used, particularly for hospital care, in both the private and public sectors (Assisting Healthcare Facilities ... 2011); (Our quality ... [s.a.]). The National Department of Health has recently made a policy and operational shift away from the use of contracted accreditation agencies in the public sector, towards self-definition and regulation of its ‘Core Standards’ using local and international benchmarks (Core Standards ... 2007). Quality of healthcare remains high on government’s agenda, as evidenced in the recently-tabled National Health Amendment Bill (South Africa 2011:7-26), and in the National Department of Health (2009) 10-point plan.

Other government-led initiatives for quality include the ‘Batho Pele’ principle, a customer-orientated approach to service delivery in the public sector that has been adopted by the South African public service as its model for promoting service delivery (Batho Pele ... [s.a.]). A number of the key principles of Batho Pele are common to some of the quality frameworks previously discussed. For example, government departments must publish standards for the level and quality of service they will provide. Value for money is also emphasised, with importance placed on interventions that not only improve customer satisfaction but also prevent waste of resources, such as the early provision of accurate information to the customer. Accessibility of services, in keeping with that proposed by Maxwell (1984:1471), is also emphasised. However, in the South African context this includes the introduction of new and more accessible services to those who have historically been denied them (Batho Pele ... [s.a]).

In South Africa it seems logical that quality management in the therapy professions, specifically OT, is framed within the key elements important to and specific to the South African situation. Identified by the researcher are the following key elements:
• The need for equity in access to healthcare to address historical imbalance
• A need to be realistic in terms of resource and skill limitation
• A need to build upon existing quality initiatives in the sector, such as the public service’s Batho Pele approach, the Core Standards initiative of the Department of Health, and the professional standards for OT of the HPCSA
• A need to dovetail quality initiatives with national healthcare policy, such as the planned move to a National Health Insurance (NHI) system.

Put differently, standards-setting, accessibility and cost–effectiveness are key components of government policy that are also common to some of the quality frameworks described herein. It follows that they are retained as important components to quality management relevant to OT in South Africa, and are applicable to the role of OT in the healthcare system as a whole.

2.3 METHODS AND PROCEDURES USED IN QUALITY MANAGEMENT

In section 2.2 an outline was provided of some of the frameworks for quality that are used in healthcare. This section will explore and describe the methods and procedures used within quality management in healthcare, internationally and locally. Methods and procedures used by the health professions generally as well as specifically by the therapy professions will be examined.

2.3.1 Core values

Initiating a quality-management program begins with defining the core values of the organisation or the profession concerned. These values are then reflected as standards. This usually involves clear, concise statements of purpose, values and objectives. It may involve the development of a vision, or mission, for the organisation (Ovretveit 1992:20). It may involve defining the framework being used, although quality management may incorporate concepts from a variety of sources to develop a framework that best fits the values of the organisation (Blain Wright 2006:416). Identifying core values and objectives is a starting point to most quality approaches (Parsley and Corrigan 1994:88).
2.3.2 Setting standards

Internationally, the World Federation of Occupational Therapists has a set of care standards for practice and patient care available to its members. Many countries have standards set by their professional organisations, such as the American Occupational Therapy Association in the USA, and the UK’s College of Occupational Therapists (Standards of practice ... 2010); (Professional standards ... 2007). In South Africa, the HPCSA provides a set of standards for care for OT (HPCSA 2006). These standards are broad, and specific audit criteria are not given. For OTs in South Africa involved in accreditation, standards and audit criteria are provided. However, local use of the audit cycle to evaluate specific aspects of quality considered important or relevant by the professional service concerned is also encouraged. As indicated previously, the Batho Pele approach to service delivery in the South African public sector also emphasises the setting of precise and measurable standards (Batho Pele ... [s.a.]).

2.3.3 Elements to be measured: structure, process, outcome

It is unrealistic to believe that all aspects of a healthcare service can be measured and evaluated. When deciding what to improve and evaluate, services need to decide which structure, process and outcome aspects of their services they consider as essential or relevant to the core values and aims of the organisation. Ovretveit’s meta-analysis of quality tools describes how choosing the right problem to address is often difficult for quality teams (Ovretveit 2005:10). In medical care, recovery, restoration of function and survival are commonly used indicators for measuring outcomes (Donabedian 2005:692).

Locally, the Gauteng Health Professionals Audit pack separates topics by structure, process and outcome to guide which aspects of care therapy services should audit (Gauteng Department of Health 2007). It contains audits for use in all three of these aspects of quality, which is reflective of Donabedian’s original intention and recommendation that all three should be used simultaneously (Donabedian 1987:9).

Measurement of structure is concerned with ensuring that the physical setting in which healthcare takes place is of sufficient quality to enable process and facilitate positive outcomes. This includes not only the provision of adequate equipment and facilities, but
also the organisational structure and financial aspects of providing healthcare (Parsley & Corrigan 1994:55); (Mainz 2003:525).

Measurement of the *process* of healthcare describes what the healthcare provider did and how it was done, i.e. the actual care process. As well as practitioners’ activities in making a diagnosis and implementing care, it includes patients’ activities in seeking care (Mainz 2003:525); (Graham 1995:38). In some settings, such as institutional or long-term care, where outcomes are long term, measuring process may be more relevant to quality (Moulin 2002:74). In circumstances where there is a demonstrated link between a given process and outcome, process measurement is a direct reflection of health-care quality (Mant 2001: 479).

Consensus on what is a desirable outcome is not always easily achieved. It is difficult to separate factors not related to the treatment process and which may influence patient outcomes. Difficulty with outcome measurement is due to the presence of confounding influences on outcome, i.e. the difficulty in deciding the extent to which the treatment provided affected the outcome (McColl & Quinn 1985:573). An OT practice or department in an urban area may, for example, experience better out-patient outcomes due to the fact that the patients can be seen more regularly for treatment than in a rural area. These influencing factors need to be adjusted for, and this is not always easily done in reality, particularly when working with smaller numbers of cases or patients (Mainz 2003:527).

### 2.3.4 Other ways of choosing what to measure

Although a dominant paradigm, the structure–process–outcome model is by no means the only method of organising what needs to be measured for a quality-management program. Ovretveit (1992:62) separates health service quality into three dimensions: client quality, professional quality and management quality. *Client quality* refers to quality as perceived by the healthcare user. *Professional quality* refers to quality from the perspective of the healthcare professional – the extent to which the service can provide interventions that meet the professionals’ beliefs about what patients require. *Management quality* refers to the organisation and implementation of services in an efficient and cost-effective manner (Ovretveit 1992:76). Topics selected for quality improvement may originate from any of these three aspects of health service provision.
Any aspect of care that gives reasonable causes for concern can be a suitable topic for quality assurance (McColl & Quinn 1985:571). McColl and Quinn also state that the diagnosis or types of patients being reviewed should make up a significant proportion of the total caseload in order that maximum amount of people stand to benefit, and should be on a topic that will have a significant functional impact if treatment is carried out effectively.

Another approach to the selection of what to measure and improve, central to the clinical governance model, is to consider which patient groups or aspects of health service delivery have high throughput, high costs or considerable risk, choosing conditions that are measurable and amenable to change (Bradshaw 1995:353); (National Department of Health 2007:3). This is the principle of 'maximum achievable benefit', i.e. the diagnoses are frequent, deficiencies in care are common and serious, and the deficiencies are correctable (Graham 1995:41). This approach to selection is closely linked to the next section where sampling methods are considered.

2.3.5 Sampling

Sampling is widely known in the context of empirical research, where 'sampling' is the term used to describe the process of systematically selecting cases for inclusion in a research study (Neuman 1997:201). However, many of the principles of sampling are applicable to methods used in quality management.

Few authors on the audit process discuss the use of sampling frames and method of case selection, which is surprising, given that selection has a major impact on the validity and reliability of a measurement technique. Most of the time, it is not possible or even desirable to audit every single case that has ever been treated in a department or by a service. Chambers and Wakley (2005:24) mention probability sampling (including simple random sampling), systematic sampling, stratified sampling (such as sampling from particular groups or types of patients/cases), and cluster sampling (involving sampling whole clusters of patients at intermittent intervals). Non-probability sampling methods may include convenience sampling, quota sampling, purposive sampling or snowball sampling. Voluntary sampling, for example inviting service users to take part in a patient-satisfaction survey, may also be used. Event sampling implies sampling at
the point of unusual or noteworthy events and is therefore the form of sampling used in adverse event monitoring or sentinel surveillance.

The point in the clinical process where audit or review occurs may be described as either retrospective or concurrent (Malby 1995:43); (McColl & Quinn 1985:572); (Sale 2000:50). Retrospective evaluation occurs when a clinical process has ended – i.e. the patient is discharged or the case closed. Concurrent evaluation occurs when the patient is still undergoing clinical care.

Sale considers that concurrent evaluation is more valuable as it gives staff the opportunity to correct any negative outcomes while the patient is still in their care (Sale 2000:50). However, a retrospective time frame often makes more economical use of time and resources (McColl & Quinn 1985:572).

Prospective review uses a form of sampling where the topic is chosen and it is agreed that cases are selected from that point forward; for example, the next 30 cases of a particular diagnosis that present to a service (Malby 1995:42).

2.3.6 Audit and other quality-assessment and improvement methods

2.3.6.1 Introduction

Some writers refer to a ‘broad’ definition of audit as opposed to a ‘restricted’ definition of audit. The broad definition refers to the entire audit or quality cycle, including measurement and change of practice where indicated, and the restricted definition refers to a stage in the quality cycle where measurement is carried out. These two definitions are often used interchangeably or simultaneously (Kogan & Redfern 1995:xi).

Crombie, Davies, Abraham and du Florey (1993:27) define audit broadly by its primary purpose – the process of reviewing the delivery of healthcare to identify deficiencies so that they may be remedied. Malby (1995:1) also gives a broad definition – a centrally-driven initiative to introduce systematic analysis of clinical practices.
A more restricted view of audit is that it is the link between standard setting and more in-depth monitoring and change, “a detailed portrait of the area of activity to be monitored, the monitoring of standards is the simple snapshot” (Sale 2000:98). With this restricted definition, audit is just one stage – the assessment or measurement of quality – within the cycle of quality assurance (Norman & Redfern 1995:10).

2.3.6.2 Criteria-based audit

The structure, process and outcome model led to the development of a standards-based approach to quality management. Criteria and standards are often misunderstood (Ruthven & Ashmore 2008:20). Criteria are statements that define good practice and can be devised for any aspect of healthcare services. An example of a criterion relating more specifically to clinical care is “patients receive an OT assessment”. Standards, on the other hand, are expected levels of success, may be time-bound, and are quantifiable (Ruthven & Ashmore 2008:21). An example of a standard in OT is “90% of patients receive an initial assessment within 2 days of referral”. Criteria-based auditing usually involves answering questions according to a ‘yes/no’ protocol, which requires the assessor to note the presence or absence of criteria.

2.3.6.3 Clinical audit

Although criteria-based auditing may be applied to any aspect of structure/process/outcome in healthcare, clinical audit is a form of criteria-based audit which specifically examines the quality of the patient-care process. This may include diagnosis, treatment and care, as well as associated use of resources, and patient outcomes in terms of quality of life (Sale 2005:52).

The use of clinical audit is described in the HPCSA’s standards statement for OT as a method for quality improvement (HPCSA...2006). However, there is no detail or guideline on its implementation.
2.3.6.4 Utilisation review

In the USA, audit in healthcare is synonymous with ‘utilization review’. Healthcare in the USA is largely funded through medical insurance, and utilisation review is a form of audit carried out through the managed care process that ensures that providers provide care that is optimum to the health needs of the ‘consumer’, cost effective and of high quality (Landry & Knox 1996:413–416). The concept of utilisation review has received attention by the HPCSA (HPCSA 2005). It has potential relevance for South Africa’s private sector, especially in light of attempts by the Board of Healthcare Funders to reduce variance, and address issues of over-servicing in the private sector (Bateman 2008:574). Despite this, a review of the literature did not yield evidence of the use of this quality-assessment method in the therapy professions in South Africa.

2.3.6.5 Documentation audit

Patient records are a commonly used source of data for quality assessment and improvement, particularly when carrying out clinical audit and examining outcomes (Donabedian 2005:695). However, the quality of documentation itself is generally considered to contribute positively to the quality of healthcare. Corben (1997:289) states that there is a positive correlation between (the quality of) care plans and positive patient outcomes. Good documentation improves communication between healthcare professionals, reduces fragmentation of care and provides focus, all of which have the potential to impact on patient outcomes (Bjorvell, Thorell-Ekstrand & Wredling 2000:7). Reviewing the quality of documentation against agreed criteria is fairly straightforward and it is generally regarded as a valid starting point for audit activity (Hartigan 1995:187). Documentation audit is readily accessible, rich in information and is not costly to implement (Salvatori, Baptiste & Ward 2000:53). However, it does have limitations, which may include a lack of explicit criteria, and problems with rater reliability and subjectivity (Salvatori et al. 2000:53).

2.3.6.6 External audit

To understand external audit, it is necessary to distinguish between ex-post and ex-ante forms of evaluation. Ex-post evaluation uses objectives set by healthcare professionals themselves. Ex-ante evaluation refers to a system where objectives are
pre-set by those who fund and legitimize them, and is consistent with managerially and politically led services (Norman & Redfern 1995:14). Accreditation is a form of ex-ante evaluation, where experts set standards and criteria, and outside evaluators rate health services according to the standards and criteria – these experts are thus external auditors.

Linked to external auditing is the concept of ‘explicit review’, where reviewers have been trained to rate care, whereas ‘implicit review’ involves a team working together within the professional field and making judgments as a group (Norman & Redfern 1995:15). Accreditation is also a form of explicit review or external auditing, as it evaluates care against pre-formulated criteria.

**2.3.6.7 Peer review**

Peer review is described as a process of coming together in a group and discussing cases with other professionals involved in similar care or with similar knowledge (Chambers & Wakley 2005:26). Assessment of quality is therefore carried out by peers. Peer review can be carried out in an anonymous way where the practitioner whose work is being reviewed is not identified, or it may be carried out openly. With reference to general medical practice, peer review has been described as “a systematic, critical reflection on their own and others’ performance by a number of colleagues…with the aim of achieving a continuous improvement in the quality of care, with a peer being a person who is equal in any stated respect” (Grol & Lawrence 1995:1). Peer review is a quality assessment performed by individuals of similar rank, profession and level of skill or experience as one another, usually within an organisation. This is a contrast to inspection-based systems of review where it is not inherently necessary to be reviewed by peers.

**2.3.6.8 Observation**

Observation of treatment is a quality-assessment method described by a number of authors (Sale 2005:37); (Chambers & Wakley 2005:27); (Grol & Lawrence 1995:19, 47, 68, 81); (Malby 1995:58); (McCull & Quinn 1985:572). Observation of patient/professional contact is carried out systematically, with pre-set criteria, in the form of an audit. A key drawback is that it may be subject to performance enhancement
and therefore provide an inaccurate picture of the health provider’s usual standard of care (Grol & Lawrence 1995:23); (McCull & Quinn 1985:572); (Donabedian 2005:698). In addition, non-participatory observation may pose ethical dilemmas for the observer if sub-standard care is observed (Malby 1995:58). Another drawback of observation is that it can be more costly and time consuming than other methods (McCull & Quinn 1985:572). Despite this, a structured observation may be more accurate than using written records that are only used for auditing incidentally (Chambers & Wakley 2005:27).

