Service quality in professional health services

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# Contents

Abstract ................................. viii  
Declaration ............................ x  
List of publications ........................ xi  
Acknowledgements ........................ xii  

1 Introduction ............................ 1  
1.1 Background to the research ........ 1  
1.2 Research problem .................... 2  
1.3 Justification for the research ....... 6  
1.4 Methodology ........................... 9  
1.5 Outline ............................... 10  
1.6 Definitions and terminology ........ 11  
1.7 Limitations of the research and key assumptions .... 12  
1.8 Conclusion ........................... 12  

2 Literature Review ...................... 14  
2.1 Introduction .......................... 14  

2.2 Services .............................. 14  
2.2.1 Definition of services .......... 15  
2.2.2 Intangibility of services ...... 17  
2.2.3 Classification of services ..... 18  
2.2.4 Professional services ......... 21  
2.2.5 Professional health services .... 23  
2.2.6 Description of the professional health service .... 25
2.3 Service marketing and service quality
2.3.1 Service quality
2.3.2 Nordic School
2.3.3 Gap Analysis Model
2.3.4 Other directions
2.3.5 Discussion around the models of quality
2.3.6 Description of service quality for this research
2.3.7 Determinants of service quality
2.3.8 Health care quality
2.3.9 Understanding health services quality
2.3.10 Description of professional health service quality

2.4 Service management for quality
2.4.1 Service management
2.4.2 Professional services management for quality
2.4.3 Marketing relationships
2.4.4 Strategy
2.4.5 Description of professional health services management

2.5 Research issues and question

2.6 Conclusion

3 Methodology

3.1 Introduction

3.2 Justification of the paradigm
3.2.1 Positivism
3.2.2 Critical theory and constructivism
3.2.3 Realism

3.3 Justification of the methodology
3.3.1 Comparison with alternatives
3.3.2 Definitions
3.3.3 Building theory from case study research
3.3.4 Criteria for judging the quality of case study design
3.3.5 Prior theory

3.4 Criteria for case selection and their number
3.4.1 Case study design
3.4.2 Choice of a single embedded case study design
3.4.3 Number of selected embedded studies
3.4.4 Data sources

3.5 Case study procedures

3.6 Case study protocol
3.6.1 Recruitment for interviews
3.6.2 Case study database
3.7 Case study interview
3.8 Pilot case study
3.9 Case study analysis procedures
3.10 Limitations of the design
3.11 Conclusion

4 Results
4.1 Introduction
4.2 Pilot study
  4.2.1 Techniques used to monitor physiotherapy services
  4.2.2 Other payers
  4.2.3 Management approach
  4.2.4 Conclusion
4.3 Main study
4.4 Respondents
4.5 Patterns of data for each stakeholder
  4.5.1 Patients
  4.5.2 Payers
  4.5.3 Health care providers
  4.5.4 Physiotherapists
4.6 Overview of common issues
4.7 Conceptualisation of patterns of data
  4.7.1 Service encounter quality
  4.7.2 Service management
  4.7.3 Management styles of the health professionals
  4.7.4 Quality drivers overall
4.8 Conclusion

5 Conclusion and implications
5.1 Introduction
5.2 Conclusions about research questions
  5.2.1 Service encounter quality
  5.2.2 Service management for quality
5.3 Conclusions about the research problem
   5.3.1 Service quality in professional health services
   5.3.2 Management for service quality
   5.3.3 Contributions to the body of knowledge
   5.3.4 Theory of service quality in professional health services

5.4 Implications for theory
   5.4.1 Contributions to services marketing theory
   5.4.2 Contributions to professional services theory
   5.4.3 Contributions to marketing relationships theory
   5.4.4 Contributions to theory of service quality strategy

5.5 Implications for policy and practice
   5.5.1 Implications for the health care professionals
   5.5.2 Implications for the professional and health service organisation

5.6 Limitations of the research

5.7 Implications for further research

5.8 Summary

References

Appendices
List of tables

<table>
<thead>
<tr>
<th>Table</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Service quality in health care: Research process</td>
<td>10</td>
</tr>
<tr>
<td>1.2</td>
<td>Thesis outline</td>
<td>11</td>
</tr>
<tr>
<td>2.1</td>
<td>Process for the identification of research questions and theoretical framework</td>
<td>14</td>
</tr>
<tr>
<td>2.2</td>
<td>References to intangibility of service products in the literature</td>
<td>17</td>
</tr>
<tr>
<td>2.3</td>
<td>Service dimensions identified in the literature</td>
<td>19</td>
</tr>
<tr>
<td>2.4</td>
<td>Types of service</td>
<td>20</td>
</tr>
<tr>
<td>2.5</td>
<td>Professional services definition</td>
<td>22</td>
</tr>
<tr>
<td>2.6</td>
<td>Determinants of service quality</td>
<td>46</td>
</tr>
<tr>
<td>2.7</td>
<td>Overview of studies of service quality in health care</td>
<td>51</td>
</tr>
<tr>
<td>2.8</td>
<td>Patient roles in the health care decision making process</td>
<td>60</td>
</tr>
<tr>
<td>3.1</td>
<td>Methodology structure</td>
<td>81</td>
</tr>
<tr>
<td>3.2</td>
<td>Basic belief systems of alternative inquiry paradigms</td>
<td>84</td>
</tr>
<tr>
<td>3.3</td>
<td>Ontological assumptions of the realist view of science</td>
<td>87</td>
</tr>
<tr>
<td>3.4</td>
<td>Positivism and realism compared</td>
<td>88</td>
</tr>
<tr>
<td>3.5</td>
<td>Selecting the appropriate research method</td>
<td>93</td>
</tr>
<tr>
<td>3.6</td>
<td>Process of building theory from case study research</td>
<td>103</td>
</tr>
<tr>
<td>3.7</td>
<td>Case study design tests of validity and reliability compared to alternative tests</td>
<td>105</td>
</tr>
<tr>
<td>3.8</td>
<td>Four basic types of case study design</td>
<td>115</td>
</tr>
<tr>
<td>3.9</td>
<td>Sampling for the research design</td>
<td>121</td>
</tr>
<tr>
<td>3.10</td>
<td>Criticisms of case study research and strategies to overcome them</td>
<td>136</td>
</tr>
<tr>
<td>4.1</td>
<td>Indicators of quality physiotherapy from analysis of data</td>
<td>140</td>
</tr>
<tr>
<td>4.2</td>
<td>Research design with number of selected stakeholders and interviews</td>
<td>145</td>
</tr>
<tr>
<td>4.3</td>
<td>Patients expectations and quality indicators</td>
<td>151</td>
</tr>
<tr>
<td>4.4</td>
<td>Payer expectations and quality indicators</td>
<td>158</td>
</tr>
<tr>
<td>4.5</td>
<td>Health care workers expectations and quality indicators of physiotherapy</td>
<td>166</td>
</tr>
<tr>
<td>4.6</td>
<td>Physiotherapists reported quality indicators</td>
<td>173</td>
</tr>
<tr>
<td>4.7</td>
<td>Quality indicators for the management and treatment of injured patients</td>
<td>176</td>
</tr>
<tr>
<td>4.8</td>
<td>Service quality management indicators</td>
<td>182</td>
</tr>
<tr>
<td>4.9</td>
<td>Service management barriers to quality</td>
<td>184</td>
</tr>
<tr>
<td>4.10</td>
<td>Impact of relationships in the case study health care network</td>
<td>191</td>
</tr>
<tr>
<td>4.11</td>
<td>Quality drivers which each stakeholders performs</td>
<td>195</td>
</tr>
<tr>
<td>5.1</td>
<td>Quality indicators compared to other literature</td>
<td>200</td>
</tr>
<tr>
<td>5.2</td>
<td>Contributions of this research from analysis of the research questions</td>
<td>213</td>
</tr>
<tr>
<td>5.3</td>
<td>A model for strategic processes in service system</td>
<td>231</td>
</tr>
<tr>
<td>Figure</td>
<td>Description</td>
<td>Page</td>
</tr>
<tr>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>1.1</td>
<td>Initial service system and service encounter activities for the case study</td>
<td>4</td>
</tr>
<tr>
<td>2.1</td>
<td>The perceived service quality model</td>
<td>32</td>
</tr>
<tr>
<td>2.2</td>
<td>Summary of the major theoretical perspectives on perceived service quality</td>
<td>44</td>
</tr>
<tr>
<td>2.3</td>
<td>The traditional hierarchy of an organisation and continuously changing shape of networks around a core competence</td>
<td>75</td>
</tr>
<tr>
<td>2.4</td>
<td>Model of service quality variables in professional health services</td>
<td>79</td>
</tr>
<tr>
<td>3.1</td>
<td>Research activities in five different research stages</td>
<td>114</td>
</tr>
<tr>
<td>5.1</td>
<td>Summary of the major theoretical perspectives on perceived service quality</td>
<td>218</td>
</tr>
<tr>
<td>5.2</td>
<td>Model of service quality in the service encounter</td>
<td>219</td>
</tr>
<tr>
<td>5.3</td>
<td>Model of service quality management</td>
<td>221</td>
</tr>
<tr>
<td>5.4</td>
<td>A process model of the formation of networks in professional health care</td>
<td>225</td>
</tr>
<tr>
<td>5.5</td>
<td>A model for network links in professional health care</td>
<td>227</td>
</tr>
</tbody>
</table>
Abstract

Service quality is important to health care. To assess service quality the perspective of all stakeholders must be considered. The research took advantage of a unique opportunity to study health care from the perspective of all relevant stakeholders. In assessing the current situation, the aim was to define: What is quality in professional health care services? How should it be managed? The research was designed to extend the theory of services marketing in the domain of professional services and to assist marketers to describe service quality in such a way that it aids stakeholders comprehension of the services they purchase.

Earlier research has sought to study individual aspects of the service encounter. In answering the central research questions, a synthesis has emerged. Bringing together the different views of quality held by different stakeholders has led to proposals to show how better to incorporate quality for the payer, when the payer is not the patient.

A qualitative single embedded case study was undertaken of service quality in professional health care. The specific situation in the health care system of workers' compensation was researched.

Seventy five interviews were drawn from four major stakeholder groups. Members of each stakeholder group discussed quality indicators and expectations of health care from their perspective. Data was analysed using the constant comparative method.

The major results of this research were insights concerning the structures and processes that characterise successful professional health care services and, more broadly, professional services generally. Firstly, rather than just communicating in a system prescribed way, successful professionals combine a limited or ambiguous
system with extensive interaction with other stakeholders. In this way they achieve superior service quality for their patients. Secondly, successful professionals understand the service offering in the 'eyes of their client' and actively orientate and encourage participation of the patient in the service. Thirdly, successful professionals combine technical quality and customised service as their core competence. Fourthly, an ability to adapt rapidly using communication to change priorities results in effective customisation of the service and, hence, acceptable quality of service as perceived by the patient. This is clear, for example, when health service goals require modification which has to be negotiated and understood among several stakeholders. Health care professionals can utilise relationship marketing and networks to achieve service quality. These alliances are evaluated as contributing to service quality.

Some procedural or process elements facilitate achieving quality, whilst some agreed standards based on quality indicators provide methods of assessing service quality. The findings indicate it is the independence of the patient and professional which is the deciding factor in achieving quality for the patient, so it is an important quality variable.
Declaration

This work contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published, or written by another person, except where due reference has been made in the text.

I give consent to this copy of my thesis, when deposited in the University Library, being available for loan and photocopying

Signed

Dated 12.2.99
List of publications

The following is a list of publications and presentations completed during the research. Best practice guidelines (1998) are provided in Appendix A.


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1 Introduction

1.1 Background to the research
Existing theory in services marketing and service quality does not conclusively provide strategies which respond to health care's complexity. The delivery of professional health services currently appears less than optimal. New strategies for service quality are required in the current climate of financial stringency in health care. A model of service quality which incorporates multiple stakeholders will be developed which includes business to business and business to client relationships. This research will contribute proposals to benefit all stakeholders in health care. In particular, the patient can benefit by a quicker return to health and work; a personal, social and economic goal. This research will explore the perceptions of health stakeholders with a view to identifying areas where changes in management could lead to improved service quality.

Most marketing theory has evolved as product-based models and applications (Gummesson 1978; Gummesson 1979). Over the last 15 years, a substantial body of literature on the marketing of services has emerged. A number of inconsistencies in this literature have been identified by Lovelock (1983), Dickson and Ginter (1987) and Gummesson (1987a). The lack of statistical information and difficulty in defining, classifying and measuring services, which comes from the intangibility of the service, contribute to these inconsistencies. Intangibility is the absence of material form and the difficulty people experience in 'mentally grasping' the concept of a service that is the cognitive aspect of intangibility (Berry 1980; Shostack 1981; Parasuraman, Zeithaml and Berry 1985; Zeithaml, Parasuraman and Berry 1985; Haywood-Farmer 1987; Fitzgerald et al. 1989; Berry and Parasuraman 1991; Berry and Parasuraman 1993; Milliman and Fugate 1993).

Intangibility is particularly apparent in professional services, including health care services. Health care services are both intangible and complex. In health care, the payer for the service is frequently not the patient who consumes the service. There are several 'clients' in health care services, other than the patient, who need to
understand the service. Marketing these services can aim to reduce the impact of intangibility and increase understanding (Kotler 1991; Engel, Blackwell and Miniard 1993). However, to some in health care provision, marketing is little known or understood. Yet to succeed in business, professionals need to know how clients regard their services to be able to market the service and assess its quality (Gronroos 1990d). By comparison to marketing products, assessing and marketing service quality presents a problem which has not been conclusively resolved in the literature. This provides an opportunity for further research.

A service that is complex and intangible is particularly difficult to understand in quality terms. Given this complexity, previous research has tended to focus on one aspect of a service at a time. There is little in the literature which brings together the different research on single aspects to produce a consideration of the many facets of service quality. Yet research on the whole problem, all aspects of service quality, can potentially have different findings than the sum of research of the parts or facets. This research will focus on all aspects of service quality to understand the complexity and intangibility of professional health services.

1.2 Research problem
Most health care service quality research has focused on the patients' evaluation of services. However, for many health professionals, at least two service clients must be satisfied. The first is the ultimate client, the patient, who receives the service; the second is the intermediate client, the service payer.

Relationships in professional health services between the payer and the professional provider of the service can be independent of the patient who chooses to use the service. A unique relationship exists between the patient and the professional service provider. However, the payer also has a stake in the quality of service provided whilst not directly involved in the provider-patient relationship. Thus, professional health service providers must satisfy at least two categories of service quality clients: the payer and the patient (a service consumer or patient in health care). Furthermore, service quality is different for each category of client (Berry, Zeithaml and Parasuraman 1985).
In fact, there are more than two categories of service quality clients. Unlike most businesses — in which clients purchase goods from producers or distributors, and these players are the primary beneficiaries of the exchange — in the health care system, patients receive the service, third parties finance the exchange, and a variety of service providers receive payment for the exchange. Thus there are three equally important categories of client in the system, each with quite different priorities and expectations (Lengnick-Hall 1995). Each stakeholder is negotiating for their own satisfaction. Patient satisfaction must be balanced against the concerns of other stakeholders. The four groups of stakeholders in this research are: patients, payers, health care providers (non-physiotherapy) and physiotherapists (the professional group which is the focus of this study).

There is a need to develop a method of describing and evaluating professional health service quality that is meaningful to all stakeholders. Complex answers must be sought to the research questions: What is quality in professional health services? How should it be managed?

This research investigates service quality from each stakeholder’s perspective. In doing so it presents some of the many definitions and characteristics of service quality along with models of service delivery drawn from the service marketing literature.

This research, using a case study design, will focus on three important elements:

1 What is to be explored?
   The case study will explore the determinants of professional health service quality as assessed by participating stakeholders, when the payer is independent of the patient and of the provider of the service.

2 Purpose of the exploration?
   The case study will explore the nature of service quality in service design to determine if it incorporates service quality criteria of all stakeholders.

3 Outcome of the exploration
   The case study will further develop theory of the nature of service quality in health care.

The specific service discussed in this research is the case of workers’ compensation in South Australia. Workers’ compensation is a system legislated to provide health
care and income support for those injured at work. Health care is provided at no cost to workers. Health professionals independent of the employer or insurer (payer) determine the most appropriate type and amount of health care. This can lead to the introduction of many health care professionals and exclusion of the employer and payer from decisions about the health care provided to the patient and its costs.

Service delivery in the health care system is complex. Figure 1.1 presents an overview of the initial management of professional health services in this study. It also shows the possible services arising from an injury in the workplace. Two main processes can be involved; the service system for claims management (left hand side of diagram), and the service encounter for medical assessment and diagnosis of injury (right hand side of diagram).

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**Figure 1.1** Initial service system and service encounter activities for the case study
Once a worker is injured they may either attend the doctor and report the injury or simply report the injury at the workplace. The choice of the next step can vary from no health care required to multiple health interactions with multiple health care providers. The path followed is extremely varied depending on the injury and circumstances of the patient. In addition, each choice of path can again be made as the patient moves between stakeholders. For example, if the patient does not initially return to work and is referred to physiotherapy, the patient then returns to the doctor for reassessment following physiotherapy health care. The choices seen in Figure 1.1 arising from the patient attending the doctor are then reapplied. Further claims for physiotherapy or income payments for not returning to work are also reprocessed in the service system. If additional health care referrals and investigations are also initiated, there are a minimum of four choices arising from their interaction. Other investigations and referrals all report back to the initial doctor. The service system expects the initial doctor to manage and coordinate all activities for the patient’s health care and claim.

The service sequence at each subsequent step has multiple choices and feedback loops for health care delivery and service system processing. For example, the processing of the claim by the service system can follow a number of sequences. If the claim is rejected initially, then the patient may reattend the doctor for further determination and assessment. Further referrals may then be required to other health care providers to assess the claim. In contrast, the client who initially returned to work and did not require physiotherapy intervention may continue to have problems with their injury and reattend the doctor for reassessment. If the injured person requires treatment after 21 days have elapsed, a rehabilitation coordinator is appointed to manage the claim. Another stakeholder is therefore introduced and a further series of alternative service delivery options possible. The potential to choose a service experience is intended to form part of a customised service. This leads to so many variations that it is difficult to definitively document the steps involved in health care delivery. The potential variety has the advantage of customising the service to the patient giving them choice and the professionals the opportunity to exercise judgement and autonomy. Overall, the health care choices made are for patient benefit rather than financial consideration alone.
This case study research considered service quality from the perspective of all stakeholders to the complex problem of service quality in professional health services. The findings indicate it is the independence of the patient and professional which is the deciding factor in achieving quality for all stakeholders, so it is an important quality variable. Some procedural or process elements facilitate achieving quality, whilst some agreed standards based on quality indicators provide methods of assessing service quality.

1.3 Justification for the research
This research seeks answers that can contribute to the improvement of health care in Australia. In order to do this, the context of this research encompasses:

- the lack of research concerning quality in Australian professional services
- ways of managing the intangibility of physiotherapy services.
- the importance of service industries to the Australian economy
- the importance of the health care industry to Australian society and the Australian economy
- the lack of research into professional services

The lack of research concerning quality in Australian professional services. This research has the potential not only to close an important gap in the literature but also to suggest ways to improve the quality of the delivery of professional health services. In health care in Australia, quality has been assessed in terms of engineering and manufacturing practice, in conformance to specifications (Donabedian 1980; Donabedian 1988; Lytle and Mokwa 1992; Stiles 1994; Turner and Pol 1995). Service quality was primarily seen as the responsibility of the health care provider. Consequently, the quality issue was addressed mechanistically and became devoid of a meaningful client orientation. Satisfaction surveys (Draper and Hill 1995; Jamison 1996; Burton, Sheather and Roberts 1997) and studies looking at funding arrangements have been used (Anderson and Noyce 1992; Duggan 1994).

Marketing in physiotherapy is not well represented in the literature. The few articles which appeared in the 1980s, do not concentrate on marketing and do not have a well developed quality focus (O'Keeffe and Patterson 1985; Schutz and Beaton 1989).
There is an opportunity for further research in quality in physiotherapy and to understand its intangibility and complexity.

*Seeking ways to manage the intangibility of services.* Services are intangible and therefore difficult to grasp conceptually. This may have been the reason for the piecemeal approach taken by researchers rather than the synthesised approach now being undertaken in this research.

Many have proposed a continuum of the degree of tangibility and intangibility of services (Shostack 1977; Liechty and Churchill 1979; Shostack 1981; Shostack 1984). These polarities of the continua reflect the degree of materiality of the product and material entities involved in the delivery of the service. There is little previous research which addresses holistically how complex services, such as professional health services, can be analysed and understood.