The literature search did not yield a practical example of the use of observation as a quality-improvement tool in OT. Salvatori, Baptiste and Ward (2000:51) developed a practice observation tool which, although primarily designed to assess the competence of OTs registering from other countries, has potential use as a quality method.

### 2.3.6.9 Benchmarking

Benchmarking is defined as the use of structured comparisons to define and implement good practice. It is the practice of a formal comparison of processes and systems with those of other organisations as the basis for assessment and improvement, and is used as a method for raising standards (Sale 2005:165); (Moulin 2002:191). Ovretveit’s meta-analysis reports that some value had been found in this method but it is time-consuming (Ovretveit 2005:11). Benchmarking may be classified as either internal, where improvements within the healthcare organisation are monitored over time, or external, where outcomes and processes are compared with a similar organisation (Anderson & Rivenburgh 1995:211). Benchmarking is particularly utilised in the TQM approach to quality management (Graham 1995:215, 218).

### 2.3.6.10 Sentinel surveillance

Critical incidents may occur by chance during routine healthcare or may be a result of sub-standard care (Chambers & Wakley 2005:29). Sentinel surveillance, also known as critical incident or adverse-event monitoring, is a form of quality assessment and monitoring where unacceptable incidents are identified and investigated (Norman & Redfern 1995:15). Sentinel surveillance is a widely used form of quality monitoring in medical care, where events such as maternal deaths are used as key indicators of
health system quality, and the circumstances of maternal deaths are reviewed to improve care. Monitoring of and action on patient complaints about service is also a form of sentinel surveillance.

Examples of involvement by therapists in this aspect of quality monitoring are difficult to find, especially in direct relation to patient care. Sentinel surveillance was the least commonly used method in a survey of audit activity among therapists in the UK (Kober 1995:61). This may be because OTs often work with conditions of a chronic or prolonged nature where the possibility of a catastrophic event as a direct consequence of a shortfall or error in actual treatment is infrequent. Perhaps as a reflection of this, therapy professionals are less likely, for example, to be subject to litigation than the medical profession. However, in any healthcare setting, error can arise from individuals, from inaccurate clinical judgment, or from systems failure (Kitson 2000:459). Wade (2009:387) recommends that the systematic recording of adverse outcomes in rehabilitation should become routine, with the goal of improving service quality. There are indirect ways in rehabilitation in which risk and harm may occur, and Wade provides examples such as maintaining the patient in the sick role, or providing information incorrectly (Wade 2009:390).

Events relating to the setting or structure of care may need monitoring and acting on, in particular, the health and safety issues that are part of routine service management such as infection control and maintenance of equipment.

An absence of adverse events or complaints does not necessarily mean good practice or satisfactory outcomes, and sentinel systems need to be viewed as just one aspect of a quality-improvement framework (Sellu 1996:128); (Ovretveit 1992:44).

Patient safety has been particularly prominent in quality management within the last 5 years (Walshe 2009:154). It has been increasingly recognised that in order to optimise risk management strategies for improved patient safety, it is essential to do so within a blame-free, open and participative quality culture (Sale 2005:50).
2.3.6.11 Clinical pathways as a quality-assessment measure

A clinical pathway refers to a multi-disciplinary process where the care of an individual is tracked and followed, usually along a time frame. It is generally used for specifically identified procedures or conditions that involve the care of more than one professional group. Clinical pathways appear in the literature in various guises such as critical pathway, anticipated recovery path and integrated care pathway (ICP) (Malby 1995:48); (Sale 2000:186); (Rotter, Kinsman, James, Machotta, Gothe, Willis, Snow, Kugler 2010:2). Clinical pathways are developed from evidence-based guidelines, and are therefore a vehicle for implementing evidence-based practice into patient care (Sale 2005:113). However, a clinical pathway differs from a clinical guideline or protocol by implying that the fulfilment of the particular elements of the pathway is monitored or evaluated as a form of quality control. ICPs make use of best available evidence and are developed by multidisciplinary collaboration (Sale 2000:188). Although there appears to be little formalisation of integrated care pathways as part of a plan for healthcare in South Africa, any use of a clinical guideline with time frames, which is monitored or reviewed, can be considered to be making use of this particular method of quality management.

2.3.6.12 Feedback from service users

Feedback from service users is generally considered to be a vital part of quality improvement in healthcare (Calnan, Sixma, Calnan & Groenewegen 2000:155); (Ovretveit 1992:39). The clinical-governance model for quality places the role of service users into considerable prominence, and emphasises that not only must service users express their views, but also clearly understand their rights and responsibilities (Cusack & Sealy-Lapes 2000:541). This balance of rights and responsibilities is echoed within the Patients’ Rights Charter for South Africa (Patients’ Rights Charter [s.a.]).

Cusack and Sealy-Lapes (2000:542) assert that user involvement is an integral element of the philosophy and practice of OT. Its emphasis on a ‘client-centred approach’ is a key dynamic in the overall aim of improved functional independence.

Brown (2007:125) cites that high patient satisfaction with healthcare is not the same as highly effective patient care, as patient satisfaction may be high even if the desired health outcome is not achieved. Despite this, it is important to understand what is
valued by patients and how quality of care is perceived, as perception of quality influences how health services are accessed and used (De Jager & Du Plooy 2007:96–97).

One of the most frequently used methods of gathering feedback from patients about services is through use of documented patient complaints (Ovretveit 2005:9). Patient surveys are often reported on; however, their validity and reliability is questionable. Focus groups are another method of soliciting patient feedback; however, it is an even less valid technique than a survey (Ovretveit 2005:9).

Methodological and conceptual difficulties around the use of patient-satisfaction surveys can be overcome to an extent by involving the patients in the development of the measurement tool. An example of this in OT is given by Calnan et al. (2000: 155), who devised an instrument for measuring the user’s perspective in community OT services. This was carried out by soliciting service users’ views on the relative importance of various quality of care dimensions.

### 2.3.6.13 Standardised audit tools

A standardised audit tool is a quality measurement method that has been rigorously tested for validity and reliability. It is helpful to make use of Donabedian’s structure–process–outcome framework when reviewing standardised audit tools. In terms of outcome, the therapy professions have developed a number of outcome-measurement tools, including the Barthel index. The Functional Independence Measure and the Functional Assessment Measure are also prominent examples of outcome-measurement tools devised and used by rehabilitation therapists (Malby 1995:13). The Canadian Occupational Performance Measure is another example of a widely used, validated outcome measure developed specifically for OT (Law, Baptiste, McColl, Opzoomer, Polatajko & Pollack 1990). It is fundamentally an outcome measure but its use does guide the OT process to some extent. The nursing profession has developed a number of valid and reliable tools that audit the nursing process, such as Qualpac Monitor, the Buckingham nursing record audit tool, Phanuef’s nursing audit, and Quality of Diagnoses, Interventions and Outcomes (Q-DIO) (Corben 1997); (Muller-Staub, Lunney, Odenbreit, Needham, Lavin, & van Achterberg 2003:1027); (Redfern, Norman, Tomalin & Oliver 1993); (Sale 2005:199). An extensive review of the literature reveals
no similar equivalent standardised measurement tools for the specific measurement of process in the health therapy professions.

2.4 THE ROLE OF PROFESSIONAL DEVELOPMENT IN IMPROVING QUALITY

2.4.1 Evidence-based practice and clinical guidelines

Writing specifically about OT, Taylor (2007:6) states that “in order to survive the current health and social care climate, we need to demonstrate that our interventions are effective both clinically and economically”. Professional quality depends on how well professionals select and use techniques that are proven and effective (Ovretveit 1992:63).

Taylor (2007:4) states that evidence-based practice is the conscientious, explicit and judicious use of current best evidence in making decisions about the care of the individual. Evidence-based practice involves ensuring that techniques used in providing treatment are based on evidence, particularly research evidence, to prove their effectiveness in terms of outcome. Clinical guidelines are the end product of an evidence-based approach (Taylor 2007:156). They make recent clinical evidence easily accessible, which helps to standardise best practice (Millard 2000:365). They are used to outline good practice and assist practitioners in decision-making about the treatment process. Clinical guidelines do not replace clinical reasoning and professional judgement; however, when they are used, deviation from a guideline should be recorded, with reasons included (Taylor 2007:156).

Although the move towards an evidence-based approach has its critics, there seems to be agreement that OTs should be proactive in its evolution (Ilott, Taylor & Bolanos 2006:38). It has been found that few South African OTs have had training in the use of evidence-based practice, and that many have had limited success in putting it into use (Buchanan, Jelsma & Sigfried 2009).

The standards of practice for OTs published by the HPCSA states that it is the responsibility of the service-delivery areas to compile clinical guidelines and protocols appropriate to them (HPCSA 2006). Some work has been carried out internationally in
the development of national guidelines for OT in certain areas of practice (Taylor 2007:158).

Other health professions in South Africa appear to be proactive in the local development of clinical guidelines. For example, the South African Society for Physiotherapy has produced clinical guidelines for physiotherapy in the management of stroke and chronic obstructive airways disease (SASP 2009). In addition, the South African Medical Association produces a number of regularly updated clinical guidelines for medical practitioners. At present, there appear to be no equivalents at a national level for OT in South Africa available generically to practitioners.

2.4.2 Continuing education

Ideally, skills development and continuing professional development should reflect the necessary corrective measures required based on the results of continuous quality improvement (Muller, Bezuidenhout & Jooste 2006:510). In other words, individual professional and skill development should be based on the needs of the organisation. One of the greatest quality costs in health services is created by the continuing use of discredited or outdated treatments (Ovretveit 1992:63); (Ovretveit & Tolf 2009:6). In order to practice in an evidenced-based manner, professionals must keep up to date with current research, and regularly review and amend the methods and techniques they use. This can be achieved by participating in continuing education activities. Recent studies suggest that participation in professional-development activities influences OTs’ ability to utilise research as part of their practice (Craik & Rappolt 2006:155).

Continuing education is formalised in South Africa through the Continuing Professional Development (CPD) system at registration body level. All healthcare professionals, including OTs, must keep a record of the educational activities in which they participate. These records are subject to random audit, with continued registration to practice dependent on a minimum level of attendance and participation in such activities (HPCSA 2011).
2.4.3 Specialisation

Another form of professional development is specialisation in clinical practice. Rapid advances in knowledge and technology have created a demand for healthcare professionals to develop expertise in more complex problems (Rushton 2004:404). Specialisation is associated with the development of post-graduate specialist courses at a higher education level. In South Africa, the OT training schools run a variety of post-graduate courses but, unlike the medical profession, specialisation is not currently formally recognised at registration body level (Holland 2009:1). A number of OT and rehabilitation special interest groups exist, that focus on particular areas of practice, which also serve to promote the development of specialist clinical skills and knowledge.

2.5 USING FEEDBACK TO IMPLEMENT CHANGE

The methods explored in the previous section have little or no worth if they are carried out without the data or information they produce being subject to analysis and used to change practice. It is this aspect of the quality cycle that practitioners often have difficulty with, and has been described as the most difficult part of quality projects (Ashmore & Ruthven 2008:21). It appears that quality-improvement processes are often implemented and measured, but analysing the outcome of such processes and making use of information for change seems to be more difficult. For example, Gnanalingham et al. (2001:288) found that many hospital departments in the UK carried out audits but failed to ‘close the loop’, i.e. review the findings of audit to improve practice. This is a common theme among participants of audit. Robinson’s (1996:83) review of audit in the therapy professions found that standard setting was often advanced, but later stages of the audit cycle were not completed. Bradshaw (1995:356) suggested that re-audit should take place at planned intervals, with sufficient time to allow change to be integrated.

When considering other areas of quality management, continuing education, for example, has little worth if new knowledge is not subsequently applied to practice. In addition, there must be demonstrable evidence that using a clinical guideline based on research evidence improves care and outcome in the practical setting.
2.6 THE IMPACT OF QUALITY MANAGEMENT

The impact of quality management is discussed in this section, followed by an exploration of factors that prevent participation in quality-management practices in the next section. This will assist in providing context for the study, as well as support the implication that research into improving quality management itself is justified.

The assertion that quality management is fundamentally a necessary part of healthcare is widely accepted; however, evidence on the impact of quality initiatives is quite difficult to find (Forster 1997:67); (Ovretveit & Gustafson 2003:759); (Grol et al. 2008:74). Ovretveit (2005:14) describes the field of quality management as ‘theory rich and evidence poor’. He further states that research into the effectiveness of quality management is sparse because programs are difficult to evaluate, and the organisations implementing them are ever-changing (Ovretveit & Gustafson 2003:759).

Despite the difficulty of measuring effectiveness, some attempts have been made. A 2006 Cochrane review discovered that the use of audit and feedback has small-to-moderate effects on improving professional practice (Jamtvedt, Young, Kristoffersen, O'Brien & Oxman 2006:13). Mainz and Barthels' (2006:79) review of the literature finds evidence indicating that quality measurement and quality monitoring combined with feedback, auditing and public disclosure of measurement data lead to improvements in the quality of care, and that a healthcare system that invests in quality frameworks will be repaid in terms of improvement in patient care. Ovretveit's (2005:5) meta-analysis of quality-improvement tools used in healthcare found some evidence that clinical guidelines and patient pathway methods are effective in healthcare if properly applied. He also asserts that it is unlikely that these tools would be used in other industries if they did not produce cost-effective results (Ovretveit 2005:14). Greenfield and Braithwaite (2008:172) conducted a systematic review of the international evidence base for healthcare accreditation which found mixed results, with some aspects of healthcare and its provision gaining more than others from the process. Despite this, some positive trends were noted. In another study, research into the specific use of clinical pathways found evidence that their use was associated with reduced in-hospital complications (Rotter et al. 2010:2).
Ovretveit and Gustafson (2003:761) state that due to inherent difficulties in objectively measuring the impact of quality programs, there may never exist firm evidence that such programs are worth the cost and effort. However, there is no conclusive evidence that there are no benefits or that resources are being wasted on such efforts (Ovretveit & Gustafson 2003:761).

This leads to a general consensus that at least some aspects of quality management programs have positive effects. However, considerable barriers exist that must be overcome in order to reap benefits in terms of measurable improvement. Efforts must be ongoing to meaningfully demonstrate appreciable differences as a result of quality-management programs, and discover the factors that influence successful implementation (Ovretveit & Gustafson 2003:761).

**2.7 FACTORS CONTRIBUTING TO A LACK OF PARTICIPATION IN QUALITY MANAGEMENT**

**2.7.1 Lack of training**

Lack of expertise, knowledge and poor understanding of the techniques involved are frequently cited barriers to quality-improvement processes (McSherry & Pearce 2007:121, 138); (Robinson 1996:209); (Ruthven & Ashmore 2008:19). However, as Robinson (1996:213) states, “it is surely unrealistic to expect people without relevant experience to design valid and reliable instruments; initially they need access to those with appropriate experience”. It is recognised that if quality of care is assessed badly, then resources are wasted in making unnecessary or ineffective changes (Hearnshaw, Harker, Cheater, Baker & Grimshaw 2003:24).

Quality-improvement processes require skills that are not necessarily integral to the training of healthcare professionals (Walshe 1995:231). Mostafa’s (2007:92) study of OTs in leadership roles in the Western Cape finds that 40% of OTs believed that training on quality assurance should be incorporated into undergraduate training. A lack of such training may be a problem for OTs involved in or wishing to be involved in quality management, particularly junior staff working in unsupported settings.
2.7.2 Lack of resources

Lack of availability of resources provides a significant barrier to participation in quality activities, particularly in terms of time and finance (Robinson 1995:86). Further questions have been raised as to whether therapists have the time and expertise to devise complex scales and questionnaire schedules (Kober 1995:69).