This research takes the view that services and their characteristic intangibility can be analysed and thereby facilitate an understanding of service quality in professional health care services. The potential benefits come from:

- identifying and understanding the service and the process of service delivery
- identifying service quality indicators from each stakeholder’s perspective
- developing a model of service quality in professional health services.

*Identifying and understanding the service and the process of service delivery.* Marketers need to describe services in order to improve stakeholder knowledge and understanding of physiotherapy services. Professional health care providers need to be able to identify the service to be able to provide it clearly and without ambiguity in order to facilitate a successful health care outcome.

*Identifying service quality indicators from each stakeholder’s perspective.* A set of concise quality indicators of physiotherapy service that complements the general service marketing models can be developed if the holistic approach taken in this research has a positive outcome. Such indicators, when applied at any stage in the process, could improve the marketing of a service by increasing awareness of the elements involved in the marketing process for health care services. A joint effort by all
stakeholders to strive for an optimal quality of patient care and successful outcome could be encouraged through the better understandings that flow from this research.

Developing a model of service quality in professional health care services. Service marketing has hitherto neglected the professional services sector. Initial indications are that the findings and implications of this research have strong potential to contribute understanding which could influence the quality of health care, the professional services industry and services marketing theory.

The importance of service industries to the Australian economy. The Australian Bureau of Statistics (ABS) reports that services with a value of $167,982 billion accounted for 56.8 per cent of the Gross Domestic Product (GDP) in 1989-90 (Australian Bureau of Statistics 1991, p. 6). By 1996, services accounted for 70 per cent of GDP, employed 80 per cent of the workforce, and comprised 22 per cent of Australia’s exports (Austrade 1994; Clark 1997). Since 1991, services have increased in their level of input into GDP and employment. Services are, therefore, an important part of Australia’s economy.

The importance of the health care industry to Australian society and the Australian economy. The health care industry comprises a significant percentage of national turnover. In 1990-1991 some $30.9 billion or 8.1 per cent of GDP was spent on health care in Australia (Australian Bureau of Statistics 1991). This spending increased to 8.6 per cent in 1997 (Williams-Wynn 1997). Health services in Australia employed close to half a million people or 7 per cent of the total Australian workforce. The demand and expenditure on health services can be expected to increase with an ageing population. Expectations are that spending on health will rise to 15 per cent of GDP by 2030 if current trends continue (Williams-Wynn 1997).

The lack of research into professional services. There is a lack of research and theory in business to business relationships in professional services (Haywood-Farmer and Nollet 1993; Walbridge and Delene 1993; Yucelt 1994; Palmer and Maani 1995; Young 1995). More recently studies are emerging which address customer satisfaction in this relationship (Patterson, Johnson and Spreng 1997). The absence of an agreed description of the common characteristics of services in general, and professional
health care services in particular, restricts the ability of the industry to clearly and simply describe health care services to existing and potential clients. A major source of buyer dissatisfaction with services is a direct consequence of not fully comprehending what is being purchased (Bloom 1984; Kotler and Bloom 1984). Health care is frequently considered of poor quality because it is not well understood and there can be a mismatch between expectations and what health care services can provide. The opportunity for this research is to contribute to the understanding of health care.

This research is justified given the importance of services and health care to Australians and the opportunity to add to the body of research, particularly in physiotherapy services.

1.4 Methodology
Service quality is a concern of all stakeholders in the case study. The research problem is to develop a method of describing and evaluating professional health service quality that is meaningful to all stakeholders. Answers are required to the research questions: What is quality in professional health services? How should it be managed? The research process to address the research problem and questions was refined and implemented as outlined in Table 1.1.

The study addressed quality elements in health care from the perspective of the health care provider, physiotherapist, payer and patient. As shown in Table 1.1, the research process started by identifying the research area and general problem. A review of research issues entailed a review of the services marketing literature concerning the definition and description of services, professional services and service quality in health care. This led to the formulation of the research question from which a theoretical framework was developed.
1.5 Outline
The thesis is presented in five chapters. The review in Chapter 2 of the existing literature on services marketing and health care quality helped identify important variables to be considered in service quality research and developed definitions to be used in the research. These variables and definitions set the stage for chapters 3, 4 and 5 which report on the stages of the empirical research (Table 1.2).

Chapter 2 reviews the current literature from a number of different disciplines in order to develop the research question. Section 2.2 comprises a review of services, paying attention to descriptions and definitions of services and professional services. Section 2.3 reviews the services marketing literature and establishes indicators of quality in services. Section 2.4 describes the literature on services management for quality. Section 2.5 identifies the research question.

Chapter 3 describes the method used for the empirical element of the research, a single embedded case study on service quality in professional health care. Section 3.2 describes and justifies the selection of the research paradigm and Section 3.3 justifies the choice of methodology. The criteria for case selection is detailed in Section 3.4.
The remaining sections explain the research procedures, protocol, interview instrument and analysis procedures.

Table 1.2  Thesis outline

<table>
<thead>
<tr>
<th>Chapter/section</th>
<th>Activity sequence</th>
</tr>
</thead>
</table>
| 1               | Intangibility of services  
|                 | Complexity of health service quality and professional service quality  
|                 | General problem |
| 2.2             | Literature related to services |
| 2.3             | Literature related to services marketing and quality |
| 2.4             | Literature related to service management for quality |
| 2.5             | Research question |
| 3               | Empirical study of quality in health care from the perspective of a range of stakeholders |
| 4               | Analysis of results |
| 5               | Conclusions and implications |

Chapter 4 describes the results from both the pilot and main study (sections 4.1 to 4.3). Section 4.4 provides a brief description of the respondents. Section 4.5 details patterns of data for each stakeholder, whilst sections 4.6 and 4.7 provide an overview of responses and a conceptualisation of the patterns of data.

Chapter 5 concludes the thesis by reviewing the results of the research question and problem in sections 5.1, 5.2, and 5.3. In Section 5.4 the theoretical implications from the research findings are discussed. Section 5.5 presents the implications for policy and practice. Section 5.6 considers the limitations of the research and Section 5.7 identifies areas for further study.

1.6 Definitions and terminology
Definitions of terms which will be used in this research and its conclusions are:

- service: an act or performance that one party can offer another that is intangible (Rust, Zahorik and Keiningham 1996)
- health: “state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity” (World Health Organisation 1986, p. 1)
- professional service: those service providers with a unique body of knowledge supported by provider legislated registration with professional associations
payer (of health care): those organisations or persons who fund health care but cannot control or direct the quality of care. In this research it is the insurance organisations and those employers who self fund their own health care costs. These self funding employers are exempt from paying levies to WorkCover therefore they are known as 'exempt employers'.

patient: person receiving or potentially receiving health care services for enhancement of their health

client: person receiving or potentially receiving any services. In this research this definition does not include those receiving health care (see patient)

stakeholders groups: patients, payers, health care providers and physiotherapists. Sometimes referred to as 'actors' in network theory.

1.7 Limitations of the research and key assumptions
The boundaries of the research activity are described in Chapter 3. The case study methodology itself places limitations on the generalisability of findings. The research involved a case study of workers' compensation and physiotherapy services in South Australia. The use of a state-based system reduces the generalisability of the research findings given other states and countries will likely have different legislative approaches. The implications of this research for those with different service and organisational systems need to be treated with caution. In addition, research of a workers' compensation health system, where the patient has no out of pocket expenses for health care, can have implications for services which require part or full payment. Again the results need to be treated with caution as part or full payment may give the patient a feeling of more involvement and control, which would potentially change the results. Specifically excluded from this research was any investigation of the effect of price on perceptions of health service quality.

1.8 Conclusion
Services, relative to other economic activities, have over recent years become more important elements of Australia's economy. With 80 per cent of the working population now employed in service industries (Austrade 1994), it is vital that a sound framework of service quality theory which considers all stakeholders be available to academics and practitioners alike. This research is designed to extend the theory of service quality in the domain of physiotherapy services and help marketers describe service quality in such a way that it aids stakeholders' comprehension of the services they provide, fund or purchase. Professional health
service quality is a current concern to both the academic discipline of marketing and to the professional health services industry. The research reported here will help to illuminate an holistic view of health service quality, take account of the views of all stakeholders, and propose strategies for improving management of the service event for all involved.
2 Literature Review

2.1 Introduction
Given the difficulty of defining and assessing service quality, the literature review will identify for this research previous work in service quality, identifying the gaps in the literature and current thinking in the area. The literature review will also identify important variables to be considered in service quality research, facilitating comparisons between the literature and the findings of this research. Descriptions and definitions are developed for use in the research to clearly identify the areas under study. An outline of the chapter is given in Table 2.1.

<table>
<thead>
<tr>
<th>Literature focus</th>
<th>Content</th>
<th>Outcome</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>theory</td>
<td>definition of services and professional services</td>
<td>description of services</td>
<td>Section 2.2</td>
</tr>
<tr>
<td></td>
<td>services marketing and service quality</td>
<td>description of professional service quality</td>
<td>Section 2.3</td>
</tr>
<tr>
<td>practice</td>
<td>health service quality management</td>
<td>description of complex professional health services and quality</td>
<td>Section 2.4</td>
</tr>
<tr>
<td>research context</td>
<td>research issues and questions</td>
<td>approach to the investigation of professional service quality in health care</td>
<td>Section 2.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>research issues and question</td>
<td>Section 2.5</td>
</tr>
</tbody>
</table>

2.2 Services
A service is an act or performance that one party can offer another that is intangible (Rust, Zahorik and Keiningham 1996). Services have unique characteristics and features. To market a service successfully, a thorough understanding of these characteristics and the nature of service quality management is required (Gronroos 1990d; 1990c).
The research is placed within the framework of the parent discipline of services marketing (see Section 2.3). A review of the literature on services will present:

- definitions of services
- the intangibility of services
- classifications of services
- a description of professional services as used in this research.

### 2.2.1 Definition of services

Many writers refer to the difficulty of defining a service. Attempts at definition lack consistency. To understand professional health services, definitions of services found in the literature will be considered as a basis for understanding.

Early debate questioned whether services were unique and if they required a completely different marketing approach (Levitt 1972; Wyckham, Fitzroy and Mandry 1975; Sasser 1976; Chase and Bowen 1991; Fryar 1991). Levitt (1972), for example, argued that services were inherent in all marketing activities, irrespective of the nature of the product. Gronroos (1978) chose not to add his own definition to the “range of more or less unsatisfactory definitions already existing” (Gronroos 1978, p. 589). Thomas (1978) drew attention to the abstract nature of ‘services’, and Lovelock (1981) considered that services marketing has received less attention than goods marketing because of the problem of definition. Gummesson (1987a) found that the definitions of service were “by no means clear” and exhibited a “discomforting unclarity” (Gummesson 1987a, p. 19).