2.7.3 Validity of methods as a concern

TQM asserts that quality management is a fundamentally statistical process; however, few authors cite a lack of valid measurement tools as a barrier to quality management. Haglund et al. (2004:403) found that many articles on quality assurance in OT do not discuss methodological shortcomings. In other words, there is a lack of awareness among OTs of the potential complexity of designing and using valid audits, and the limitations of the quality methods and assessments that they are using (Robinson 1996:213). Criteria-based audits have been criticised as being not methodologically pure, with results obtained only being specific to the area under audit. They need to be piloted and tested in order to be proven valid and transferable to other settings (Sale 2005:231). The same concern has been discussed with reference to patient-satisfaction surveys (Chambers & Wakley 2005:27). As considerable time and resources go into quality-management activities, it is essential that valid and proven methods and tools are utilised to avoid waste of resources (Hearnshaw et al. 2003:28).

2.8 PREVIOUS RESEARCH ON THE TOPIC

Examples abound of the use of quality management and associated techniques to improve healthcare and its delivery. However, considering the wide range of quality frameworks and methods that exist, there is a paucity of studies specifically on quality methodology. As Haglund et al. (2004:403) point out, “Research on the standard of practice [sic] and methods used for monitoring quality seems sparse”.

2.8.1 Therapy specific research

Kober (1995:58) explores the methodology used for clinical audit in the therapy professions (OT, physiotherapy, clinical psychology and speech therapy) in the UK. A
search was carried out of correspondence relating to audit activities kept by a nursing/therapy audit network. Two elements are used to examine how audit topics are selected. Firstly, audit activities are categorized as either one of core clinical activities, closely associated activities or less closely associated activities. Core activities are those associated with the care of the patient, and closely or less closely associated activities are those associated with quality of service (Kober 1995:58). Secondly, audits are categorised as being of structure, process or outcome in what they audit (Kober 1995:58). Kober (1995:61) then describes the method being used to evaluate quality, such as case presentations, peer review, adverse/sentinel events, criteria-based audit and patient surveys. Kober’s research does not cover in detail how therapists analyse information or utilise it to improve practice.

Hebert, Thibeault, Landry, Boisvenu and Laporte (2000:147) cite a study carried out in community OT services in Canada looking at quality-evaluation methods used. It was found that performance evaluation, peer evaluation and file inspection were commonly used, and that client service evaluation was the least-used method. The methodology of the study is not cited.

Haglund et al. (2004:403) carried out a literature review of involvement in quality assurance by OTs. They also carried out a postal questionnaire to all OTs in Sweden working in the field of psychiatric care, covering aims and goals of OT services, frequency of monitoring and different methods used. They found that 32% of OT services had identified goals and 36% carried out regular quality control in the workplace, although only 19% specifically in OT practice. The most common methods of measuring quality were patient interviews and questionnaires. Some use of record audit was found to be related to treatment process and outcomes, but no use of peer review was described.

2.8.2 Non-therapy specific research

There is considerable literature describing quality tools but few studies describing how they are actually used in healthcare (Ovretveit 2005:15). Many of the studies on methodology were carried out in the UK, and highly specific to medical audit. The Oxfordshire Medical Audit Advisory Group advocates the use of the audit cycle itself to ‘audit audits’ (Derry, Lawrence, Griew, Anderson, Humphreys & Pandher 1991:1247). It
used the audit cycle to examine how general practitioner (GP) practices in the UK chose an audit topic and set criteria, and to ascertain how much of the audit cycle each GP practice was completing. Although the study does not examine audit methodology in great detail, it provides a useful illustration of how the quality or audit cycle itself can be used to examine what is happening in quality management.

Gnanalingham et al. (2001:288) used a similar framework to examine how well the audit cycle was being completed and included clinical-support services (physiotherapy, OT, dietetics). In the clinical-support services they found a high use of making recommendations as a result of using audits, but low use of re-auditing.

Khunti, Baker, Rumsey and Lakhani (1999:221) made use of a closed-format, multiple-choice postal questionnaire to primary-care audit groups in the UK to discover how audit groups conduct multi-practice audits—in particular, how they are organised and their strengths and weaknesses. They examined the conduct, design, methodology and organisation of audits that had been undertaken. A questionnaire was designed and piloted on a convenience sample of six audit groups—approximately 5% of the actual number of audit groups who were sent the final questionnaire. It contained questions about completion of the cycle, reporting on the audit, methods for selecting audit criteria, and sampling, standard setting and data sources. The researchers found weaknesses in the design and organisation, with particular reference to sampling, collecting data and implementing recommendations. The results of their study emphasised a need to give attention to basic methodological principles, and this was recommended for countries commencing with quality-improvement activities.

Grol, Baker, Roberts and Booth (1997:66) conducted an exploratory study of GPs in developed country healthcare systems, examining a variety of issues relating to quality improvement. A questionnaire containing open and closed questions was used, which gathered data on methods used for quality improvement, as well as policies and structures in place. It was found that review of outcome/morbidity data was the most commonly used method for quality improvement, followed by review of utilisation data from insurers and chart audits. Despite this, only a small minority of the countries surveyed collected data systematically and regularly. Patient surveys were reportedly used occasionally, as were other methods such as observation of practice.
2.9 SUMMARY AND CONCLUSIONS

This chapter has described some key frameworks for quality management in healthcare. The quality cycle itself has been used as a framework to provide some background on the methodology used in quality management in healthcare, with some examples of the use of methods and techniques provided, with particular relevance to OT.

The impact of quality management on healthcare and outcomes is discussed with barriers to participation and implementation. This leads to the conclusion that further research into the implementation of quality management is a valid exercise, and provides further context for the study. Previous work on summarising and evaluating quality methodology is cited, both from within the OT profession, in the health therapies generally, and in other health professional groups. From this, a number of key quality methods were explored. The literature search also revealed a number of methodological issues that are important to consider when using quality-management tools and methods.

Ovretveit and Gustafson (2002:272); (2003:759) emphasise the need to evaluate the quality of quality-management programs. Methodological challenges that restrict evaluation research on the effectiveness of quality-improvement programs and initiatives do not necessarily mean that this should not be carried out. They recommend a descriptive case design as a useful starting point to evaluating the effectiveness of quality management. By describing what is happening, others can understand what is being done and replicate interventions that are working. A first description of programmes in place avoids wasting time analysing impact when few or no activities are actually being implemented (Ovretveit & Gustafson 2002:272). This perspective usefully ties in the findings of the literature review with the approach for the research design of the next chapter.
CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1 INTRODUCTION

This chapter documents the study design and the method used. It will describe how the research purpose and questions were used to guide the development of the instrument used in the research, the purpose of which is to describe OTs’ involvement in quality management. The research method is a survey.

3.2 RESEARCH DESIGN AND METHODOLOGY

In this study, a quantitative descriptive design is used to investigate the quality-improvement methodology that OTs working in the healthcare field employ and are familiar with.

Generally, descriptive research is used to provide a foundation for further exploratory research. By describing a situation, theories can be developed for further testing. However, descriptive research can also provide a basis for policies and interventions, as well as highlight problems (De Vaus 2002:18). These provide the motivation for using a descriptive design for research into OTs involvement in quality improvement.

Parahoo (2006:187) states that surveys are appropriate for descriptive designs, because in defining this method it is evident that collection of a wide range of data is associated with this method. Data is mainly collected in surveys using questionnaires as data collection instruments. Parahoo (2006:188) elaborates on this method as follows: “The type of data is mainly descriptive, although attempts are made to find correlations between variables”. The researcher aims to describe the extent to which OTs are involved in quality management activities and also the methods that OTs are using when improving quality: therefore a survey as the research method is appropriate.

As is evident from the objectives, the emphasis in this study is on description. However, relationships or correlations that might be noted during data analysis will also be reported on in order to add to the descriptive nature of this study.
Saks and Allsop (2007:180) point out that the strength of a survey is that a broad overview of a social phenomenon can be provided. A weakness mentioned by the same authors is that meanings and perceptions are not captured in surveys (Saks and Allsop 2007:181). The intention of this study is not to describe meanings and perceptions about quality management in occupational therapy.

3.3 POPULATION AND SAMPLING

3.3.1 Study population

A study population is the aggregation of the elements of interest to the research, from which the sample is selected (Babbie & Mouton 2001:174). In this case the study population is OTs in South Africa who work predominantly in a healthcare-related environment.

3.3.2 Sampling method

Two basic types of sampling, namely probability and non-probability sampling exist. In probability sampling the chance to be selected for each unit in the sample frame is known whereas with non-probability sampling it is not the case (Parahoo 2006: 471).

It was not possible to obtain a random sample of all practicing OTs, as a list of all such practitioners does not exist. The HPCSA’s register contains at least all practicing OTs in South Africa, because an occupational therapist must be registered in order to practice. However, this database has limitations. For example, it is not possible to isolate OTs that are working in South Africa because some registered OTs will be retired, some not currently working, and others practicing overseas. The HPCSA database is further not appropriate for an email-based survey as email addresses were not available on the database when this research was done.

In some cases a convenience (or availability) sample must be used, and this may be utilised when obtaining a random sample is not possible. It involves sampling readily or easily available subjects or objects (Brink 2006:132).
For this research, a non-probability convenience sampling method was used, utilising two alternative sources.

One source was the database of OTASA. OTASA is the national organisation that represents OT interests. Membership of OTASA is voluntary, and the researcher deduced that its members were less likely to be retired, overseas or not practicing, as OTASA membership confers particular benefits to locally practicing OTs. The other source was an address list of OTs working in the public sector in South Africa. This address list is used to communicate professional issues in the public sector.

By using the OTASA database it was possible to conduct a survey by email or post, as these contact details are registered for each member. For the purpose of this study, professionally qualified members of OTASA were invited to take part, in addition to OTs on the public service emailing list, thus providing a *convenience sample*.

A key principle of sample size is that the smaller the population, the larger the sampling ratio must be for an accurate sample (Neumann 2006:241). In total, the questionnaire was sent to 1571 OTs. This number was made up of the following: OTs on the OTASA database with an email address, who were all emailed the questionnaire, OTs on the OTASA database without an email address, who were posted the questionnaire, and OTs on the public service list who were emailed the questionnaire.

### 3.4 RESEARCH INSTRUMENT

#### 3.4.1 Introduction

A questionnaire is the most common method of collecting survey data (De Vaus 2002:94). It is helpful to distinguish between five distinct types of question content: behaviour, beliefs, knowledge, attitudes and attributes (De Vaus 2002:95), and this will be elaborated further in section 3.4.3.

There are a number of advantages to using a questionnaire for this type of research. Questionnaires can be a rapid method of obtaining information from a large group of individuals, and they are relatively inexpensive compared to other methods. The relative
anonymity of a questionnaire also encourages an honest response (Brink 2006:147). These were all important factors to consider for this research.

It is always recommended to use a standardised measurement instrument if possible (Rudestam & Newton 1992:68). In the case of this study there was no suitable standardised research instrument available, so one had to be designed.

3.4.2 Development of the questionnaire

Designing a questionnaire involves thinking about what the concepts mean as well as how the data is going to be analysed (De Vaus 2002: 94). It must demonstrate a fit between its contents and the research problem and objectives (Brink 2006: 147).

Questionnaire content must reflect the research questions clearly in order to collect relevant information and show adequate conceptualisation. The questionnaire for this research was developed based on findings from the literature search described in Chapter 2.

3.4.3 Layout of the questionnaire

The questionnaire asks the following regarding OT and quality management: which OTs are involved (i.e. characteristics); what knowledge OTs have about the subject; what OTs are doing in relation to the subject (i.e. behaviours), and finally they ask about outcomes. These factors were integrated, in the question layout, with themes drawn from the literature search.

The ordering of the questions was done in a manner that promoted provision of sufficient background information, the interest of the respondent, and to maximize response. To reflect this, the questionnaire was presented as a series of sections.

Section 1 consisted of definitions of terms relating to quality management, which the researcher considered may have been subject to confusion or lack of clarity. Explicit and comprehensive definitions were avoided, as one of the aims of the research was to discover the level of knowledge about quality-management concepts.
Sections 2, 3 and 4 reflected the requirements, and therefore the objectives, of the research and are detailed in Table 3.1 on the following page, which describes the layout of the questionnaire. The questionnaire is attached as Appendix B.
### TABLE 3.1: LAYOUT OF THE QUESTIONNAIRE

<table>
<thead>
<tr>
<th>Information required</th>
<th>Description and layout of questions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Characteristics</strong></td>
<td>Sections 4.1, 4.2 and 4.3&lt;br&gt;Information was requested about the respondent’s workplace, years in practice, and highest level of training&lt;br&gt;The data obtained were used to describe the population and sample</td>
</tr>
<tr>
<td><strong>Knowledge</strong></td>
<td>Sections 2.1 and 3.1&lt;br&gt;Respondents were requested to provide information on their knowledge of quality frameworks, and quality-management methods and techniques&lt;br&gt;The data obtained were used to describe the knowledge and experience of the sample regarding quality management frameworks and methods</td>
</tr>
<tr>
<td><strong>Behaviours</strong></td>
<td>Sections 2.1, 2.2, 2.3, 2.4, 3.1 3.2, 3.3 and 3.5&lt;br&gt;Respondents were requested to indicate their use of quality frameworks, standards of practice, continuing professional development and other quality methods in their current and previous working environments&lt;br&gt;The data obtained were used to describe how and to what degree the sample utilises quality management frameworks and methods in their current and previous experience</td>
</tr>
<tr>
<td><strong>Outcomes</strong></td>
<td>Sections 3.4 and 4.4&lt;br&gt;Respondents were requested to indicate how information obtained from quality-management processes is utilised to promote change, and were invited to add any additional qualitative observations&lt;br&gt;The information obtained was used to describe the impact of utilising quality management and challenges to implementation</td>
</tr>
</tbody>
</table>
The questionnaire used closed-ended, unordered answer choices. Closed-ended, unordered choice questions are useful in that they are undemanding on the part of the respondents so they are frequently more willing to complete them; however, one shortcoming is that the desired answer of the respondent may not be listed, which may frustrate the respondent, as discussed in Dillman’s specialised text on survey research, and also by Brink (Dillman 1978: 91); (Brink 2006: 149). This was overcome for this research by adding open-ended choices, so where an answer is not listed it may be supplied by the respondent if necessary.

Other aspects of questionnaire design were also taken into account. Using the right wording enhances validity and improves response rate. A balance must be made between keeping questions short and expressing questions clearly. Abbreviations may help if it is unlikely they will be misunderstood by the respondents. Questions should also be examined for vagueness and should be unambiguous. ‘Double-barrelled’ questions must always be avoided. The level of knowledge presumed should not be too great or too little, and there must be technical accuracy of the subject matter (Dillman 1978:95–112) (Brink 2006:150). All these issues were considered when designing the questions for this research. These issues were also addressed by pre-testing, which is described in the next section.

3.4.4 Pre-testing of the questionnaire

The number of respondents used for pre-testing was chosen by considering a balance between the availability of relevant potential respondents, time constraints and sufficient numbers to ensure validity. Pre-testing was carried out by requesting a group of OTs, some of whom were known to use quality-management techniques in their workplace, to complete the questionnaire. They were solicited for comments on the ease of use of the questionnaire and understanding of the requirements for completing it, as well as its relevance relative to their experience. The questionnaire was also reviewed by the study supervisor and an external quality-assurance expert who provided input into the design. Recommended changes were made and it was finally pre-tested again with another small team of OTs.
3.5 VALIDITY AND RELIABILITY OF THE STUDY

3.5.1 Validity

‘Valid’ means ‘truthful’ (Neumann 1997:196). Internal validity is the degree to which the measurement method measures what it purports to measure. An instrument can be assigned internal validity after it has been satisfactorily tested repeatedly in the populations for which it is designed (Bowling 2009:166).

Face validity refers to the subjective opinion of the researcher, or interviewees in the pre-testing phase, as to whether the questions appear relevant, reasonable unambiguous and clear (Bowling 2009: 167). Face validity was enhanced by pre-testing the questionnaire on a sample of OTs representative of the study population and requesting their feedback.

Content validity requires judgements by ‘experts’ in the field about the extent to which the instrument is logical, balanced and comprehensive (Bowling 2009:167). Content validity was enhanced by pre-testing the questionnaire on OTs that have experience and knowledge of quality assurance in healthcare, and soliciting feedback from them. The input of the study supervisor and an expert in the field of quality management also enhanced content validity.

3.5.2 External validity

The failure to gain a valid response from a survey weakens the ability to generalize the results – i.e. it weakens external validity (Neuman 1997:295). There are a number of ways of encouraging a high response rate. The covering letter for the survey was written concisely to provide a balance between imparting sufficient information, and not losing respondent interest by being overly long.

It was decided that email was an appropriate primary mechanism for circulating the questionnaire. Of all the methods of circulating a survey, posted surveys produce the lowest response rate (Neumann 1997:300). Face-to-face interviews ensure a high and comprehensive response; however, they are more time-consuming and expensive than any other method, and may be subject to interviewer (Neuman 1997:301) and social
desirability bias (Dillman 1978:62). Email was considered likely to produce a higher response rate than a postal survey as less effort on the part of the participant was required, yet retaining the advantages of confidentiality and being able to carry out the survey in the participants' own time.

The disadvantage of email is that it potentially excluded those OTs that do not use email; however, the researcher overcame this by posting the questionnaire to OTs who did not have an email address. Also considered was the possibility of outdated or redundant email addresses on the database information; however, this would also have been true with a postal survey.

Although there is no general agreement on ideal response rate for survey research, a response rate under 60% is generally considered suboptimal (Bowling 2009:289).

3.5.3 Reliability

'Reliability' refers to the degree to which the research instrument can be depended upon to yield consistent results if used repeatedly over time on the same person or if used by different researchers (Brink 2006:163). It denotes the consistency of the measurements obtained from the use of the research instrument (Burns & Grove 2005:374).

*Stability* (or 'test-retest reliability') describes the consistency of repeated measures of the same attribute with the use of the same research instrument. It was not possible to ascertain stability for this research due to the risk of participants in pre-testing answering questions differently on repeat testing due to their experience during the initial testing (Brink 2006:164); (Burns & Grove 2005:374).

*Equivalence* (or 'inter-rater reliability') refers to the ability of a research instrument to record the same results for two or more observers of the same subject matter (Burns & Grove 2005:374). It was not relevant to this research as each respondent's experience of the subject matter was unique and different.

*Internal consistency* (or 'homogeneity') assesses the extent to which the items on the questionnaire measure the same construct. Reliability is difficult to test if there is only a
single question measuring each construct (De Vaus 2002:52), and also if the research instrument measures multiple concepts (Brink 2006:164).

3.6 ETHICAL CONSIDERATIONS

There are five key ethical considerations with regards to survey research:

- Voluntary participation
- Informed consent
- No harm
- Confidentiality and anonymity
- Privacy

(De Vaus 2002:59)

3.6.1 Voluntary participation

This principle conflicts to some extent with the need to establish a representative sample; however, no individual should be forced to participate, and for this research the covering letter was the mechanism used to ensure that this was understood. As some of the questions asked about happenings in the participant’s workplace, there was some indirect involuntary participation on the part of others such as their colleagues/managers, about whom information was indirectly being collected. This meant that privacy and anonymity principles were of particular importance.

3.6.2 Informed consent

True choice to participate can only be made with full and accurate information about the nature of the study and the questionnaire (De Vaus 2002:60). The covering letter provided information; however, one advantage of an email or postal survey is that the questionnaire could be perused by the potential participant before they agreed to participate. It is reasonable to presume that informed consent is given by the participant completing the questionnaire and returning it, but this was made explicit in the covering letter.
3.6.3 Anonymity and confidentiality

Survey participants should be assured that their answers will be either confidential or anonymous (De Vaus 2002:62). Anonymity means that the respondent cannot be identified by the researcher. This is different to confidentiality, which implies that the participant might be identifiable to the researcher but that the information they give will not be identifiable to them as an individual by anyone else except the researcher.

When highly sensitive information is not involved, it is likely to make less difference if anonymity is used over confidentiality. For this research, the covering letter explained that confidentiality would be assured, and no information that could identify the respondents to others was shared. However, it was not possible to assure complete anonymity for the email respondents as, due to time and cost constraints, the completed surveys were emailed directly back to the researcher.

3.5.4 Privacy

The right to privacy extends beyond voluntary participation and confidentiality. Participants can expect to be free of any intrusion of their privacy (De Vaus 2002:64). Some potential participants may have considered that the use of their email address for the purpose of an invitation to participate is an intrusion of privacy. It should be remembered that OTs have submitted contact details to OTASA in the knowledge that such details are frequently used to share information relating to professional interests. The issue of privacy must be balanced against the best interests of the profession, its need for further development and an improved evidence base. Potential participants approached were assured in the covering letter that their contact information or similar details were not to be used for any other purpose except for the research in question.

3.6 DATA ANALYSIS

Data analysis refers to the process of categorising, ordering, manipulating and summarising the data in order to describe them in a manner that provides answers to the research questions (Brink 2006:170). It is a necessary process that provides meaning to the data (Burns & Grove 2005:43). For this research a data-analysis plan
was devised that involved the researcher capturing the data with the EPI Info™ statistical program and utilising them to provide information.

3.7 LIMITATIONS AND POSSIBLE SOURCES OF ERROR

Although this will be elaborated upon further in the final chapter, some limitations are mentioned here. External validity was reduced with convenience sampling, as the characteristics of the convenience sample may differ in some respects to the population of interest, i.e. OTs who are members of OTASA combined with those on a public service mailing list may differ in some way from OTs working generally in South Africa.

There was a risk that OTs unfamiliar with or less knowledgeable of quality improvement were less likely to participate, which will have provided a biased result of the extent of participation in quality improvement.

A non-standardised measurement instrument was used, and despite pre-testing, this would definitely have been less reliable than a standardised measurement tool.

3.8 SUMMARY

This chapter has introduced the research design, the study population and sampling methods. Some limitations of the study and attempts to control for sources of error have been discussed, including the design of the measurement instrument, which is a survey–questionnaire. Ethical concerns have also been addressed.
CHAPTER 4: DATA ANALYSIS AND FINDINGS

4.1 CHAPTER OUTLINE

This chapter provides a description of the type of data and the rationale for the choice of method for data analysis. The results are presented in the form of frequency-distribution tables, bar charts and bivariate tables. Discussion of the results as they relate to the research questions follows the results presentation.

The survey questionnaire was sent out to a total of 1571 OTs, of whom 1546 were contacted by email and 25 by post. In total, 80 responses were received, giving a low response rate of just over 5%.

4.2 DATA-ANALYSIS METHODS

In the survey, nominal (or categorical) data were captured, i.e. data that have no underlying continuum, units or intervals that have equal or ordinal rank (Bowling 2002:160). There were a number of discrete categories that could be coded but not ordered. This type of data is applicable to descriptive or dichotomous (yes/no) responses. The appropriate statistics are non-parametric. Non-parametric techniques use frequencies, and observed/expected comparisons can be made using the Chi-square test.

The data elicited from the survey was entered into the EPI Info™ statistical program. This was used to produce frequency distributions for the responses and to examine for associations between some of the variables where this was relevant to the research questions. Although a p-value of <0.05 was taken as acceptable to regard an association as significant, interpretation is cautious for some relationships owing to the small sample size, with ‘expected’ table values < 5 in some instances.

4.3 RESPONDENTS’ DEMOGRAPHIC INFORMATION

A description of the demographic characteristics of the sample revealed relevant attributes of the participants. Years of experience as an OT, sector of employment
and further training are given. These data were obtained from Section 4 of the questionnaire.

### 4.3.1 Employment sector

In question 4.1 the participants were requested to indicate their area of work, and were invited to indicate more than one sector if this was applicable. There were 90 responses in total. The percentages are given as a percentage of the number of persons completing the survey (i.e. n=80). This information is shown in Table 4.1, and by the graph in Figure 4.1. The total percentage in this case is not 100% because some of the respondents were employed in more than one sector.

**TABLE 4.1: EMPLOYMENT SECTOR**

<table>
<thead>
<tr>
<th>Employment sector</th>
<th>Frequency (n)</th>
<th>Respondents (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government hospital: district/regional</td>
<td>7</td>
<td>8.7</td>
</tr>
<tr>
<td>Government hospital: specialist/academic</td>
<td>11</td>
<td>13.8</td>
</tr>
<tr>
<td>Government: primary healthcare</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Government: education</td>
<td>7</td>
<td>8.8</td>
</tr>
<tr>
<td>Academic/teaching</td>
<td>6</td>
<td>7.5</td>
</tr>
<tr>
<td>Private: individual practice</td>
<td>24</td>
<td>30</td>
</tr>
<tr>
<td>Private: group practice</td>
<td>17</td>
<td>21.3</td>
</tr>
<tr>
<td>Private: hospital</td>
<td>5</td>
<td>6.3</td>
</tr>
<tr>
<td>NGO</td>
<td>6</td>
<td>7.5</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>3.8</td>
</tr>
</tbody>
</table>
The largest group comprised of OTs in individual private practice (30%; n=24), followed by OTs in group practices (21.3%; n=17). The largest group of government employees who responded were those working in specialist/academic hospitals (13.8%; n=11).

The sample is further summarised in Table 4.2 and Figure 4.2.

**TABLE 4.2: SUMMARY OF EMPLOYMENT SECTOR**

<table>
<thead>
<tr>
<th>Employment sector</th>
<th>Frequency (n)</th>
<th>Respondents (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>29</td>
<td>36.3</td>
</tr>
<tr>
<td>Private</td>
<td>46</td>
<td>57.5</td>
</tr>
<tr>
<td>Teaching/academic</td>
<td>6</td>
<td>7.5</td>
</tr>
<tr>
<td>NGO/other</td>
<td>9</td>
<td>11.3</td>
</tr>
<tr>
<td>Total</td>
<td>90</td>
<td>112.6</td>
</tr>
</tbody>
</table>
This shows that the majority of respondents work in the private sector (57.5%; n=46).

4.3.2 Experience as an occupational therapist

The amount of experience in the field was recorded by participants in question 4.2 of the questionnaire, and is detailed in Table 4.3 and Figure 4.3. In total, 78 participants answered this question.

**TABLE 4.3: EXPERIENCE AS AN OCCUPATIONAL THERAPIST**

<table>
<thead>
<tr>
<th>Experience (years)</th>
<th>Frequency (n)</th>
<th>Respondents (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community service</td>
<td>2</td>
<td>2.6</td>
</tr>
<tr>
<td>0–5</td>
<td>17</td>
<td>21.8</td>
</tr>
<tr>
<td>5–10</td>
<td>13</td>
<td>16.7</td>
</tr>
<tr>
<td>11–15</td>
<td>10</td>
<td>12.8</td>
</tr>
<tr>
<td>16–20</td>
<td>15</td>
<td>19.2</td>
</tr>
<tr>
<td>21–25</td>
<td>11</td>
<td>14.1</td>
</tr>
<tr>
<td>26–30</td>
<td>5</td>
<td>6.4</td>
</tr>
<tr>
<td>≥31</td>
<td>5</td>
<td>6.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>78</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
Just over half of the sample had 15-years experience or less (53.9%), with the remaining 46.1% having more than 15-years experience.

The largest group comprised OTs with 0–5 years experience post-community service, which made up 21.8 % (n=17) of the sample. Overall, the sample presents as young in age relative to the potential work lifespan of practitioners.

4.3.3 Highest level of qualification

The highest level of qualification was asked in question 4.3 of the questionnaire, and is shown in Table 4.4 and Figure 4.4.
TABLE 4.4: HIGHEST LEVEL OF QUALIFICATION

<table>
<thead>
<tr>
<th>Level</th>
<th>Frequency (n)</th>
<th>Respondents (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Degree</td>
<td>45</td>
<td>57.7</td>
</tr>
<tr>
<td>Post-graduate diploma</td>
<td>18</td>
<td>17.9</td>
</tr>
<tr>
<td>Masters</td>
<td>14</td>
<td>23.1</td>
</tr>
<tr>
<td>Doctorate</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Total</td>
<td>78</td>
<td>100</td>
</tr>
</tbody>
</table>

Figure 4.4: Highest level of qualification

The data in Table 4.4 and Figure 4.4 show that the majority of respondents (57.7%) are basic degree qualified only, with 42.3% of respondents having higher or further qualifications. In total, 17.9% of respondents had a post-graduate diploma, implying some level of specialist clinical knowledge.
4.4 OCCUPATIONAL THERAPISTS’ INVOLVEMENT IN QUALITY MANAGEMENT: FRAMEWORKS, MODELS AND CONCEPTS

The items in Section 2 of the questionnaire investigated respondents’ knowledge and utilisation of quality frameworks and models/concepts.

4.4.1 Frameworks, models and related concepts

In section 2 of the questionnaire, question 2.1 asked respondents to indicate their familiarity with a number of quality framework, models and other quality concepts. The results of this question are reflected in Table 4.5.

**TABLE 4.5: QUALITY FRAMEWORKS, CONCEPTS AND MODELS**

<table>
<thead>
<tr>
<th>Quality framework, concept, model</th>
<th>No knowledge Frequency (n)</th>
<th>%</th>
<th>Know but do not use Frequency (n)</th>
<th>%</th>
<th>Currently use Frequency (n)</th>
<th>%</th>
<th>Respondents (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accreditation</td>
<td>6</td>
<td>7.6</td>
<td>40</td>
<td>50.6</td>
<td>33</td>
<td>41.8</td>
<td>79</td>
</tr>
<tr>
<td>Quality cycle</td>
<td>19</td>
<td>24.1</td>
<td>33</td>
<td>41.8</td>
<td>27</td>
<td>34.1</td>
<td>79</td>
</tr>
<tr>
<td>‘Batho Pele’</td>
<td>25</td>
<td>31.3</td>
<td>20</td>
<td>25</td>
<td>35</td>
<td>43.8</td>
<td>80</td>
</tr>
<tr>
<td>Patients’ Rights charter</td>
<td>5</td>
<td>6.3</td>
<td>15</td>
<td>18.8</td>
<td>60</td>
<td>75</td>
<td>80</td>
</tr>
<tr>
<td>Clinical governance</td>
<td>27</td>
<td>33.8</td>
<td>23</td>
<td>28.8</td>
<td>30</td>
<td>37.5</td>
<td>80</td>
</tr>
<tr>
<td>Continuous quality improvement</td>
<td>14</td>
<td>17.9</td>
<td>18</td>
<td>23.1</td>
<td>48</td>
<td>61.5</td>
<td>78</td>
</tr>
<tr>
<td>Structure–process–outcome model</td>
<td>25</td>
<td>31.3</td>
<td>30</td>
<td>37.5</td>
<td>25</td>
<td>31.3</td>
<td>80</td>
</tr>
<tr>
<td>Quality assurance</td>
<td>10</td>
<td>12.8</td>
<td>27</td>
<td>33.8</td>
<td>41</td>
<td>52.6</td>
<td>78</td>
</tr>
<tr>
<td>Total quality management</td>
<td>31</td>
<td>39.7</td>
<td>27</td>
<td>33.8</td>
<td>20</td>
<td>25.7</td>
<td>78</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>100</td>
<td>3</td>
</tr>
</tbody>
</table>
From Table 4.5, it is evident that the Patients’ Rights Charter is currently used by most respondents (75%), followed by Continuous Quality Improvement (61.5%), and Quality Assurance (52.6%). Total quality management was the least used (25.7%) and this corresponds with the data in the ‘No knowledge’ column, where it was chosen by a high number of respondents (39.7%). Surprisingly, almost a third of respondents (31.3%) had no knowledge of the ‘Batho Pele’ approach to public service delivery, despite this being pervasive to all aspects of public service and not just health service delivery. The other government-promoted quality concept, the Patients’ Rights Charter, seems to be more prominent, with only 6.3% of respondents claiming no knowledge.