Early work also noted that there are very few pure services or pure products in the marketplace as nearly every marketplace offers aspects of both (Shostack 1977). Purchases of goods involves purchase of services. Conversely, almost all purchases of services involve the purchase of goods either directly by the consumer or by the producer of the service. All purchases actually involve services. Services are not ‘things’ but the ‘process’ is the product or ‘thing’ (Shostack 1987). Whether services and products are indeed distinct categories seems to be an issue not easily resolved. Many writers (Shostack 1977; Berry 1980) have gone to great lengths to demonstrate the qualitative differences between products and services, while others (Wyckham, Fitzroy and Mandry 1975; Lovelock 1981) have noted that their similarities outweigh
their differences. Services and services marketing can be characterised as more intangible than goods and more likely to involve simultaneous production and consumption (Grove and Fisk 1983).

Services are produced and consumed at the same time and are not easily defined or formulated. A large human component is involved in performing services — the ‘outcome’ of a service operation tends to be less standardised than goods-producing operations. Goods tend to be produced, inventoried, sold, then consumed; whereas services are usually sold first, then produced and consumed simultaneously because they cannot be inventoried (Berry 1980; Bowen and Schneider 1988).

Definitions of service offered include, a service defined as an act or performance that one party can offer another that is essentially intangible (Rust, Zahorik and Keiningham 1996). Others writers consider the unique characteristics of services. For example, Berry (1980) defined services as deeds, performances and efforts. He introduced the notion of services having characteristics of intangibility, heterogeneity (or variability), simultaneity (or inseparability) and perishability (Lovelock 1981; Parasuraman, Zeithaml and Berry 1985; Rust, Zahorik and Keiningham 1996).

The difficulty in describing services has an impact directly on quality and marketing. Service researchers consider that manufacturing quality models are inappropriate for services quality, as the role of the client is not adequately incorporated (Sasser 1976; Shostack 1977; Thomas 1978; Berry 1980; Zeithaml, Parasuraman and Berry 1985). Unlike goods, services cannot be possessed, rather, they can be experienced, created or participated in (Shostack 1981; Haywood-Farmer 1987). Gummesson (1994) considers that the division between goods and services is outdated. Instead, he believes services should be seen from the client’s perspective where activities and things render services.

Definitions are still debated and no clearly agreed definitions have emerged from the literature. The existing definitions do not encompass the perspective of the many stakeholders in the service which is the focus of this research. This research will propose a definition of services, based on the literature, which can assist in improving the understanding and delivery of professional health services.
2.2.2 Intangibility of services
To differentiate between goods and services authors have described services as non-material and intangible, while goods are material and therefore tangible. Definitions of intangibility are presented in Table 2.2.

Table 2.2 References to intangibility of service products in the literature

<table>
<thead>
<tr>
<th>Reference to intangibility</th>
<th>Researcher</th>
</tr>
</thead>
<tbody>
<tr>
<td>intangibility (means) more than one version of reality may be found in a service market ... the reality of service varies according to the mind of the beholder</td>
<td>Shostack (1977, p. 42)</td>
</tr>
<tr>
<td>services are immaterial and physically intangible</td>
<td>Gronroos (1980, p. 37)</td>
</tr>
<tr>
<td>intangibility refers to the elusiveness of the service, it cannot be touched or displayed ahead of time</td>
<td>Berry (1980, p. 29)</td>
</tr>
<tr>
<td>the fundamental difference...is intangibility, and, ‘intangibility’ is the critical goods–service distinction from which all other differences emerge</td>
<td>Zeithaml, Parasuraman and Berry (1985, p. 33)</td>
</tr>
<tr>
<td>services are intangible both in that they lack a physical referent and they are dominated by highly abstract qualities which are difficult to grasp mentally</td>
<td>Smith and Houston (1983, p. 59)</td>
</tr>
<tr>
<td>the intangibility means that the consumer usually has not gained anything palpable after the exchange</td>
<td>Milliman and Fugate (1993); Fitzgerald et al (1989)</td>
</tr>
</tbody>
</table>

The descriptions in Table 2.2 indicate that the meaning of intangibility is used differently in the marketing literature. The meaning of intangibility appears to be based on the concept that production and consumption are inseparable (Gronroos 1978). Dixon and Smith (1983, p. 77) were sceptical, suggesting that the intangible definition of services is “tautological at best”. They continue by pointing out the lack of logic applied by previous researchers. “It is logically impossible to determine the characteristics of something which has not been identified, and then utilise these characteristics to identify the object of study” (Dixon and Smith 1983, p. 77). Despite this researchers have attempted, by using their own definition of intangibility, to study the nature of services. There is agreement that intangibility has an impact on services marketing. Recognising that intangibility is not clearly defined in the literature but does impact on service quality, intangibility will be considered in this research when considering the perspective of all stakeholders of a service.
Blueprinting has been used to document service processes in an attempt to be more precise. Blueprinting is noted here as a means of describing the production of a service, in the same way as one would a product. The concept of blueprinting was introduced by Shostack (1981; 1984; 1987; 1992) and further developed by Lovelock (1983) and Baum (1990). When processes are reduced to steps and sequences, services are viewed as interdependent, interactive systems not as disconnected pieces and parts (Zeithaml, Berry and Parasuraman 1988; Fitzgerald et al. 1989; Randall 1993; Mattsson 1994b). The benefit of blueprinting is to concisely document the process so it can be exactly repeated, made consistent and efficient. Thus, the service blueprint is analogous to the assembly line in process production. However the complexity and intangibility of professional health service quality makes blueprinting difficult. This research will consider service quality assessment from the perspective of all stakeholders. Blueprinting and alternative assessment methods will be reviewed as to their application in such a complex service, potentially providing new methods of understanding service quality.

2.2.3 Classification of services
Reviewing the literature on the classification of services assists this research in understanding and identifying methods of communicating the attributes of professional services. Identifying existing classification systems, service dimensions and service types assists the description of professional services.

A continuum best describes most attempts to differentiate products and services on one or more dimensions. Products are arrayed at one end and services at the other and there is considerable overlap between the two (Solomon et al. 1985). The most extensive overview of classifications of services (Lovelock 1983) formed the basis of Lovelock’s five category classification scheme. Each category has two subcriteria based on answers to the following guidelines into how the nature of the service might affect marketing strategies and tactics:

1 The nature of the service act:
   - Are they tangible or intangible actions?
   - Are the recipients of the service people or things?

2 Type of relationship with the client:
   - Is it a continuous delivery of the service or discrete transactions?
• Is it a membership relationship or a formal relationship?

3 Room for customisation and judgement in service delivery:
• Is the extent to which client contact personnel exercise judgement in meeting individual client needs high or low?
• Is the extent to which service characteristics are customised high or low?

4 The nature of demand for the service relative to the supply:
• Does the demand for the service fluctuate widely or narrowly over time?
• Can peak demand usually be met without a major delay or does it regularly exceed capacity?

5 Method of service delivery:
• What is the nature of the interaction: does the client go to the organisation, or does the organisation come to the client, or do they transact at arm’s length?
• Are service outlets available at multiple sites or at a single site?

Of Lovelock’s (1983, p. 15) five schemes for classifying services, one is based upon customisation and judgement. He recommends that professional services should be placed in a position of ‘high/high’. The extent to which service characteristics are customised is high, as is the extent to which client contact personnel exercise judgement in meeting individual client needs. Lovelock concludes that professional services should be customised to meet the individual characteristics and needs of the clients.

Table 2.3 Service dimensions identified in the literature

<table>
<thead>
<tr>
<th>Service dimension</th>
<th>Researcher</th>
</tr>
</thead>
<tbody>
<tr>
<td>proportion of physical goods and intangible services contained within each product package</td>
<td>Shostack (1977)</td>
</tr>
<tr>
<td>equipment or people focus</td>
<td>Thomas (1978) Kotler (1984; 1991)</td>
</tr>
<tr>
<td>extent of provider’s judgement</td>
<td>Lovelock (1983)</td>
</tr>
<tr>
<td>extent to which client’s presence is necessary</td>
<td>Kotler (1984; 1991)</td>
</tr>
<tr>
<td>length of client contact time</td>
<td>Chase and Bowen (1991)</td>
</tr>
<tr>
<td>source of value added, either front or back office</td>
<td>Mersha and Adlakha (1992)</td>
</tr>
<tr>
<td>product or process focus</td>
<td>Silvestro et al (1992)</td>
</tr>
</tbody>
</table>
The classification scheme above provides one method of describing or communicating aspects of services. Another method is using service dimensions. Service dimensions identified in the literature are summarised in Table 2.3.

These service dimensions (Table 2.3) may then be applied to form a fuller classification of different services. Following on from Lovelock (1983) the classification can be based upon the nature of the service act and the degree of customisation in the service delivery. The types of service classification found in the literature are shown in Table 2.4, to assist in identifying professional services.

Table 2.4 Types of service

<table>
<thead>
<tr>
<th>Service types</th>
<th>Researcher</th>
</tr>
</thead>
<tbody>
<tr>
<td>unique service attributes versus the uniqueness of service production</td>
<td>Levitt (1972)</td>
</tr>
<tr>
<td>professional producer services, offered to other organisations or professional consumer services sold to households</td>
<td>Gummesson (1981)</td>
</tr>
<tr>
<td>product or process focus with three basic types of service: professional, mass and service shop</td>
<td>Silvestro et al (1992)</td>
</tr>
<tr>
<td>consumer or professional services; consumer services have facilitating goods, such as in a department store, so the service can be more tangible. There is less simultaneity and less participation of the consumer in the production of the service compared to professional services</td>
<td>Bowen (1988)</td>
</tr>
<tr>
<td>client processing, information processing and material processing operations</td>
<td>Morris and Johnston (1987)</td>
</tr>
<tr>
<td>using properties of intangibility, immediacy and non-storability services are then classified: governments; wholesale and retail firms; private business, health insurance, personal</td>
<td>Mersha and Adlakha (1992)</td>
</tr>
</tbody>
</table>

Table 2.4 demonstrates that writers have each described service types in their own way. Some authors identify professional services as one service type.