4.4.2 Other aspects that frame quality

In question 2.2 of the questionnaire, respondents were asked to indicate their usage of other aspects that help to frame quality, such as mission statements and organisational objectives. The respondents were invited to indicate their usage of mission statements, organisational objectives, minimum standards, and written policies and procedures. The responses are reflected in Table 4.6. Percentages are given as a proportion of those who answered the question.

<table>
<thead>
<tr>
<th>Aspect that frames quality</th>
<th>Yes (n)</th>
<th>Yes (%)</th>
<th>No (n)</th>
<th>No (%)</th>
<th>Not sure (n)</th>
<th>Not sure (%)</th>
<th>Total (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mission statement</td>
<td>46</td>
<td>58.2</td>
<td>25</td>
<td>31.6</td>
<td>8</td>
<td>10.1</td>
<td>79</td>
</tr>
<tr>
<td>Organisational purpose/objectives</td>
<td>49</td>
<td>62</td>
<td>29</td>
<td>36.7</td>
<td>5</td>
<td>6.3</td>
<td>79</td>
</tr>
<tr>
<td>Minimum standards</td>
<td>61</td>
<td>77</td>
<td>10</td>
<td>12.7</td>
<td>8</td>
<td>10.1</td>
<td>79</td>
</tr>
<tr>
<td>Written policies</td>
<td>55</td>
<td>70.5</td>
<td>20</td>
<td>25.6</td>
<td>3</td>
<td>3.8</td>
<td>78</td>
</tr>
</tbody>
</table>

The majority of respondents reported using minimum standards of practice (77%), followed by written policies/procedures (70.5%). Least likely to be used was a mission statement (58.2%). Using standards of practice was closely associated with having a mission statement (p=0.0034), having organisational objectives (p=0.0001)
and having written policies/procedures (p<0.0001); in other words, there was an association between the use of these aspects.

### 4.4.3 Sources of standards of practice

The researcher anticipated that there may be a reasonable number of respondents that used minimum standards of practice. Therefore, in question 2.3 respondents were invited to indicate the sources that applied to them, which could have been more than one. Results are reflected in Table 4.7.

#### TABLE 4.7: SOURCES OF STANDARDS OF PRACTICE

<table>
<thead>
<tr>
<th>Source of standards of practice</th>
<th>Frequency (n)</th>
<th>% of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPCSA</td>
<td>63</td>
<td>79</td>
</tr>
<tr>
<td>Accreditation process</td>
<td>27</td>
<td>34</td>
</tr>
<tr>
<td>Devised by OT department</td>
<td>49</td>
<td>61</td>
</tr>
<tr>
<td>Provided by managers</td>
<td>25</td>
<td>31</td>
</tr>
<tr>
<td>Not sure</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>OTASA</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>Other</td>
<td>11</td>
<td>14</td>
</tr>
</tbody>
</table>

Most of the respondents who answered this question cited the HPCSA as a key source of minimum standards of practice (79%). A discrepancy was noted here, in that the number of respondents who indicated that they actually make use of standards of practice (61 individuals) is 2 less than the number who indicated that they use standards sourced from the HPCSA (63 individuals). This may be evidence of some contradictions in interpretation of the questions.

The option chosen by the second largest group of respondents (61%) indicated that standards of practice are self-devised within their workplace. Standards obtained during accreditation processes was the source cited third most (27%). The least number of respondents (6%) cited OTASA as a source.
Other sources not detailed in the Table 4.9 were: other OTs’ standards, CPD activities, international sources, the policies of their own organisation, and the National Occupational Therapy Forum. Encouragingly, OTs appear to make good use of standards that are set within the profession or by professional bodies, and appear willing to take local ownership of their own standards, as recommended by the OT board of the HPCSA and others (HPCSA 2006); (Muller & Flisher 2005:141); (Bradshaw 1995:353); (Foote et al. 2006:6).

4.4.4. Aspects of practice for which standards and/or written policies are used

In question 2.4 of the questionnaire respondents were asked to indicate for which areas of OT practice in their working situation minimum standards of practice apply.

The responses have been divided according to Donabedian’s structure–process–outcome model. Table 4.8 has therefore been constructed in such a way that the three components of Donabedian’s model are reflected.

Table 4.8 demonstrates the use of standards and/or written policies relating to structure (response choices 2.4.1, 2.4.2, 2.4.3, 2.4.4, 2.4.6 and 2.4.7 of question 2.4), process (response choices 2.4.5, 2.4.8, 2.4.9, 2.4.10 and 2.4.11 of question 2.4), and outcome (response choices 2.4.12 and 2.4.13 of question 2.4).
TABLE 4.8: ASPECTS OF PRACTICE FOR WHICH MINIMUM STANDARDS OR POLICIES ARE USED, SUBDIVIDED ACCORDING TO DONABEDIAN’S MODEL

<table>
<thead>
<tr>
<th>Donabedian component</th>
<th>model</th>
<th>Area of practice</th>
<th>Frequency (n)</th>
<th>Respondents (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRUCTURE</td>
<td></td>
<td>Health and safety</td>
<td>44</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Space</td>
<td>29</td>
<td>36.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Facilities</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Equipment</td>
<td>46</td>
<td>57.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Staffing</td>
<td>31</td>
<td>38.8</td>
</tr>
<tr>
<td>PROCESS</td>
<td></td>
<td>Assessment</td>
<td>55</td>
<td>68.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Treatment/care planning</td>
<td>50</td>
<td>62.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Treatment implementation</td>
<td>48</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Evaluation of treatment</td>
<td>45</td>
<td>56.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use of resources</td>
<td>36</td>
<td>45</td>
</tr>
<tr>
<td>OUTCOME</td>
<td></td>
<td>Outcomes obtained</td>
<td>31</td>
<td>38.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Performance indicators</td>
<td>30</td>
<td>37.5</td>
</tr>
<tr>
<td>OTHERS</td>
<td></td>
<td>Client relationships/teamwork</td>
<td>1</td>
<td>1.25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Documentation/waiting times</td>
<td>1</td>
<td>1.25</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Education outcomes</td>
<td>1</td>
<td>1.25</td>
</tr>
</tbody>
</table>

In the structure subsection, the majority of OTs use minimum standards or written policies for equipment (57.5%) followed by health and safety (55%), and financial management (53.8%). For process, respondents most commonly used standards for assessment (68.8%), followed by treatment planning (60%) and treatment evaluation (56.3%). The information in Table 4.8 suggests that respondents use standards of practice for process aspects of their work more than they do for structure or outcome aspects; a majority of therapists indicated that they use minimum standards or written policies to guide assessments, treatment planning and treatment implementation.

Associations are seen throughout the three components of structure, process and outcome, both within each component and between components. This is reflective of Donabedian’s original intention and recommendation that all three aspects should be used simultaneously when setting standards (Donabedian 1987:9). Having minimum
standards for health and safety was associated with standards for other areas of structure (space: \(p<0.0001\); facilities: \(p<0.0001\); equipment: \(p<0.0001\); staffing: \(p<0.0001\); financial management: \(p<0.0001\)), where \(p<0.05\) is considered to be significant. Having standards for a process aspects of practice was significantly associated with having standards for other aspects of process (e.g. assessment/treatment planning: \(p<0.0001\); assessment/treatment evaluation: \(p<0.0001\)), with associations considered significant at the \(p<0.05\) level.

An association between standards for structure, and standards for process was observed as follows: health and safety/treatment planning: \(p<0.0001\); health and safety/treatment implementation: \(p=0.002\); and also equipment/assessment: \(p<0.0001\), where \(p<0.05\) is considered significant for all the reported associations.

Standards for outcome was associated with all the standards for structure and many for process (e.g. outcomes obtained/facilities: \(p=0.001\); outcomes obtained/financial management: \(p=0.0007\); outcomes obtained/treatment care planning: \(p=0.00004\)).

Health and safety standards were also associated with a range of quality models and frameworks (quality cycle: \(p=0.0005\), ‘Batho Pele’: \(p=0.023\), Patients’ Rights Charter: \(p=0.03\); clinical governance: \(p=0.0001\)). Similar associations between the other structure-related standards and quality models were also observed.

**4.5 OCCUPATIONAL THERAPISTS’ INVOLVEMENT IN QUALITY MANAGEMENT: ACTIVITIES AND METHODS USED**

This section demonstrates the respondents’ use and knowledge of various quality-management methods. Informed by the literature review, a list of quality methods was drawn up and incorporated into the questionnaire as question 3.1.

For the purpose of the analysis, the quality methods have been divided into those relating to audit and/or criteria-based, those related to professional and clinical development, and those derived from or associated with quality models such as TQM and clinical governance. These are not necessarily mutually exclusive.
categories and represent a broad guide to assist with clearer presentation. Table 4.9, on the next page, provides an overview of all the quality-management activities and methods covered in the questionnaire. It demonstrates the respondents’ knowledge and utilisation of a range of quality-management methods and activities. The three quality management methods and activities that stand out are as follows:-

- Clinical guidelines and/or treatment protocols (questionnaire item 3.1.4); 46.8% of respondents indicated that they use these on a daily basis
- Continuing professional development (questionnaire item 3.1.1); 48.1% of respondents indicated that they participated in this at variable intervals, with no respondents having no knowledge of it, and only 1.3% reporting that they do not use it
- Documentation audit/records review (questionnaire item 3.1.2); 41.6% of respondents indicated that they make use of this at variable time intervals
### TABLE 4.9: QUALITY-MANAGEMENT ACTIVITIES AND METHODS

<table>
<thead>
<tr>
<th>Methods/activities</th>
<th>No knowledge % (n)</th>
<th>Know but do not use % (n)</th>
<th>Used on a daily basis % (n)</th>
<th>Used on a weekly basis % (n)</th>
<th>Used on a monthly basis % (n)</th>
<th>Used at variable time intervals % (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AUDIT AND/OR CRITERIA-BASED METHODS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Documentation audit/records review (total n=77)</td>
<td>9.1 (7)</td>
<td>26.0 (20)</td>
<td>9.1 (7)</td>
<td>2.6 (2)</td>
<td>11.7 (9)</td>
<td>41.6 (32)</td>
</tr>
<tr>
<td>Peer review (total n=74)</td>
<td>10.8 (8)</td>
<td>45.9 (34)</td>
<td>4.1 (3)</td>
<td>2.7 (2)</td>
<td>9.5 (7)</td>
<td>27 (20)</td>
</tr>
<tr>
<td>Observation of treatment (total n=74)</td>
<td>6.8 (5)</td>
<td>24.3 (18)</td>
<td>29.7 (22)</td>
<td>6.8 (5)</td>
<td>6.8 (5)</td>
<td>25.7 (19)</td>
</tr>
<tr>
<td>Accreditation, inspection or external audit (total n=77)</td>
<td>13 (10)</td>
<td>39 (30)</td>
<td>2.6 (2)</td>
<td>1.3 (1)</td>
<td>5.2 (4)</td>
<td>39 (30)</td>
</tr>
<tr>
<td>Utilisation review (total n=71)</td>
<td>60.6 (43)</td>
<td>21.1 (15)</td>
<td>0</td>
<td>1.4 (1)</td>
<td>1.4 (1)</td>
<td>15.5 (11)</td>
</tr>
<tr>
<td>Clinical audit (total n=66)</td>
<td>27.3 (18)</td>
<td>39.4 (26)</td>
<td>0</td>
<td>0</td>
<td>10.6 (7)</td>
<td>22.7 (15)</td>
</tr>
<tr>
<td>Standardised outcome measures (total n=54)</td>
<td>16.7 (9)</td>
<td>42.6 (23)</td>
<td>13.0 (7)</td>
<td>1.9 (1)</td>
<td>7.4 (4)</td>
<td>18.5 (10)</td>
</tr>
<tr>
<td><strong>PROFESSIONAL AND CLINICAL DEVELOPMENT-RELATED METHODS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continuing professional development (total n=79)</td>
<td>0</td>
<td>1.3 (1)</td>
<td>7.6 (6)</td>
<td>16.5 (13)</td>
<td>26.6 (21)</td>
<td>48.1 (38)</td>
</tr>
<tr>
<td>Clinical guidelines/treatment protocols (total n=77)</td>
<td>1.3 (1)</td>
<td>13 (10)</td>
<td>46.8 (36)</td>
<td>5.2 (4)</td>
<td>7.8 (6)</td>
<td>26 (20)</td>
</tr>
<tr>
<td>Evidence-based practice (total n=70)</td>
<td>7.1 (5)</td>
<td>34.3 (24)</td>
<td>30.0 (21)</td>
<td>2.9 (2)</td>
<td>7.1 (5)</td>
<td>18.6 (13)</td>
</tr>
<tr>
<td>Case presentations (total n=73)</td>
<td>4.1 (3)</td>
<td>26.0 (19)</td>
<td>0</td>
<td>15.1 (11)</td>
<td>16.4 (12)</td>
<td>38.4 (28)</td>
</tr>
<tr>
<td><strong>QUALITY MODEL AND FRAMEWORK-RELATED METHODS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Individual performance management (total n=77)</td>
<td>7.8 (6)</td>
<td>29.9 (23)</td>
<td>3.9 (3)</td>
<td>1.3 (1)</td>
<td>24.7 (19)</td>
<td>32.5 (25)</td>
</tr>
<tr>
<td>Patient satisfaction survey (total n=77)</td>
<td>6.5 (5)</td>
<td>36.4 (28)</td>
<td>5.2 (4)</td>
<td>5.2 (4)</td>
<td>11.7 (9)</td>
<td>35.1 (27)</td>
</tr>
<tr>
<td>Benchmarking (total n=72)</td>
<td>36.1 (26)</td>
<td>43.1 (31)</td>
<td>2.8 (2)</td>
<td>0</td>
<td>4.2 (3)</td>
<td>13.9 (10)</td>
</tr>
<tr>
<td>Adverse event monitoring (total n=49)</td>
<td>26.5 (13)</td>
<td>34.7 (17)</td>
<td>10.2 (5)</td>
<td>2 (1)</td>
<td>12.2 (6)</td>
<td>14.3 (7)</td>
</tr>
<tr>
<td>Integrated care pathways/collaborative care planning (total n=72)</td>
<td>38.9 (28)</td>
<td>26.4 (19)</td>
<td>12.5 (9)</td>
<td>5.6 (4)</td>
<td>2.8 (2)</td>
<td>13.9 (10)</td>
</tr>
<tr>
<td>Quality meetings (total n=77)</td>
<td>13 (10)</td>
<td>22.1 (17)</td>
<td>2.6 (2)</td>
<td>10.4 (8)</td>
<td>24.7 (19)</td>
<td>27.3 (21)</td>
</tr>
<tr>
<td>Quality-improvement projects (total n=73)</td>
<td>20.5 (15)</td>
<td>21.9 (16)</td>
<td>4.1 (3)</td>
<td>1.4 (1)</td>
<td>17.8 (13)</td>
<td>34.2 (25)</td>
</tr>
<tr>
<td><strong>OTHER</strong></td>
<td></td>
<td></td>
<td></td>
<td>100% (1)</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
The results in Table 4.9 are now further discussed according to the groups mentioned near the beginning of Section 4.5 and used as sub-headings in the table. Only one item was listed under ‘Other’, namely, assistive devices/attendances/response times; this one item is not discussed separately.