Some authors have used different service typologies than Lovelock’s customisation and judgement to describe professional services. An alternative description is as a continuum varying from products through to pure services. Professional services are often termed ‘pure services’ as they are considered less tangible and more perishable, have client involvement and are less homogenous than other types of
services (Palmer and Maani 1995). Pure services require direct, face-to-face contact, with loose specifications between client and the service provider (Georgantzas and Madu 1994). Pure services are characterised as having high customisation, and little homogeneity, with a heavy reliance on client involvement and professional judgement. The very intangibility of professional services and consequent variety of descriptions and classification in the literature indicate opportunities for more research to take account of the perspective of all stakeholders in the provision of professional service.

2.2.4 Professional services

Drawn from the service classifications, dimensions and typologies, early work on professional services was pioneered by Wittreich (1966). Seminal articles on professional services marketing started to appear in the late 1970s (Bloom 1977; Kotler and Connor 1977; Gronroos 1978; Gummesson 1978; Gummesson 1979). However, no commonly accepted definition of a professional or a professional service emerged (Gummesson 1981). Some of the definitions found in the literature are outlined in Table 2.5.

The very length of Table 2.5 demonstrates that writers each have found it necessary to describe professional services. No clear agreement can be seen although common themes emerge. Professional services typically have:

- entry criteria, such as an educational course
- a unique subculture
- deliver services which are highly customised to the client.

Professional services are largely intangible but are accompanied by tangible elements (Shostack 1977). Professional tangibles, or evidence, differ with each profession. For example, in a medical practice, tangible elements include the decor of the reception area, staff attire and technical equipment (Congram 1991). The service provider is the one kind of evidence common to all professional services. For many patients, the service and the provider of the professional service or the administrator are inseparable.
The professional’s years of training and special expertise mean most clients have a tendency to perceive professionals as high in both the social and competence hierarchies. As a result, the professional-client relationship offers a somewhat unique service experience that requires special evaluation considerations (Congram 1991; Swartz and Brown 1991). Professional services have a high uncertainty for clients and are difficult to select and evaluate (Bloom 1984; Congram 1991). The lack of tangible prepurchase qualities associated with professional services means that clients are more likely to remain with one provider rather than take the chance with

The professional’s years of training and special expertise mean most clients have a tendency to perceive professionals as high in both the social and competence hierarchies. As a result, the professional-client relationship offers a somewhat unique service experience that requires special evaluation considerations (Congram 1991; Swartz and Brown 1991). Professional services have a high uncertainty for clients and are difficult to select and evaluate (Bloom 1984; Congram 1991). The lack of tangible prepurchase qualities associated with professional services means that clients are more likely to remain with one provider rather than take the chance with
an unknown (Zeithaml 1988). The service delivery process is complex and quality is difficult to control (Congram 1991). Typically, there is no objective measure of the quality of a professional service. The client is therefore buying confidence (Gunnnesson 1981) and the communication skills of the professional are of paramount importance (Morgan 1990). The services are delivered with a highly intimate and prolonged contact and the interpersonal skills of the provider become a critical cue for service quality evaluation (Price, Arnould and Tierney 1995).

A ‘line of invisibility’ separates actions observable to the client from those which, although necessary to the functioning of the service system, are nonetheless invisible to the client. These are referred to as front and back office processes (Shostack and Kingman-Brundage 1991). The high client contact intensity of professional health services reduces the involvement of the back office in the service process. All professional services are front office, performed with the clients who witness and share the expenses of rework or service failure (see Silvestro (1992) in Table 2.5).

This research will recognise the key elements of professional services described in the literature. Professional services:

- are highly intangible
- require a high degree of customisation and problem solving by the professional service provider
- require client involvement
- are provided with highly intimate and prolonged contact between the client and the professional service provider
- present the client with a high degree of uncertainty and difficulty in service evaluation
- are provided by those with a common group identity and culture and guided by a group code of ethics.

2.2.5 Professional health services
The specific area of professional health services presents particular challenges for services marketing and quality. The World Health Organisation (WHO) defines health as a “state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity (World Health Organisation 1986, p. 1). Therefore, ‘health offerings’ must be provided to bring about complete physical, mental and
social wellbeing for a person to maintain complete health. Health care encompasses
a wider impact than the single episode of health care delivery and usually includes a
large emotional investment by the patient. It is a very high involvement purchase
from the patient’s perspective. This high involvement adds to the complexity of
professional health services. The contribution of those involved in health care is
unknown, combined with the services intangibility, delivering service quality
becomes unpredictable. Health care services require different considerations than
other professional services.

The health care offering includes the medical treatment of illness and also the
associated social, cognitive and emotional factors. “Medical care is a generic term
that describes the organisation, financing and delivery of health services that focus
on individual or personal needs. It encompasses the service and skills of a variety of
health providers, including physicians, nurses and therapists” (Hult and Lukas 1995,
p. 40). Medical care is a subset of health care.

The service offering is the exchange between health care provider and patient to
jointly create value (Hult and Lukas 1995). This view of health care follows the logic
of Wyckham, Fitzroy and Mandry (1975). They argue that all services are
characterised by sets or dimensions of need satisfiers (offerings). This adds another
definition of services to those already considered.

Health care delivery firms try to alter the way people, patients and their families
behave, think or feel over a long period of time. The product and other services these
firms deliver is human change. The delivered change is expected to endure beyond
the client’s affiliation with the health care provider and without continued medical
intervention or renewed purchase. In addition, the human change is expected to
improve with use, rather than wear out or become obsolete. For example, bone
recovering from fracture should strengthen and improve with time (Lengnick-Hall
1995).

The concept of high quality as equated with high client satisfaction is not as clear as
other services when dealing with health care (Lengnick-Hall 1995). Health care
activities “combine, develop, exchange or create resources such as products, services,
and/or information about a specific health care problem by utilising other resources (Hult and Lukas 1995, p. 39). Such activities have been classified as ‘transformation’ or as ‘transfer’ activities (Hakansson and Johanson 1992).

These transfer activities are always carried out within the control of one of the health care participants. They are characterised by one resource being improved by the use of other resources. The most common case in the health care setting is when the health care provider, with participation from the patient, makes a diagnosis of the health care problem and subsequently treats the problem. In this service, both technical health care equipment and medicine are used as resources to improve the condition of the client (Hult and Lukas 1995).

Health systems deliver comprehensive and durable changes in the mental and physical wellbeing of people. This change process is the basis of quality in health care settings. Health care services cannot only be considered as single episodes of service delivery. This research in health care considers services wider than delivery by the professional health service provider, rather all stakeholders are considered. Professional health service requires unique consideration and provides opportunity for further research.

This research will recognise that professional health care services:

- aim to bring about complete physical, mental and social wellbeing (this broad scope differentiates health care providers from other professionals)
- require the client to make a direct contribution to their health care
- encompass the skills and services of a variety of stakeholders and require the coordination of activities between these professional stakeholders.

2.2.6 Description of the professional health service
This review of the definition of services has explored the origins of the current degree of understanding, or lack of understanding, and has indicated how some modern definitions have evolved. The benefits derived are an understanding of the:

- sources of current diversity in the definition of services
- evolution of the use of key words and the lack of agreed definitions or terms within the services marketing disciplines
- differing views on classifying and describing different types of service
unique classification for professional health service.

A description of professional health services enables the context of the research to be identified. For this research, professional health services are intangible, provided in a highly customised and variable manner aiming to bring about the wellbeing of the patient. The professional health service provider has a unique body of knowledge, is registered according to government legislation and has a recognised professional association.

2.3 Service marketing and service quality

The essential characteristics of services in the unique situation of professional health care services were reviewed in Section 2.2. Services theory forms the basis for the parent discipline of services marketing. The immediate discipline of this research is service quality. The following literature review sections further explore the importance of service elements to service quality and service management.

Service marketing as a subject for research emerged in the late 1970s and early 1980s. It has evolved from the early debate about whether service marketing is different to advanced research in specific topics (Brown, Fisk and Bitner 1994). Shostack’s (1977) article ‘Breaking free from product marketing’ was to alter the course of thinking by discussing service marketing as a distinct discipline (Gronroos 1990c). Service marketing research has developed from legitimising the field (Berry 1980; Lovelock 1981) and contributing conceptual breakthroughs (Gronroos 1990a; Berry and Parasuraman 1991) to more recent increased involvement of researchers with specific topics (Berry and Parasuraman 1993; Gronroos 1994a).

Marketing as a management philosophy has gone through several stages of development. Since the 1980s it has evolved and grown into the strategic marketing concept. Strategic marketing has its origins in the classical marketing concept by focusing primarily on the needs and wants of the client. It also pays attention to the consequences of the operations of a service organisation for the society as a whole. The strategic focus provides explicit attention to changes in the organisation’s external environment, client groups, distribution channels and competitors as well as its internal environment.
A new view of service marketing is currently emerging which complements traditional views. This emerging view incorporates the principles of customer service, customer orientation, and quality management widely applied from the late 1980s and early 1990s. The emphasis of the emerging paradigm is that of continually improving services to increase customer satisfaction and therefore revenues, market share and profits (Rust, Zahorik and Keiningham 1996). Central assumptions of this emerging view are: every organisation is in service, the primary purpose of the organisation is to satisfy clients, and customer requirements are constantly changing. Research in these areas is continuing, and this research can add to the literature on service marketing.

One service marketing topic which has received attention in the literature is service quality. Service quality is considered “the delivery of excellent or superior service” (Zeithaml and Bitner 1996, p. 34). Service quality has been described as an elusive and abstract construct that is difficult to define and measure (Gronroos 1983b; Parasuraman, Zeithaml and Berry 1985; Brown and Swartz 1989; Cronin and Taylor 1992). Service quality is seen as a result of expectations and perceptions of the consumer, in that perceptions of service quality result from comparisons of actual performance with prior expectations (Solomon et al. 1985). This research, recognising the elusive and abstract construct of quality, will add to the understanding of service quality in professional health services by considering the views of all stakeholders.

Quality has been recognised as an important instrument for developing long term relationships with satisfied clients. Client satisfaction and perceived service quality are expected to have consequences such as attitude change, repeat purchase, purchase frequencies, complaint behaviour and resolution, word of mouth and brand loyalty as opposed to client defections, cost savings and increased market share (Churchill and Surprenant 1982; LaBarbera and Mazursky 1983; Parasuraman, Zeithaml and Berry 1985; Zeithaml, Berry and Parasuraman 1988; Yi 1990; Zahorik and Rust 1992; Anderson 1993; Rust and Zahorik 1993; Iacobucci, Grayson and Ostrom 1994). Client satisfaction has become a corporate goal, in addition to traditional financial measures of success (Crosby, Evans and Cowles 1990; Bolton and Drew 1991; Oliva, Oliver and MacMillan 1992; Bitner and Hubbert 1994).
Scientific interest in services, and especially service quality, has increased greatly during the last decade. In addition to the work of Sasser (1976), explicit service quality discussion emerged in the so called ‘Nordic School’ (Gronroos 1978; 1984a; Normann 1984b; Lehtinen and Lehtinen 1991). Also developed was the notion of perceived service quality (Gronroos 1983b; Berry, Zeithaml and Parasuraman 1985; Parasuraman, Zeithaml and Berry 1985; Lindqvist 1987; Zeithaml, Berry and Parasuraman 1988) and client satisfaction (Oliver 1980). Quality has also been examined in the context of service firms’ operations (Haywood-Farmer and Stuart 1988; Shostack 1992).

The parent discipline, services marketing literature, now considers service quality as a distinct topic. Service quality is considered an important construct for both managers and academics and has lead to considerable literature on the topic. No conclusive understanding of service quality has yet emerged from the research in the area of service quality. More research, set in the immediate discipline of service quality, describing professional health service quality for all stakeholders could lead to better understanding and quality in the delivery of professional health services.

Descriptions of service quality, models of service quality, and determinants of service quality are presented to understand the current thinking and debate. A description of professional health service quality is developed to clearly define and constrain the determinants and methods used in establishing service quality.

2.3.1 Service quality
The characteristics of services mentioned in Section 2.2 have various consequences for an understanding of service quality. Services intangibility means precise manufacturing specifications concerning uniform quality cannot easily be set (Boerkamp 1995). As a consequence of the inseparability of production and consumption, quality is evidenced during service delivery (Gronroos 1978; Parasuraman, Zeithaml and Berry 1985; Lehtinen and Lehtinen 1991). In services where client participation is intense, for example professional health services, the service organisation has little managerial control over quality because the patient affects the process (Haywood-Farmer 1987; Boerkamp 1995). In these situations the
patient's input, for example their description of symptoms in health care, becomes crucial to the quality of service performance (Gummesson 1987b; Fitzgerald et al. 1989). Furthermore, the organisation may find it difficult to understand how patients perceive their services and evaluate service quality (Boerkamp 1995). This could be because patients do not communicate their perceptions, or that they are not asked for their reactions.

Drawing on the intangible nature of services, three types of attributes or qualities may influence the overall level of a service quality (Darby and Karnie 1973; Parasuraman, Zeithaml and Berry 1985; Bateson 1991). These qualities are:

- **search** qualities, those features that the client can examine in advance to establish quality
- **experience** qualities, when aspects of the service must be experienced before they can be assessed
- **credence** qualities, attributes which cannot be evaluated, that is, the client cannot assess the service even after purchase.

Services are high in experience and credence qualities and difficult to evaluate (Gummesson 1994; Boerkamp 1995). This classification reflects the lack of knowledge of the client and the gap between quality in fact and quality in perception.

The characteristics of services and their consequences have stimulated services marketing researchers to investigate service quality. This interest has become more important with the focus on quality, total quality management, and customer satisfaction in business over the last decade.

Service satisfaction is a closely related topic, which is sometimes difficult to distinguish from service quality (Bitner 1990; Bitner, Booms and Tetreault 1990; Crosby, Evans and Cowles 1990; Oliva, Oliver and MacMillan 1992; Bitner and Hubbert 1994; Boerkamp 1995). As a construct, customer satisfaction has been noted as a special form of consumer attitude. It is a postpurchase phenomenon reflecting how much the client likes or dislikes the service after experiencing it (Churchill and Surprenant 1982; Boerkamp 1995). Satisfaction and the differences between satisfaction and quality are presented in Appendix B.
The early efforts aimed at defining and measuring quality have come from the manufacturing sector. Garvin (1988) identifies five alternative perspectives to define quality:

- The *transcendent* view of quality is a subjective judgement made by the producer. This viewpoint is often applied to the performing and visual arts. It argues that people learn to recognise quality only through experience gained from repeated exposure.

- The *product based* approach sees quality as a precise and measurable variable. It focuses on the ingredients or attributes as well as the costs associated with the product’s components. Since this view is totally objective, it fails to account for differences in individual tastes, needs and preferences.

- *User based* definitions start from the premise that quality lies in the eye of the beholder. They equate quality with maximum satisfaction. This subjective, demand oriented perspective recognises that different clients have different wants and needs.

- The *manufacturing based* approach is related to the production process. In this case, quality is measured on the basis of internal norms of design or specifications as defined by the producer.

- *Value based* is quality defined in terms of value and price. By considering the trade off between performance and price, quality can be defined as ‘affordable excellence’.

Sasser (1976) began the quality discussion with his early work. He described the three dimensions of service quality as materials, facilities and personnel. Quality was expanded in the services literature in the beginning of the 1980s. In the first phase (1980-1985) development of a foundation for understanding service quality took place, including the development of models of Perceived Service Quality developed by the Nordic School (see Section 2.2.2) and the Gap Analysis Model (see Section 2.2.3). These models used the Garvin (1988) user based approach to define quality. These are static models describing variables and contexts which have to be taken into account when attempting to understand how service quality is perceived and how service quality should be managed. In the second phase (1986-1992) measurement models, such as SERVQUAL, were developed and subsequently refined. However, these measurement models are based on the static models from the first phase. In the third phase (1993-onwards), service quality research has increasingly turned to developing more refined measurement models which are dynamic (Gronroos 1993).
Given the difficulties of defining and operationalising service quality, relatively few efforts have been made to explain service quality through models. In fact, only a limited number of major conceptual models have been developed (Gronroos 1984b; Parasuraman, Zeithaml and Berry 1985; Lehtinen and Lehtinen 1991). These models hypothesise that service quality is mostly derived from a comparison of client expectations and the service received. However limited empirical testing means these models are not able to show conclusively how the client perceives quality nor what determines or influences their perception of quality (LeBlanc and Nguyen 1988). Some studies have attempted to assess how customers evaluated overall service quality, yet these have not been in health care, for example a study of a retailing organisation (Parasuraman, Zeithaml and Berry 1988).

Two managerial approaches and service quality models have been developed by the Nordic School and the Gap Analysis school. These will now be considered in more detail to understand the current debates about service quality.

2.3.2 Nordic School
The start of the explicit service quality discussion began in the Nordic School with the work of Lehtinen, Gronroos, Gummesson and Normann. The Nordic School has conducted research into areas of industrial and services marketing since 1980 (Gronroos 1990a).

In 1982, a research report by Lehtinen and Lehtinen proposed two dimensions of quality: physical and interactive. Physical quality covers the physical products and the physical support from the environment and its equipment. Physical products are the goods consumed during the service production process. In some cases the physical product is not important or practically non-existent, for example in health care. Interactive quality is the dimension of quality originating from the interaction between the personnel and clients, and the interaction between the client and other clients (Lehtinen and Lehtinen 1991). In health care, interactive quality is measured by comparing expectations and perceptions of the patients (and their families) and the expectations and perceptions of others in the health systems such as providers and payers (Zeithaml, Parasuraman and Berry 1990).
The Perceived Service Quality Model was also introduced in 1982 (Gronroos 1983b; Gronroos 1983a; Gronroos 1993). According to this model, the quality of a service as perceived by the client is the result of a comparison between the client's expectations and their real life experience with the service. Commonly, service quality is seen as the result of comparing the client's expectations prior to receiving the service with the client experience with the service. If expectations are met or exceeded, service quality is perceived to be satisfactory (Liljander and Strandvik 1993). Another important facet of the Perceived Service Quality Model is the distinction between the quality impact of the outcome of the service and the service delivery. Therefore, the quality of the service is considered to have two dimensions: functional, a process related dimension, and technical, an outcome related dimension. Functional quality is assessed during the service performance. Technical quality is evaluated after the service performance (Gronroos 1978; 1984b; 1984a; Normann 1984a; 1988; 1990d; Hart, Heskett and Sasser 1990; Teas 1993a).

Figure 2.1 The perceived service quality model (Gronroos 1984b, p. 37)

The functional quality dimension cannot be evaluated as objectively as the technical dimension (Boerkamp 1995). Gronroos (1984b) also recognised the importance of the image of the organisation (see Figure 2.1). Quality perceptions can be filtered by image, affecting perception of quality in various ways. If the provider is good in the minds of the clients (a positive image) minor mistakes will more likely be forgiven. If
the mistakes occur frequently, the image will be harmed. Conversely, if the image is negative, the impact of any mistake will often be considerably greater than it would have otherwise been (Boerkamp 1995).

The experienced or perceived quality is determined by the *what, how and image*, presented in Figure 2.1. Gronroos (1984b) links these quality experiences with the traditional marketing activities, resulting in a perceived service quality or total perceived quality. The perceived quality is considered 'good' when the experienced quality meets the expectations of the client. As seen in Figure 2.1, the expected quality is a function of several factors. These factors include market communication, word-of-mouth communication, corporate and local image, and customer needs. The level of total perceived quality is not determined by the level of the technical and functional quality dimensions only, but rather by the gap between the expected and experienced quality (Gronroos 1984b; Boerkamp 1995). Viewed in this way, perceived service quality is likely to be influenced by the organisation’s overall image as a function of advertising and word of mouth, as well as price and perceived value of the service encounter (Bitner and Hubbert 1994). A client’s assessment of overall or total service quality is directly affected by perceptions of performance levels (Bolton and Drew 1991).

Criticisms of the Perceived Service Quality Model are either that the model can lead to theoretically unacceptable conclusions or that independent assessments of clients' expectations and experiences cannot be made (George and Gibson 1991; Gronroos 1993). Given these limitations, and its inability to consider all stakeholders, the model cannot be applied in professional health services and therefore alternative means is required. Further consideration of the perception—expectation gap concept is presented in Section 2.3.5.

2.3.3 Gap Analysis Model
Further research into the concept of service quality was provided by Parasuraman, Zeithaml and Berry (1985) who developed a comprehensive quality measurement instrument, named SERVQUAL. SERVQUAL will be discussed after reviewing their work in defining perceived service quality and conceptualising quality as process and outcome.
Perceived service quality is also used by Parasuraman, Zeithaml and Berry (1985). Previous research on service quality supports the notion that perceived service quality stems from clients' comparisons of what they wish to receive from firms and what they perceive actual service performance to be (Parasuraman, Zeithaml and Berry 1985; 1988; Brown and Swartz 1989). In contrast, overall service quality is viewed as “the consumer’s judgement of overall excellence or superiority” (Zeithaml 1988, p. 3–4). Perceived quality is:

1  “different from objective or actual quality
2  a higher level abstraction rather than a specific attribute of a product
3  a global assessment that in some cases resembles attitude” (Zeithaml 1988, p. 3–4).