4.5.1 Quality-management methods which are criteria-based/related to audit

Figure 4.5 illustrates the respondents’ familiarity with and utilisation of quality methods and techniques based on audit and criteria-based.

![Quality method use chart]

**Figure 4.5: Involvement in quality methods related to audit**

The information suggests that direct observation of another therapists’ treatment is the most frequently used method in this sub-section. However, the researcher considers that it is unlikely that observation of other therapists’ treatment as a quality
method is used on a daily basis by almost 30% of the sample, and suspects that there may have misinterpretation by some respondents of the nature of this activity, because it was not highly rated during pre-testing. 70% of respondents indicated that it is used by them on a daily, weekly, monthly or variable basis. Consequently, this result should be treated with caution.

Placing observation of treatment aside, documentation audit is the most utilised audit technique, with 63.9% of respondents reporting that they use it at some time (daily, weekly, monthly or at variable intervals). Accreditation is reportedly used by 48% of the sample at some time.

A relationship was observed between documentation audit and some quality models and framework (questionnaire item 2.1); namely the quality cycle (p<0.0001), Batho Pele approach (p=0.012), continuous quality improvement (p=0.004) and quality assurance (p=0.013). This suggests that use of documentation auditing is associated with knowledge of quality models. Documentation auditing is regarded as valid starting point for beginning quality management activities (Hartigan 1995: 187); and the quality of documentation is considered to correlate with the overall quality of care, as previously discussed in Section 2.3.6.5. This knowledge, combined with a high level of use of documentation auditing amongst survey respondents, suggests that use of this technique should be encouraged.

Utilisation review was the least used or known about; this despite it being put forward in HPCSA standards as a quality method for ensuring ethical and professional conduct (Ethics & Professional Conduct 2005: 5).

4.5.2 Quality management methods related to professional and clinical development

Figure 4.6 shows the proportion and percentage of respondents for a variety of professional and clinical development related quality activities.
Unsurprisingly, considering that HPCSA re-registration is dependent on CPD participation, all respondents had knowledge of CPD or participated in it at some time. Clinical guidelines/protocols were used on a daily basis by 46.8% of respondents and there was no relationship between use of this method and any particular quality models and standards of practice. This suggests that for the use and awareness of clinical guidelines, there exists a universality that is not related to knowledge of specific areas of quality management.

Many respondents were aware of EBP but not putting it to use (34.3%) with 30% reporting practicing based on evidence on a daily basis. EBP had a relationship with one model only, namely accreditation (p=0.026). EBP was also associated with the use of a number of standards (questionnaire item 2.4) (treatment planning: p=0.02; treatment implementation: p=0.013; treatment evaluation: p=0.029, and outcomes standards: p=0.016). EBP was also associated with participation in post graduate...
study (p=0.029), and the use of courses, journals and post graduate study for obtaining clinical guidelines (p= 0.043; p=0.018; p=0.028).

4.5.3 Quality management methods relating to quality models and frameworks

This section presents information on the respondents’ knowledge of and use of quality methods considered derived from or associated with quality models and framework-related methods. An overview of respondents’ knowledge of quality methods related to or derived from quality models is presented in Figure 4.7.

Figure 4.7: Involvement in quality methods related to quality models and frameworks
The most frequently used quality method based on quality models was quality meetings (65%). Not unexpectedly, there was a relationship between quality meetings and various models/frameworks (questionnaire item 2.1) (quality cycle: p=0.005; Batho Pele: p=0.0058; quality assurance: p=0.016; accreditation model: p=0.047).

Quality meetings was also associated with the use of standards for a number of areas of practice (health and safety: p=0.0067; equipment: p=0.01; use of resources: p=0.0006; financial management: p=0.0011; staffing: p=0.0047; treatment planning: p=0.005; treatment implementation: p=0.0023). This could suggest a link between having a regular ‘forum’ for quality and the active development and use of minimum standards of practice.

It was also observed that individual private practitioners tended not to use quality meetings (p<0.0001), but specialist/academic hospital employees were likely to use this quality method (p=0.0003).

**4.5.4 Continuing-education activities**

The discussion under Section 4.5.2 is expanded further in this section, because the researcher anticipated a high degree of involvement in the area of continuing education.

Respondents were asked which continuing education or continuing professional development activities they had been involved in within the last year (questionnaire item 3.2) They were invited to indicate as many as applied to them, and add more if they were involved in activities not listed.

Table 4.10 and Figure 4.8 demonstrate the respondents’ involvement in various continuing education activities, the last five being those listed under ‘other’ in the questionnaire.
### TABLE 4.13: INVOLVEMENT IN CONTINUING EDUCATION ACTIVITIES

<table>
<thead>
<tr>
<th>CPD activity</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-service training</td>
<td>48</td>
<td>60</td>
</tr>
<tr>
<td>Workshop/study day</td>
<td>71</td>
<td>88.8</td>
</tr>
<tr>
<td>Conference</td>
<td>39</td>
<td>48.8</td>
</tr>
<tr>
<td>Course</td>
<td>70</td>
<td>87.5</td>
</tr>
<tr>
<td>Case presentation</td>
<td>34</td>
<td>42.5</td>
</tr>
<tr>
<td>Post-graduate study</td>
<td>25</td>
<td>31.3</td>
</tr>
<tr>
<td>Interest group</td>
<td>2</td>
<td>2.5</td>
</tr>
<tr>
<td>Internet</td>
<td>1</td>
<td>1.25</td>
</tr>
<tr>
<td>Reviewing articles</td>
<td>2</td>
<td>2.5</td>
</tr>
<tr>
<td>Journals/journal club</td>
<td>6</td>
<td>7.5</td>
</tr>
<tr>
<td>Teaching/presenting courses</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**Figure 4.8: Involvement in continuing education activities**
Workshops and courses were the most participated in, with participation from almost 90% of respondents (88.8% and 87.5% respectively). Involvement in postgraduate study was reported by 31.3%. Other activities volunteered by the respondents included interest groups (2.5%), reading journals/attending journal clubs (7.5%), and teaching/presenting courses (5%).

There was an association between length of experience and the likelihood of being recently involved in post graduate study (p=0.0055).

4.5.5 Sources of clinical guidelines/treatment protocols

This section, in common with Section 4.5.4, is also an expansion of the discussion in Section 4.5.2. Continuing on the theme of quality methods related to professional and clinical development, the respondents were asked from where (if they used them in their practice) they obtained clinical guidelines and treatment protocols (question 3.3). They were invited to indicate any or all that applied. The results are represented by Table 4.11 and the graph shown in Figure 4.10. The final three items were responses to the prompt ‘other’ in the questionnaire.

**TABLE 4.11: SOURCES OF CLINICAL GUIDELINES AND TREATMENT PROTOCOLS**

<table>
<thead>
<tr>
<th>Source</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Book</td>
<td>41</td>
<td>51.3</td>
</tr>
<tr>
<td>Special interest group</td>
<td>38</td>
<td>48.7</td>
</tr>
<tr>
<td>Post-graduate study</td>
<td>29</td>
<td>31.3</td>
</tr>
<tr>
<td>Journal</td>
<td>38</td>
<td>47.5</td>
</tr>
<tr>
<td>Internet</td>
<td>30</td>
<td>37.5</td>
</tr>
<tr>
<td>Course/workshop</td>
<td>55</td>
<td>68.8</td>
</tr>
<tr>
<td>Undergraduate study</td>
<td>28</td>
<td>35</td>
</tr>
<tr>
<td>Conference</td>
<td>19</td>
<td>23.8</td>
</tr>
<tr>
<td>Not sure</td>
<td>10</td>
<td>12.5</td>
</tr>
<tr>
<td>Variety of sources</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Peer collaboration</td>
<td>6</td>
<td>7.5</td>
</tr>
<tr>
<td>Own experience</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
The results indicate that courses/workshops were the most used source of clinical guidelines and/or treatment protocols (68.8%). Clinical guidelines and treatment protocols should be based on latest research i.e. evidence based. The respondents’ use of continuing education activities as a source of clinical guidelines fits with the suggestion that participation in professional development activities influences occupational therapists’ ability to utilise research as part of their practice (Craik & Rappolt 2006: 155). Books (51.3%) and special interest groups (48.7%) were also cited as important sources. The special interest groups that were mentioned were South African Institute for Sensory Integration (SAISI) (n=7, 8.8%), Psychiatric Occupational Therapy Special interest group (POTS) (n=1), Private Practitioners Group (INSTOPP) (n=1) and School based Occupational Therapists (SBOT)(n=1).

### 4.5.6 Use of adverse-event monitoring

In anticipation of responses on the use of adverse-event monitoring, a questionnaire item on this was included (questionnaire item 3.5). Results are reflected in Table 4.12 and Figure 4.10.
When queried more closely about use of adverse-event monitoring, it was found that just under half of respondents reported the use of some form of complaint mechanism, and this was the most widely-used form of incident monitoring (46.3%). When invited to provide further examples of adverse-event monitoring, it was quite correctly pointed out by one respondent that reporting mechanisms to the HPSCA is open to all clients/patients as a form of adverse event management. Other respondents cited a ‘self-reporting’ mechanism and use of grievance procedures and monthly reports to managers.

**TABLE 4.12: USE OF ADVERSE-EVENTS MONITORING**

<table>
<thead>
<tr>
<th>Adverse event mechanism</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complaint mechanism</td>
<td>37</td>
<td>46.3</td>
</tr>
<tr>
<td>Anonymous incident reporting</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Health and safety incident reporting</td>
<td>25</td>
<td>31.3</td>
</tr>
<tr>
<td>Grievance procedure</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Use HPSCA</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Self monitoring</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Monthly report</td>
<td>1</td>
<td>1.3</td>
</tr>
</tbody>
</table>
4.5.7 Use of feedback in quality management activities

In order to be truly representative of the quality cycle (Figure 2.2), respondents were asked about how they ‘completed the cycle’ i.e. used feedback and information derived from the use of quality methods in order to promote change (questionnaire item 3.4). These results are shown in Table 4.13 and graphically represented by Figure 4.11. The percentages shown are as a percentage of the total survey sample.
TABLE 4.13: USE OF FEEDBACK IN QUALITY-MANAGEMENT ACTIVITIES

<table>
<thead>
<tr>
<th>Feedback mechanism</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussed with individual therapists</td>
<td>42</td>
<td>52.5</td>
</tr>
<tr>
<td>Targets set for improvement</td>
<td>30</td>
<td>37.5</td>
</tr>
<tr>
<td>In-service training planned</td>
<td>29</td>
<td>36.3</td>
</tr>
<tr>
<td>Results given to managers</td>
<td>27</td>
<td>33.8</td>
</tr>
<tr>
<td>Results used for accreditation</td>
<td>15</td>
<td>18.8</td>
</tr>
<tr>
<td>Remedial action strategies developed</td>
<td>24</td>
<td>30</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Figure 4.11: Use of feedback in quality-management activities

Discussions with therapists as individuals (52.5%) was the most used mechanism to use feedback from quality methods, followed by discussing results and feedback as a team (46.3%). Relative to the use of quality methods, the use of feedback is fairly
low. As discussed in section 2.5, failing to act on feedback to promote change is a common problem.

4.6 OPEN-ENDED RESPONSES

Section 4.4 of the questionnaire invited respondents to comment on their perception of quality management in their workplace, and/or within the profession generally. The opportunity to gather some information in this way assisted to contextualise the inputs and ensure that potentially important or useful information was not missed. 21 OTs (26.3% of all respondents) took the opportunity to provide comments. The researcher listed the comments and sorted them according to a series of key emerging themes.

An issue that emerged prominently was the difficulty of being involved in quality management activities when working in isolation, such as in individual private practice or in Primary Health Care.

Related to this, Primary Health Care OTs, amongst others, also cited a lack of support and knowledge from managers and trainers, who may not necessarily be from the same professional background as them. A lack of policies around quality, and a lack of access to minimum standards were also cited as problematic to some.

A number of respondents reported broadly that, although they believed procedures such as accreditation could be useful, they could also be time-consuming to such an extent that time for patient care is compromised; thus the object of improved care is actually defeated. A need to ‘strike a balance’ was mentioned.

Some individual private practitioners reported that they struggled to see the relevance of quality initiatives to their work. Budget was also identified as a constraint by one respondent.
On a positive note, a number of respondents reported that participating in the survey had been thought provoking and provided impetus for future quality-management initiatives.

4.7 SUMMARY

This chapter has presented an analysis of the data captured from the received survey questionnaires. The following chapter will discuss limitations of the data and findings, draw conclusions, and make final recommendations.
CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This section reviews the initially identified problem, the purpose of the study and the research questions. Limitations are identified and discussed. Conclusions are drawn and, finally, further recommendations are made.

5.2 RECAP OF THE PROBLEM STATEMENT AND PURPOSE OF THE STUDY

An initial deduction was made that at least some OTs in South Africa are involved in quality management, to some extent. However, it was identified that there existed a paucity of information regarding their involvement in quality management, their knowledge of quality management and, more specifically, techniques and methods in use in order to improve quality. The purpose of the study was to describe the extent of OTs' involvement in quality management. Objectives for the study were to:

- Describe the extent to which OTs are involved in quality management and quality improvement activities
- Describe the methods that OTs are using when improving quality
- Make recommendations for the implementation of quality-management programs for use in OT

The first two objectives have been reached by administration of the questionnaire (Appendix C) to the designated sample, with the data analysed to provide the results detailed in the previous chapter. Recommendations made in this chapter will complete the third objective.

The research was structured to describe the level of involvement, the quality frameworks used, and the quality methods and tools used. It was also designed to examine how data is collected and used to implement change.
5.3 CONCLUSIONS

From the results of the data analysis presented in chapter 4, a number of conclusions were drawn, and these are discussed here.

5.3.1 Knowledge of quality frameworks

Most OTs have some knowledge of some quality frameworks and many use them within their work. Formal quality models such as TQM and clinical governance are the least known about or utilised. Almost all OTs make use of or know about at least one relevant quality concept. The Patients’ Charter is a broadly familiar concept across all sectors where OTs are employed, although, possibly due to a considerable proportion of the sample being from the non-government sector, there is less familiarity with the government-led ‘Batho Pele’ approach to service quality.

5.3.2 Use of minimum standards

Most practitioners make use of some form of minimum standards. Mission statements and the use of objectives or statement of purpose are not widely used, possibly because of a high representation in the sample of individual and non-government practitioners. Such statements are more likely to be evident in larger organisations and the public sector. However, their use is associated with utilising standards and other service-guidance activities such as policies and procedures.

OTs using standards of practice source them predominantly from within the OT profession, or from the HPCSA. This is encouraging, as the literature predominates that setting standards from within the profession is fundamentally positive, as standards will be relevant, achievable, and realistic if set by those who understand the challenges and emphasis of the profession (Foote et al. 2006:6).