Quality evaluations are derived from service process as well as service outcome (Berry, Zeithaml and Parasuraman 1985). Process quality is the client’s qualitative evaluation of their participation in the service production process. Process quality is the client’s personal and subjective judgement (Lehtinen and Lehtinen 1991). The client experiences the production process on the basis of their participation (Larsson and Bowen 1989; Gronroos 1990c; Brown et al. 1991).

Client participation refers to “the consumer’s ability to exercise options which affect the sequence and substance of service delivery throughout the service experience” (Goodwin and Radford 1993, p. 234). Client participation is present in almost every consumer and professional service production. As a concept, client participation explains the role of the client in the service production process (Bowen and Schneider 1988; Crosby, Evans and Cowles 1990; Lehtinen and Lehtinen 1991; Lovelock 1991). As processes are the raw material which construct services (Lehtinen and Lehtinen 1991), the client is good at evaluating process quality (Kaluzney, McLaughlin and Kibbe 1995). The process often delivers one or more core services and other additional services as support to create added value (Mattsson 1995).

Outcome quality is a consumer’s evaluation concerning the result of a service production process. The outcome can be tangible or intangible. For example, outcome quality can be measured in term of changes to the patient, for example a reduction in pain. The control of the process and process quality leads to control of
the outcome quality. However the outcome quality can be difficult to measure (Dixon and Smith 1983; Lehtinen and Lehtinen 1991; Johnston 1995b).

Other researchers use the process and outcome concept to understand service quality. The process and outcome can be applied to the 'systems framework' which uses different terminology but the concept is similar. Inputs, processes and outputs each play an important role in the successful operation of the firm (Kelley, Donnelly and Skinner 1990; Schoderbek, Schoderbek and Kefalas 1990; Johnson, Tsiros and Lancioni 1995). Grove and Fisk (1992) use a similar systems approach and describe the service process as inputs, throughputs (the service experience itself) and outcomes. The input dimension is found not to have a significant effect on overall service quality (Johnson, Tsiros and Lancioni 1995). Instead, outputs will be of greatest importance to consumers (Murphy and Ross 1987; Parasuraman, Berry and Zeithaml 1991b). Outcomes or outputs can be considered the primary driver of consumer evaluations of service during the initial service encounter. However, processes are the primary drivers in satisfaction during service encounters (Spreng, Harrell and Mackoy 1995). Service processes can be considered to be the essence of services, and client needs levy special demands on these processes (Shostack 1984; Kingman-Brundage 1991).

There are two main themes of service quality which emerge from:

1 consumer perceptions of service quality result from comparing expectations prior to receiving the service and the actual experience of the service (Berry, Zeithaml and Parasuraman 1985; Parasuraman, Zeithaml and Berry 1985; Zeithaml, Parasuraman and Berry 1990)

2 quality evaluations are derived from service process as well as service outcome (Berry, Zeithaml and Parasuraman 1985).

These two themes led to the development of the Gap Analysis Model and SERVQUAL. Berry, Zeithaml and Parasuraman (1985) achieved a major step forward in developing quantitative measures of service quality by researching perceived service quality using a gap model of service quality. A client’s assessment of service quality results from a comparison of service expectations with actual performance, and any gap between the expectation and perceived performance. Their original work identified 10 determinants of service quality: access, communication, competence, courtesy, credibility, reliability, responsiveness, security, tangibles and
understanding or knowing clients. These 10 determinants were empirically tested and subsequently refined (Parasuraman, Zeithaml and Berry 1988) into SERVQUAL, an instrument specifically designed to measure client perceptions of service quality.

Process and outcome descriptions of quality also share aspects of the Gap Analysis Model (Murphy and Ross 1987). Inputs are tangibles, processes are responsiveness, assurance and empathy, and outputs are reliability, satisfaction and complaints (Parasuraman, Zeithaml and Berry 1988).

The dimensions of material quality standards, tangibles, corporate image, technical quality and physical support are consistent with the input dimension. Process includes interactive quality, staff-client interaction, functional quality, assurance, and responsiveness. The output dimension is represented in outcome and reliability (Gronroos 1984b; LeBlanc and Nguyen 1988; Lehtinen and Lehtinen 1991).

The SERVQUAL process consists of two matched questionnaires which measure prior expectations of service and perceptions of the service actually received. Service quality is determined by comparing the results obtained from the two questionnaires. The approach is primarily interested in demonstrating the underlying dimensions of overall service quality perceptions and then assessing the individual impact of these dimensions on overall service quality (Parasuraman, Berry and Zeithaml 1990; Zeithaml, Parasuraman and Berry 1990; Patterson and Spreng 1997).

The SERVQUAL instrument consolidated the initial 10 determinants of service quality into five constructs namely reliability, assurance (encompassing communication, credibility, security, competence and courtesy), tangibles, responsiveness and empathy (encompassing access and understanding or knowing the client) (Zeithaml, Parasuraman and Berry 1990). Evidence was also provided for the scale’s factor structure, reliability and validity which suggested its applicability to different service industries (Parasuraman, Zeithaml and Berry 1988). Their research determined the relative importance of five quality determinants in four non-health related service settings. Reliability was consistently the most important attribute, with the assurance attribute second in importance. Empathy was the least
important attribute in the service settings studied. The model has been variously extended and adapted. For example, the original model was extended to assess the impact of communication and control processes in the delivery of service quality. It was further extended to research the impact of various factors affecting the magnitude and direction of the four perception expectation gaps (Parasuraman, Berry and Zeithaml 1991b). The researchers found reliability the most important, responsiveness the second most important, and tangibles the least important. The authors have continued to propose and defend the appropriateness of the five dimensions of service quality as a basis of client perceptions and expectations of service quality (Zeithaml, Parasuraman and Berry 1992).

More recently, the original authors developed three variations of SERVQUAL which they describe as capturing the expanded conceptualisation of expectations (Parasuraman, Zeithaml and Berry 1994a). Testing of these expanded expectations found some support for the distinctiveness of SERVQUAL’s five dimensions, however, there was considerable overlap, especially of responsiveness, assurance and empathy (Parasuraman, Zeithaml and Berry 1994a). Interestingly, there was a significant association between service quality and behavioural intentions. Providing superior service fostered client loyalty and willingness to pay a price premium, and lowered the propensity to spread negative word of mouth communication and to switch to competitors. Managers were recommended to consider implementing a measurement approach that provides separate ratings of desired, adequate and perceived service. The studies, conducted on a computer manufacturer, a retail chain, an auto insurer and a life insurer, may have little applicability to health care. Professional health care services are highly intangible and require maximal participation from all involved. Therefore health care services require different consideration to other services. Professional services are unlike any of these conducted studies and the applicability of these existing studies is questionable.

There have been many discussions of the merits of SERVQUAL. The criticisms of the model (Carman 1990; Cronin and Taylor 1992; Brown, Churchill and Peter 1993; Teas 1993b) have been responded to in various articles (Parasuraman, Berry and Zeithaml
The discussion has reviewed:

- dimensionality of SERVQUAL
- applicability of the model
- applicability to professional services

**Dimensionality of SERVQUAL.** In the healthy and productive debate about the dimensions of SERVQUAL across industries, researchers have generally agreed that the scale items used were good predictors of overall service quality (Brown and Swartz 1989; Bolton and Drew 1991; Parasuraman, Berry and Zeithaml 1991b; Cronin and Taylor 1992). The debate has underscored the importance of the topic and the significance of the contributions to date (Fisk, Brown and Bitner 1993). For example, the SERVQUAL based measures, reflecting the disconfirmation of expectations paradigm, have not been considered as accurate as the performance based measures (Taylor and Cronin 1994). Limitations due to the lack of reliable and valid measures which can operationalise service quality are also a weakness (Taylor and Cronin 1994). In contrast, Andersson’s (1992) critique of SERVQUAL was based upon its conceptual nature: SERVQUAL captured service process aspects but the process as such was not measured.

**The applicability of the model.** SERVQUAL has been applied and subsequently criticised by many authors for a lack of applicability to many industries (Andersson 1992; Cronin and Taylor 1992; Taylor and Cronin 1994). This is because SERVQUAL only measures the stated variables in the service process (Mattsson 1994b). Cronin and Taylor (1992) also took issue with the conceptualisation and measurement approach used in developing SERVQUAL. From their research, they concluded that the disconfirmation paradigm, the basis of SERVQUAL, was inappropriate for measuring service quality. Rather, Taylor and Cronin (1994) consider SERVQUAL a better measure of satisfaction than of service quality (see Appendix B).

**Applicability to professional services.** Haywood-Farmer and Stuart (1988) modified and extended the SERVQUAL instrument by including additional questions to assess core or technical service element, service customisation, knowledge and information. Their findings showed the SERVQUAL instrument inappropriate for measuring professional service quality since the core service element of professional services was not included.
When applying SERVQUAL to professional business services Freeman and Dart (1993) found it inadequate as a stand alone instrument to capture all the elements of service quality. However, they did propose additional new dimensions of fees, professionalism and 'exceptions' as important quality elements to complement the SERVQUAL generated data. Fees needed to provide value for money or detail for the client to assess the appropriateness of the fees. Professionalism was found to be very important in the business to business services. 'Exceptions' was a miscellaneous list of quality ideas including: the provider being reassuring, services being provided outside regular office hours, work being error free, and the provider sticking to the rules regardless of the client’s requests (Freeman and Dart 1993). However, these exceptions can be seen as a secondary level for the assessment of quality rather than the primary level of quality, which is the standard regular service delivered. Other researchers have developed and extended service quality dimensions based on SERVQUAL and related measurement models. Lindqvist (1987) developed seven general and three specific quality dimensions from his research.

SERVQUAL has been widely applied in the literature and provides a source of studies on service quality. However, although the dimensions and concepts have been reviewed, its application in health care presents limitations given its static nature and the interpretations of expectations. This means it is not applicable for research in professional health services. Another means of researching professional health service quality is needed.

2.3.4 Other directions
Other researchers have proposed and tested models which view the concept of quality holistically. LeBlanc and Nguyen (1988) proposed a model which uses five quality components; corporate image, internal organisation, physical support of the service producing system, client-staff interaction and the degree of client satisfaction. Other models of service quality were based upon approaches other than the confirmation-disconfirmation paradigm. Andersson (1992) proposed an alternative model of service quality which included causes as well as effects of service quality. Causes or determinants, he believed, should describe characteristics
of a service in general form and preferably as a measure of the value a client attached to the particular characteristic.