5.3.3 Use of Donabedian’s structure–process–outcome model

The results in Chapter 4 indicate that OTs are more likely to use standards for process aspects of service delivery, i.e. for the actual treatment and care process of
the client or patient, than for other areas. Following that, they are most likely to use standards for structural aspects of their working environment such as equipment/facilities, health and safety, and financial management. Outcomes standards are the least likely to be used. This reflects the difficulty in measuring outcomes, which, as discussed in Section 2.3.3, is considered to be more difficult than measuring process and structure owing to confounding influences.

Setting standards to guide how, when and where outcomes are measured is an essential area for further investigation, as treatment outcomes in the form of improved quality of life through improved function and adaptive responses are the ultimate goal of treatment for OTs. However, it is encouraging that OTs mainly utilise process standards, as measuring process is considered highly effective for ensuring high-quality care (Mant 2001:475) and should, therefore, also be encouraged.

5.3.4 Quality-management methods

A range of quality-management methods exists that OTs are involved in to some degree. Defining methodology by that related to audit/criteria-setting, that related to professional and clinical development, and that directly evolving from the key quality models provided a useful way of identifying, with greater clarity, the types of quality activities that OTs are involved in.

According to findings detailed in Section 4.5.1 of Chapter 4, documentation audit is used by most OTs, at varying intervals, and they are widely aware of this technique as a quality-management method. Most OTs are aware of accreditation as a quality method, with just under half being involved in accreditation procedures.

Of quality-management methods related to professional development, CPD is highly prominent. Just under half of OTs make use of clinical guidelines and protocols; even fewer actively use EBP in their work. Although OTs may well use EBP in a more passive sense, such as in sharing evidence-based clinical guidelines with colleagues, an increasing emphasis on EBP in healthcare generally suggests that these related areas may benefit from more attention from within the profession locally.
For quality methods that are directly associated with quality frameworks and models, quality meetings stand out as the most utilised, and there exists a high level of awareness of patient satisfaction measurement and individual performance management. Despite this awareness, the latter two methods may be challenging to put into use for individually employed practitioners, who made up a major part of the sample.

Key findings from the Chapter 4 analysis, relating to quality methods, are discussed in greater detail in the following sub-sections.

5.3.4.1 Use of documentation audit

The evidence suggests that most OTs are involved in documentation audit in some form (Section 4.5.1). According to the literature search, no standardised documentation-auditing tools exist for OT and the questionnaire did not solicit the submission of such.

Documentation audits are a valid starting point for quality activities (Hartigan 1995:187) and, given the increasingly litigatious environment that South African healthcare practitioners operate in (Pepper & Slabbert 2011:29); (Bateman 2011: 216), it would be judicious to support and encourage this quality activity. This is true both for those OTs who are already involved in documentation audit and as a starting point for OTs’ involvement in quality-management activities. It may be helpful for the profession to develop standardised auditing tools, with greater consensus on minimum standards for documentation than currently exists.

5.3.4.2 Professional development

In terms of professional development, including the development of clinical knowledge, there exists a universality that is not associated with any particular quality model, concept or framework. EBP and the use of clinical guidelines result from the development of clinical knowledge - OTs make some use of clinical guidelines and, and may be making better use of EBP than they perceive, given that the former is generally considered to be a consequence of the latter (Taylor
2007:156). However, the results do not provide any detail on exactly how OTs make use of clinical guidelines and evidence-based practice. In reality it may be more challenging to implement EBP effectively (Buchanan, Jelsma & Sigfried 2009).

5.3.4.3 Methods derived from models and frameworks

Of the quality methods that are directly derived from or associated with particular quality frameworks, quality meetings are the most used. Individual performance management is also fairly well utilised, and there is high awareness, if less use, of other methods such as benchmarking, patient-satisfaction surveys and adverse events monitoring. These latter methods, unsurprisingly, are not so well utilised by individual private practitioners, and this also highlights some of the difficulties that practitioners working alone face when implementing quality activities.

OTs often work in relative professional isolation, both in government and in private practice, and these practitioners find it particularly difficult to implement quality-improvement measures or quality-management techniques; this was also expressed prominently in Section 4.6 of Chapter 4. Given that OTs in South Africa work extensively in such circumstances, it is important that these practitioners are aware of the relevance of quality management to their work, and that information and support exists to enable them to implement quality management.

5.3.5 Adverse-event monitoring

The findings reported in Section 4.5.6 of Chapter 4 suggest that there is presently little use of adverse-event monitoring in the profession; less than half of OTs have a local complaints mechanism of some kind, with even fewer making use of other adverse-incident management mechanisms.

OTs may need encouragement to explore this area of service delivery and quality management, given the increasing attention both locally and globally in managing risk in its various forms. Particular areas of emphasis include the management of spiralling healthcare costs, safe working practices and clinical risk (Koning et al. 2006:11); (Professional standards ... 2007:65); (Ovretveit & Tolf 2009: 5).
5.3.6 Using feedback to promote change

OTs are failing to close the gap between implementing quality activities and acting on feedback or outcomes of quality techniques. Reflected by information in Section 4.5.7 of Chapter 4, some OTs report the use of discussions within their teams or with individual therapists as mechanisms for using feedback; however, very few identified the use of more concrete actions, such as remediation strategies or further training.

Qualitative feedback reported in Section 4.6 also suggests that activities such as accreditation are often ‘paper-based’ and that the end goal becomes the accreditation itself rather than making tangible changes in the areas identified as deficient. These challenges around fostering long-term change are unlikely to be unique to the profession or to the South African setting, but still need to be addressed.

5.4 RECOMMENDATIONS

Arising from the conclusions drawn are summarised recommendations.

5.4.1 Recommendations for occupational therapy practice

- Increased standardisation for documentation, and its auditing, should be promoted and advocated for.
- The HPSCA professional board already sets broad minimum standards and should remain the guiding mechanism for standards. OTs should be encouraged to work within the profession for guiding standards, principles and procedures, particularly with regards to profession-specific processes such as treatment and care planning.
- Quality meetings, for those in a position to meet, are a potentially useful starting point for quality activities and should be encouraged.
• Quality management could be included in or emphasised in OT curricula. When OT students are allocated in practice for experiential learning, quality management should be brought to the attention of these students.
• Specific support and information should be available for OTs who work in relative professional isolation, to enable them to participate more widely in quality management.

5.4.2 Recommendations for further research

• An investigation could be done to research the gap between the perception of knowledge of EBP and its implementation in practice.
• Forms of adverse-events monitoring, such as health and safety monitoring, need to be explored for relevance, and further encouraged and developed, particularly in a climate of increasing litigation for both clinical and non-clinical events.
• Research related to the development of OT specific standardised auditing tools could be done. This could include minimum standards for documentation.
• A study comparing quality management in the public and private sectors could be done.
• Best practices in quality management for OT could be investigated.
• Barriers to implementing quality management need to be explored further to ensure that quality frameworks and methods used are effective in promoting genuine and tangible change for the better.
• The researcher makes recommendations for a quality framework for occupational therapy (see next section) – if such a framework is implemented, the impact thereof could be researched.
• In order to keep pace with changes to healthcare policy, priorities and health systems, quality management must be a dynamic process. This research provides insights into the current situation, but it is recommended that further monitoring of how quality management is carried out within the profession should be ongoing.
5.4.3 Recommendations for a proposed quality framework for occupational therapy in South Africa

5.4.3.1 Introduction

Drawing on findings from the research, both through the literature search and through key findings from the questionnaire, recommendations for a quality-management framework for the profession are suggested. By making use of a framework, wider knowledge and challenges in implementing quality healthcare can be incorporated with profession-specific challenges and local issues. Existing mechanisms and areas of strength can be incorporated, in order to expand and build upon them. Locally relevant information about techniques and methods can be encompassed.

There are a number of ways that a framework could be adopted and disseminated; for example, at registration board level, through the OTASA, or via a special interest group organised by practitioners. The decision would lie with the profession collectively as to how it could be utilised. This could be, for example, by using the framework when initiating proactive measures by the profession to evaluate, maintain and improve the quality of OT practice generally, or, alternatively, as a readily-available guideline for practitioners or organisations with an interest in, or mandate for, quality management.

The following subsections detail key recommendations and guiding principles for a proposed quality framework, followed by an outline of how it could be implemented.

5.4.3.2 Key recommendations and guiding principles

- Framework to be based upon the structure–process–outcome model.
- An emphasis on cost–effectiveness and accessibility of OT services.
- Relevant to the challenges and needs of practitioners who work in relative professional isolation.
- Relevant to both public and private sector practice.
- Responsive to both clients/patients and funders (e.g. government departments, medical insurers) – a ‘client-centred’ approach.
- Build upon existing quality initiatives both within the profession and within the sectors in which OTs are employed.
- Continued emphasis on clinical development and implementation of EBP, promoted through CPD activities and special-interest groups.
- The development of adverse-event and risk-management strategies.

5.4.3.3 Recommended practical implementation

- Minimum standards should be set, relevant to practice settings, and developed from within the profession.
- Audit methods that can be carried out by practitioners in a variety of settings should be developed and implemented.
- Communication and networking structures for quality management should be established, to promote the inclusion of all practitioners.
- Adverse-event and risk-management activities should be implemented.
- Guidance should be provided on using feedback from quality methods to make quality improvements in practice.
- Implementation could be done via one of the options previously discussed in Section 5.4.3 (e.g. HPCSA professional board, OTASA, special-interest group).

5.5 LIMITATIONS

5.5.1 Sample bias

Convenience sampling was used. The use of sub-groups of OTs means that the respondents may differ in some respects to the actual population of OTs in South Africa. There may be inherent bias due to the nature of the membership profile of the group.
It is likely that the respondents are over-represented by OTs involved in quality management, as practitioners who do not participate in quality activities, or who have limited knowledge of the subject, would have been less likely to respond.

5.5.2 Low response rate

The response rate was low, at just above 5%. This, in addition to the issue discussed in 5.5.1, means that generalisation of the results is limited, as the respondents may not be truly representative of the entire population of OTs. Further investigation into the reason why the response rate was low would assist future research efforts, both in this subject and for other research using the population in question. Identifying characteristics of the non-respondents would have assisted in determining how representative the responding sample was.

5.5.3 Terminology

There is evidence to suggest that some questions in the questionnaire were ambiguous, and some of the terminology uncertain to the respondents. These ambiguities in understanding some of the terms used were not identified from pre-testing of the questionnaire and will have affected the validity of the study. For example, 79% of respondents reported obtaining standards of practice from the HPCSA, which is more than the 76.3% who, in the previous question, reported using standards. Another area of misinterpretation was in the understanding of the method ‘observation of practice’, which was scored very highly as a frequently used quality method, to a degree unlikely in practice. A decision was made when devising the questionnaire to strike a balance between providing the respondents with definitions of certain terms used in the study, and in allowing the study to measure respondents’ perceived knowledge about certain quality-management concepts. An unwanted side effect of this decision may have been a tendency for respondents to indicate a positive response rather than indicate a lack of knowledge. Additionally, although there was a list of terms at the start of the questionnaire, this list may not have been as effective in prompting respondents’ knowledge as the questions were themselves.
5.6 SUMMARY

Maxwell (1984:1470) informed us that “concern about the quality of care must be as old as medicine itself … but not the same as methodical assessment based on reliable evidence.” This research has provided a basis for improving the OT profession’s ability to make such assessments; it was carried out in response to a need, informed by an extensive literature search, to explore and detail OTs’ knowledge and use of quality management and its related concepts and activities.

The research examined the extent to which OTs are involved in quality-management activities, and compared the methods that OTs use when aiming to improve quality. The conclusions drawn from the research provide recommendations for the development of a framework for co-ordinated implementation of quality management in the profession.

Quality in healthcare not only reflects the values and goals of the healthcare system, but also of the larger society in which we participate (Donabedian 2005:692). Mainz & Bartels (2006:79) remind us that “quality improvement methods and frameworks are here to stay.” Addressing quality management in OT, through means of this research, may assist in encouraging the profession to engage fully and meaningfully in its contribution to the quality of the nation’s healthcare and its health outcomes.
BIBLIOGRAPHY

The bibliography is presented in five (5) sub-sections

Books


**Journal articles**


**Internet sources**


Research


Other sources


COHSASA. See Council of Health Service Accreditation of South Africa. 2003.


Health Professions Council of South Africa. 2006. Standards of Practice for Occupational Therapists. Form 265. Pretoria, South Africa: HPCSA.


HPCSA. 2011. See Health Professions Council of South Africa. 2011


ANNEXURE A

ETHICS APPROVAL
SUMMARY SHEET FOR THE ETHICAL CLEARANCE OF POSTGRADUATE STUDENT PROPOSALS FOR DISSERTATIONS

The Higher Degrees Committees in Departments in the College of Human Sciences are reminded that they should make their students aware of the policy for research ethics of UNISA available at:

A CANDIDATURE DETAILS

A1 NAME OF CANDIDATE
Helen E Robinson – Master of Public Health Student

A2 ACADEMIC AND PROFESSIONAL QUALIFICATIONS
B Sc (Occupational Therapy)
HPCSA – Occupational Therapist

A3 THESIS/DISSERTATION TITLE
Measuring Quality in Occupational Therapy

A4 PERSONAL PARTICULARS
(a) student number: 3592-186-2
(b) current address: P O Box 482 Mafikeng 2745
(c) e-mail: msinsi@telkomsa.net
(d) telephone number(s): 0865127277

A5 PROMOTER(S)/SUPERVISOR(S)
(a) Initials & surname: Dr A D H Botha
(b) Contact details: 0124298814
(c) Department: Health Studies

B PROPOSAL SUMMARY SHEET

B1 RESEARCH OBJECTIVES

To describe the extent to which occupational therapists are involved in quality improvement activities

To describe and compare the methodology that occupational therapists are using when measuring quality of care
B2 RESEARCH DESIGN
Quantitative methodology. Survey.

B3 HOW SHOULD THIS STUDY BE CHARACTERISED? (Please tick all appropriate boxes.)

<table>
<thead>
<tr>
<th>Personal and social information collected directly from participants</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participants to undergo physical examination*</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Participants to undergo psychometric testing**</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Identifiable information to be collected about people from available records (e.g. medical records, staff records, student records, etc.)</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

*For medical or related procedures, please submit an application to a medical ethics committee.
**Please add details on copyright issues related to standardized psychometric tests.

B4 WHAT IS THE AGE RANGE OF THE INTENDED PARTICIPANTS IN THIS STUDY?
23 years and above

B4.1 If the proposed participants are 18 years and older, is the informed consent form for participants attached?

Yes | No | Not applicable X

B.4.2 If the proposed participants are younger than 18 years, are consent and assent forms attached? (In order for minors - younger than 18 years of age - to participate in a research study, parental or guardian permission must be obtained. For minors a youth assent form is required.)

Yes | No | Not applicable X

B4.3 Description of the process for obtaining informed consent (if applicable)

B5. DESCRIPTION OF THE RISKS POSED BY THE PROPOSED STUDY WHICH RESEARCH PARTICIPANTS MAY/WILL SUFFER AS WELL AS THE LEVEL OF RISK (please consider any discomfort, pain/physical or psychological problems/side-effects, persecution, stigmatisation or negative labelling)

No risks
B6. DESCRIPTION AND/OR AMOUNTS OF COMPENSATION INCLUDING
REIMBURSEMENTS, GIFTS OR SERVICES TO BE PROVIDED TO PARTICIPANTS (IF
APPLICABLE) (Will the participants incur financial costs by participating in this study? Will
incentives be given to the participants for participation in this study?)

N A

B7. DESCRIPTION FOR ARRANGEMENT FOR INDEMNITY (IF APPLICABLE)

N A

B9. DESCRIPTION OF STEPS TO BE UNDERTAKEN IN CASE OF ADVERSE EVENTS
OR WHEN INJURY OR HARM IS EXPERIENCED BY THE PARTICIPANTS
ATTRIBUTABLE TO THEIR PARTICIPATION IN THE STUDY

N A

C CANDIDATE’S STATEMENT AGREEING TO COMPLY WITH ETHICAL PRINCIPLES
SET OUT IN UNISA POLICY ON RESEARCH ETHICS

I, Helen Elizabeth Robinson (Name of student) declare that I have read the policy for research ethics of UNISA and that this form is a true and accurate reflection of the methodological and ethical implications of my proposed study. I shall carry out the study in strict accordance with the approved proposal and the ethics policy of UNISA. I shall maintain the confidentiality of all data collected from or about research participants, and maintain security procedures for the protection of privacy. I shall record the way in which the ethical guidelines as suggested in the proposal has been implemented in my research. I shall work in close collaboration with my promoter(s)/supervisor(s) and shall notify my promoter(s)/supervisor(s) in writing immediately if any change to the study is proposed. I undertake to notify the Higher Degrees Committee in writing immediately if any adverse event occurs or when injury or harm is experienced by the participants attributable to their participation in the study.

(Signature) 5/11/2009 (Date)
D OBSERVATIONS BY THE HIGHER DEGREES COMMITTEE OF THE DEPARTMENT

D1. Is the proposal of an acceptable standard?

YES [ ]
NO, IT SHOULD BE REFERRED BACK TO THE CANDIDATE [ ]

COMMENTS:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

D2. Are all reasonable guarantees and safeguards for the ethics of this study covered?

YES [ ]
NO, IT SHOULD BE REFERRED BACK TO THE RESEARCHER [ ]

COMMENTS:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

We have reviewed this completed Summary Sheet and are satisfied that it meets the methodological, technical and ethical standards as set in our Department and that it is in compliance with the UNISA policy on research ethics.

Signed: ______________  ______________
Name: J.T. Elferses  A. D. H. Botha
Date: 3 November 2009  3 November 2009
ANNEXURE B

Survey on quality management in occupational therapy in health services

The survey is divided into 4 short sections. Some of the concepts used in this study that you might be familiar with under a different name will be explained first. After each question there are a number of answers to choose from. Please indicate your answer by typing or writing an ‘x’ in the relevant space. Where indicated in the question you may choose more than one answer if it is applicable to you.

Section 1: Explanation of some terms used

<table>
<thead>
<tr>
<th>Concept/term</th>
<th>Explanation/Clarification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Accreditation</td>
<td>A process where a hospital or health service provider is measured against standards set by an outside agency, which might involve inspections or audits. E.g. The Council of Health Service Accreditation of South Africa (COHSASA), International Standards Organisation (ISO)</td>
</tr>
<tr>
<td>1.2 Continuous professional development</td>
<td>Any continuing education activity, such as in-service training, attendance at conferences, courses or workshops.</td>
</tr>
<tr>
<td>1.3 Individual performance management</td>
<td>A system where staff members have an agreed work-plan with expected levels of achievement, often linked to promotion, pay progression etc.</td>
</tr>
<tr>
<td>1.4 Outcomes measures</td>
<td>A standardised method of measuring the outcome of therapy e.g. Functional Independence Measure (FIM), Canadian Occupational Performance Measure (COPM), Assessment of Motor/Process Skills (AMPS)</td>
</tr>
<tr>
<td>1.5 Adverse event monitoring</td>
<td>A system for recording unwanted occurrences, such as having an incident book, a complaint system or a ‘hotline’.</td>
</tr>
<tr>
<td>1.6 Integrated care pathway/collaborative care plan</td>
<td>A formal guideline for patient care that guides the inputs of the various health professionals (multi-disciplinary team) involved in the care of a patient</td>
</tr>
<tr>
<td>1.7 Evidence based practice</td>
<td>Treatment techniques that are based on established research evidence.</td>
</tr>
</tbody>
</table>
Section 2: Quality frameworks and approaches to quality management.

2.1 Indicate the extent to which you are familiar with the following quality frameworks, models and related concepts

<table>
<thead>
<tr>
<th>Quality framework</th>
<th>I have no knowledge of this</th>
<th>I know about this, but don’t use it</th>
<th>I currently use this in my workplace/practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.1 Accreditation</td>
<td></td>
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<tr>
<td>2.1.2 Quality/audit cycle</td>
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<td>2.1.3 Batho Pele</td>
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<tr>
<td>2.1.4 Patients’ Rights Charter</td>
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<tr>
<td>2.1.5 Clinical governance</td>
<td></td>
<td></td>
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<tr>
<td>2.1.6 Continuous quality improvement</td>
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<tr>
<td>2.1.7 Structure/process/outcome model</td>
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<tr>
<td>2.1.8 Quality assurance</td>
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<tr>
<td>2.1.9 Total quality management</td>
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</tr>
<tr>
<td>2.1.10 Other (please specify):-</td>
<td></td>
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</tr>
</tbody>
</table>

2.2 Indicate which of the following aspects are used in your workplace:

<table>
<thead>
<tr>
<th>2.2.1 Statements of mission and or philosophy and or values of the organisation</th>
<th>Yes</th>
<th>No</th>
<th>Not sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2.2 Statements of purpose and or objectives of the organisation</td>
<td></td>
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<tr>
<td>2.2.3 Minimum standards of practice</td>
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<tr>
<td>2.2.4 Written policies or procedures</td>
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</tbody>
</table>
2.3 If you use standards of practice in your work, please indicate from the options listed below where they are obtained from (indicate any/all that apply):

<table>
<thead>
<tr>
<th>Standards of practice options</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.3.1 HPCSA</td>
</tr>
<tr>
<td>2.3.2 Accreditation process</td>
</tr>
<tr>
<td>2.3.3 Devised within the OT department/practice</td>
</tr>
<tr>
<td>2.3.4 Provided by managers</td>
</tr>
<tr>
<td>2.3.5 Not sure where standards of practice used in my work place are obtained from</td>
</tr>
<tr>
<td>2.3.6 Other source (please specify)</td>
</tr>
</tbody>
</table>

2.4 If you use minimum standards and/or written policies in your work, please indicate what areas of OT service they are for (indicate any/all that apply):

<table>
<thead>
<tr>
<th>Areas of practice that minimum standards / written policies are used in</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.4.1 Health and safety</td>
</tr>
<tr>
<td>2.4.2 Space</td>
</tr>
<tr>
<td>2.4.3 Facilities</td>
</tr>
<tr>
<td>2.4.4 Equipment</td>
</tr>
<tr>
<td>2.4.5 Use of resources</td>
</tr>
<tr>
<td>2.4.6 Financial management</td>
</tr>
<tr>
<td>2.4.7 Staffing</td>
</tr>
<tr>
<td>2.4.8 Assessment</td>
</tr>
<tr>
<td>2.4.9 Treatment/care planning</td>
</tr>
<tr>
<td>2.4.10 Treatment implementation</td>
</tr>
<tr>
<td>2.4.11 Evaluation of treatment</td>
</tr>
<tr>
<td>2.4.12 Outcomes attained</td>
</tr>
<tr>
<td>2.4.13 Performance indicators</td>
</tr>
<tr>
<td>2.4.14 Other (please indicate):</td>
</tr>
</tbody>
</table>
### Section 3: Quality management activities and methods

3.1 Please indicate if you are familiar with the following quality management activities and methods:

<table>
<thead>
<tr>
<th>Activity</th>
<th>I have no knowledge of this</th>
<th>I know about this but don’t use it</th>
<th>This is used in my workplace/practice on a daily basis</th>
<th>This is used in my workplace/practice weekly</th>
<th>This is used in my workplace/practice monthly</th>
<th>This is used in my workplace/practice at variable intervals/no fixed time</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1.1 Continuous professional development</td>
<td></td>
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<tr>
<td>3.1.2 Documentation audit and or records review</td>
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<td>3.1.3 Individual performance management</td>
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<td>3.1.4 Clinical guidelines and or treatment protocols</td>
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<td>3.1.5 Patient satisfaction survey</td>
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<td>3.1.6 Peer review</td>
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<td>3.1.7 Benchmarking</td>
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<td>3.1.8 Evidence based practice</td>
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<td>3.1.9 Observation of treatment</td>
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<tr>
<td>3.1.10 Accreditation, inspection and or external audit</td>
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<tr>
<td>3.1.11 Adverse event monitoring</td>
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<tr>
<td>3.1.12 Integrated care pathways</td>
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</tr>
</tbody>
</table>
and or collaborative care plans

<table>
<thead>
<tr>
<th>3.1.13 Quality improvement projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1.14 Regular quality meetings</td>
</tr>
<tr>
<td>3.1.15 Utilisation review</td>
</tr>
<tr>
<td>3.1.16 Case presentations</td>
</tr>
<tr>
<td>3.1.17 Clinical audit</td>
</tr>
<tr>
<td>3.1.18 Standardised functional outcome measures - please state which one(s):-</td>
</tr>
<tr>
<td>3.1.19 Other (please give details):-</td>
</tr>
</tbody>
</table>

3.2 If you are involved in continuous professional development or continuing education activities, please indicate which ones you have made use of in the past year (indicate any/all that apply):

<table>
<thead>
<tr>
<th>Continuous professional development / continuing education activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2.1 In-service training</td>
</tr>
<tr>
<td>3.2.2 Workshop</td>
</tr>
<tr>
<td>3.2.3 Conference attendance</td>
</tr>
</tbody>
</table>
3.2.4 Courses
3.2.5 Case presentations
3.2.6 Post graduate study
3.2.6 Study day
3.2.7 Other (please indicate):

3.3 If you use clinical guidelines or treatment protocols in your workplace/practice, please indicate where the guidelines or protocols were obtained from (indicate any/all that apply):

<table>
<thead>
<tr>
<th>Source where guidelines / protocols were obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.3.1 Journal</td>
</tr>
<tr>
<td>3.3.2 Internet</td>
</tr>
<tr>
<td>3.3.3 Book</td>
</tr>
<tr>
<td>3.3.4 Special interest group (e.g. SASHT, SAISI, POTS, SANDT) – specify which</td>
</tr>
<tr>
<td>3.3.5 Course/workshop attended</td>
</tr>
<tr>
<td>3.3.6 Undergraduate study</td>
</tr>
<tr>
<td>3.3.7 Postgraduate study</td>
</tr>
<tr>
<td>3.3.8 Conference</td>
</tr>
<tr>
<td>3.3.9 Not sure of the origin</td>
</tr>
<tr>
<td>3.3.10 Other (please specify):-</td>
</tr>
</tbody>
</table>

3.4 If feedback is given or results of quality management methods are given in your workplace, how is it done?

<table>
<thead>
<tr>
<th>Method of feedback regarding quality management</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.4.1 Discussed by the OT team</td>
</tr>
<tr>
<td>3.4.2 Results given to managers</td>
</tr>
</tbody>
</table>
3.4.3 Results used for accreditation
3.4.5 Discussed with individual therapists
3.4.6 Targets for improvement are set, with re-evaluation
3.4.7 Remedial action strategies are developed
3.4.8 In-service training is planned
3.4.9 Other (please specify):

3.5 Please indicate which of the following methods for monitoring adverse events is available in your practice or workplace (indicate any/all that apply):

<table>
<thead>
<tr>
<th>Adverse event monitoring method</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.5.1 Patients or service user complaint mechanism</td>
</tr>
<tr>
<td>3.5.2 Anonymous incident reporting (e.g. hotline)</td>
</tr>
<tr>
<td>3.5.3 Health and safety incident reporting</td>
</tr>
<tr>
<td>3.5.4 Other (please specify):</td>
</tr>
</tbody>
</table>

Section 4: Demographic information, for statistical purposes

4.1 Please indicate which sector you work in (indicate any or all that apply):

<table>
<thead>
<tr>
<th>Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1.1 Government hospital – district or regional</td>
</tr>
<tr>
<td>4.1.2 Government hospital – specialist or academic</td>
</tr>
<tr>
<td>4.1.3 Government: primary healthcare</td>
</tr>
<tr>
<td>4.1.4 Government: head office or senior manager</td>
</tr>
<tr>
<td>4.1.5 Government: education</td>
</tr>
</tbody>
</table>
4.1.6 Government: other (specify)

4.1.7 Private practice - individual
4.1.8 Private practice - group
4.1.9 Private clinic
4.1.10 Private hospital
4.1.11 NGO
4.1.12 Other: please specify

4.2 Please indicate your years of experience in the field:—

<table>
<thead>
<tr>
<th>4.2.1</th>
<th>Doing community service</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2.2</td>
<td>1 – 5 yrs</td>
</tr>
<tr>
<td>4.2.3</td>
<td>6 - 10 yrs</td>
</tr>
<tr>
<td>4.2.4</td>
<td>11 – 15 yrs</td>
</tr>
<tr>
<td>4.2.5</td>
<td>16 – 20 yrs</td>
</tr>
<tr>
<td>4.2.6</td>
<td>21 years or more: please specify</td>
</tr>
</tbody>
</table>

4.3 Please indicate your highest level of training:—

<table>
<thead>
<tr>
<th>Qualification</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.3.1 Degree</td>
</tr>
<tr>
<td>4.3.2 Postgraduate diploma</td>
</tr>
<tr>
<td>4.3.3 Masters</td>
</tr>
<tr>
<td>4.3.4 Doctorate</td>
</tr>
</tbody>
</table>

4.4 Please feel free to add any comments on your perception/opinion of quality and its management in your workplace and/or in the profession generally:—

..................................................................................................................................................
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If you received this survey by email, please ‘save’ the survey with your marked x’s, and attach it to a return email to:  msinsi@telkomsa.net

If you received the survey by post, please put the completed survey in the return envelope and post it.

If you have any queries, please email them to msinsi@telkomsa.net, or phone 082 7143003.

Thank you for your participation.
Dear Colleague,

There is currently renewed emphasis on improving and maintaining quality in health services. I am a Master of Public Health student at UNISA, and have an interest in quality management in occupational therapy.

With this letter, I am requesting your help, as a practicing occupational therapist, to share information on any experience, knowledge and involvement you have had in quality initiatives. Please complete the attached survey-questionnaire, whatever your knowledge of quality management - every OT’s perspective on this issue is relevant. The questionnaire should take about 15 - 20 minutes.

The purpose of the study is to describe the extent to which OTs are involved in quality management, to discover what methodology is being used, and to develop guidelines for quality management in occupational therapy. The data will be used for a Master of Public Health degree research report; the title of the research is ‘Quality management in occupational therapy in health services’. My study supervisor is Prof Annali Botha (tel: 0124298814). Participation is entirely voluntary and is confidential. Informed consent will be presumed if you complete the questionnaire and return it.

If you received this by email, right-click on the other attachment ‘Quality Survey’ and ‘save as’ to the ‘Documents’ section on your PC. Open the survey from your ‘Documents’, complete it, then save it. Then attach it to a return email to me, Helen Robinson: msinsi@telkomsa.net, by 31\textsuperscript{st} March 2010. If you received this by post, please complete the questionnaire, place it in the return envelope and post it. If you have any queries or difficulty, please contact me at this email address; alternatively phone 082 7143003.

If you would like feedback on the results, please let me know when you return the questionnaire.

Thank you in advance for your participation

Helen Robinson
Occupational Therapist and Master of Public Health student