Chase (1991) also presented service quality holistically. Conceptualisation of service quality could be expressed in terms of attribute theory, client satisfaction theory and interaction theory (Chase and Bowen 1991). The attribute theory stated that service quality reflected the attributes of the service delivery system. Primary importance was placed on the technical aspects of production (Chase and Bowen 1991). Client satisfaction theory considered that quality arose from identifying and satisfying client needs. The interaction theory indicated that the experiences of the client and the contact employee were interrelated. Service quality emerged through the mutual need satisfaction of both providers and clients (Chase and Bowen 1991).

These models share the notion that service provision is multifaceted. However, none except SERVQUAL have received extensive empirical testing (Johnson, Tsiros and Lancioni 1995). Thus, there is still uncertainty in trying to identify an appropriate measure of service quality. Professional health services have a payer other than the client of the service. The existing models are inappropriate to professional health service quality and another means is needed which can incorporate service quality for all stakeholders.

2.3.5 Discussion around the models of quality
The discussion of the models of quality presented in Section 2.3.2 to 2.3.4 have been criticised in the literature on the following issues:

- perception–expectations gap conceptualisation of service quality
- types of comparison norms
- relationship between customer satisfaction and service quality
- static nature of the model.

Perception–expectations gap conceptualisation of service quality. The expectations component seen in the Perceived Service Quality Model and SERVQUAL have generated concerns and criticisms in the literature. Carman (1990) was one of the first to be critical of SERVQUAL (Boerkamp 1995). His concern was the subtracting of expectations in SERVQUAL, questioning the psychometric properties of such
differences in their use for subsequent analysis. He recommended collection of perceptions–expectations directly in a combined form rather than asking questions about each separately (Boerkamp 1995). In 1992, Cronin and Taylor (1992) stated that there was little theoretical and empirical evidence to support the relevance of the perceptions–expectations gap as the basis for measuring service quality. In fact, the considerable variance in clients interpretation of 'expectations', leads to different interpretations of the question being asked in any research data collection (Teas 1993a; Teas 1993b; Teas 1994). Parasuraman, Zeithaml and Berry (1994b) responded to some of the concerns raised by Cronin and Taylor (1992; Teas 1993b) by clarifying their approach but maintained that abandoning SERVQUAL all together was not warranted. However, Parasuraman, Berry and Zeithaml (1991b) considered the degree of overlap between dimensions was substantial and subsequently questioned the usefulness of measuring expectations. This led to various alternatives being suggested. For example, Brown, Churchill and Peter (1993) believed there were problems conceptualising service quality as a difference score. Instead, they conducted a comparative study and concluded that a non-difference score had more favourable psychometric properties than SERVQUAL.

In contrast, Bolton and Drew (1991) supported the perceptions–expectations conceptualisation of service quality (Boerkamp 1995). Their empirical study found the difference between perceptions and expectations (disconfirmation) explained a larger proportion of variance in service quality than a performance based measure. Furthermore, an argument for incorporating client expectations in service quality measurements was that expectations provide information which is richer and has greater diagnostic value (Parasuraman, Zeithaml and Berry 1994b).

Types of comparison norms. There has also been a debate of an appropriate standard against which perceptions could be compared. Originally, no distinction was made as to comparison standards (Parasuraman, Zeithaml and Berry 1988). Expectations were viewed as desires or what they feel a service provider should offer, rather than would or does offer (Parasuraman, Zeithaml and Berry 1988). Later Parasuraman, Zeithaml and Berry introduced a revised expectations measure, representing the extent to which clients believed a particular attribute was 'essential' for an excellent service organisation (Parasuraman, Berry and Zeithaml 1990). More recently, these
authors revised the classes of expectations and developed a conceptual model making the general antecedents of expectations explicit and showing how these were likely to influence the different expectation levels (Boerkamp 1995). Expectations were viewed as predictions made by clients about what was likely to happen during an impending transaction or exchange (Zeithaml, Berry and Parasuraman 1993). The authors distinguished adequate service as well as desired service. Adequate service was the lowest level of service that still satisfied the client. From the satisfaction-dissatisfaction research literature other comparison norms were mentioned, for example deserved service, minimum tolerable service and predicted service, as predictors of what will happen (Oliver 1980; Boerkamp 1995). Expectations are considered further in Appendix B. In service quality research these will expectations have been studied by Boulding et al (1993). The expectations construct has been viewed as playing a key role in client evaluation of service quality (Parasuraman, Zeithaml and Berry 1985; Brown and Swartz 1989; Lehtinen and Lehtinen 1991).

**Relationship between customer satisfaction and service quality.** Several authors (Cronin and Taylor 1992; Teas 1993b) have raised the link between service quality and client satisfaction. Carman (1990) and Parasuraman, Zeithaml and Berry (1988) distinguished the two according to the level at which they were measured: client satisfaction was a transaction-specific assessment, consistent with the satisfaction-dissatisfaction literature; service quality was a global assessment following one or several transactions, consistent with the service quality literature. On the basis of this distinction an accumulation of transaction-specific assessment (customer satisfaction) would lead to a global assessment (service quality) (Parasuraman, Zeithaml and Berry 1988; Patterson and Spreng 1997).

In contrast, Cronin and Taylor (1992) provided empirical research suggesting that service quality should be measured as an attitude (Boerkamp 1995). This attitude forms an antecedent for client satisfaction. In response, Parasuraman, Zeithaml and Berry (1994b), developed a conceptual model that incorporated service quality as an antecedent for client satisfaction. Therefore, service quality leads to satisfaction. Overall satisfaction is a function of the client’s assessment of service quality, product quality and price. This is discussed further in Appendix B.
A static model. The static nature of the SERVQUAL instrument and other models have also been criticised. These models are a static description of variables that are somehow involved when the perception of the quality of a service is formed by a client (Gronroos 1993). SERVQUAL and other models do not say how expectations are formed and how they change before they are compared with actual experiences of a client (Boerkamp 1995). Although including dynamic processes in the models of service quality has started only recently, some researchers have tried to develop a dynamic model of service quality perception (Bolton and Drew 1991; Boulding et al. 1993). In the static SERVQUAL model, overall perceived quality consists of perceptions minus should expectations. This model assumes that expectations prior to the service are equal to those after the service. The opportunity for the service encounter to modify expectations is ignored.

The difficulties existing models have do provide an opportunity to research other means of assessing and understanding service quality. In particular it presents an opportunity for more research of professional health service quality.

2.3.6 Description of service quality for this research
It is difficult to conceptualise perceived service quality and, in particular, how expectations are formed. The impact of modifying variables on expectations reinforces this difficulty. Attempts to understand and describe service quality have led to several definitions. LeBlanc and Nguyen (1988) believe that while the literature on service quality is mostly descriptive in nature it reveals three principal schools of thought on how clients evaluate quality:

1 Service quality resides in the physical environment associated with the service offering—the tangible elements of the service production system which act as indicators of perceived quality (Shostack 1977; Berry 1980; Lehtinen and Lehtinen 1991).

2 Service quality is achieved through the performance of contact personnel—in the attitude and behaviour of staff (Solomon et al. 1985).

3 Service quality is described in terms of the degree of client satisfaction derived from the service encounter (Oliver 1980; Bitner 1990; Bitner, Booms and Tetreault 1990; Walker 1995).

Service quality research continues to develop and current attention is directed towards a dynamic service quality model. The quality of services as perceived by
clients, and the service quality context helps to understand the dynamics of expectations and experiences and the quality formation processes (Gronroos 1993). This recent direction has been initiated by a number of studies questioning the confirmation–disconfirmation concept (Bolton and Drew 1991; O'Connor, Shewchuk and Bowers 1991; Andersson 1992; Gummesson 1992; Gronroos 1993; Bolton and Drew 1994; O'Connor, Shewchuk and Carney 1994). It is reasonable to expect that during the production and delivery process of services, a client’s expectations change continuously and that the perception of quality also changes continuously during a service encounter (Gronroos 1993).

The major theoretical perspectives presented in the preceding sections can now be synthesised. Lehtinen and Lehtinen (1991) defined service quality in terms of physical and interactive quality. In another service quality model Gronroos (1984b) distinguished between the technical aspects (‘what’ is provided) and the functional aspects (‘how’ the service is provided). Berry, Zeithaml and Parasuraman (1985) identified two interrelated service quality dimensions, outcome quality and process quality, which correspond to the dichotomy proposed by Gronroos (1984b) and to the ‘physical’ and ‘interactive’ quality characteristics identified earlier by Lehtinen and Lehtinen (1991). Figure 2.2 summarises these major theoretical perspectives.

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**Perceived service quality**

Figure 2.2 Summary of the major theoretical perspectives on perceived service quality (Walbridge and Delene 1993, p. 8), adapted from Swartz (1989)

The major theoretical perspectives have elements in common. The process and outcome model (Berry, Zeithaml and Parasuraman 1985) can be considered to share aspects of the Nordic school model (Normann 1984a; Gronroos 1988; Hart, Heskett and Sasser 1990; Teas 1993a). The functional quality comes in part from processes
and technical quality is part of the outcome. The two dimensions of quality, physical and interactive, proposed by Lehtinen and Lehtinen (1991) have some parallels with Gronroos (1984b). Physical quality covers the physical products and the physical support from the environment and its equipment, therefore it is part of the technical quality as well as the functional quality (Gronroos 1984b).

In summary, service quality has been described using two models called the Perceived Service Quality Model and SERVQUAL. However, the models found in the literature are static and therefore inadequate to explain the dynamic nature of professional health services.

Service quality for this research is a global judgement of performance across multiple service encounters. Client satisfaction over several encounters can lead to perceptions of global service quality. Service quality can be described as delivery of the service quality determinants (considered as what is provided and how it is provided) together with management of client perceptions to meet expectations, implemented with maximal client and provider participation.

2.3.7 Determinants of service quality
Clients' expectations are rarely concerned with a single aspect of the service package but rather many aspects (Berry, Zeithaml and Parasuraman 1985). Identification of the determinants of service quality is necessary in order to be able to specify, measure, control and improve client perceived service quality (Parasuraman, Zeithaml and Berry 1985; Johnston 1995a). Identification of these determinants forms the basis for service quality strategies (Zeithaml, Parasuraman and Berry 1992). Services have many important attributes, the relative importance of which from the clients' perspective can change rapidly (Haywood-Farmer 1987). Determinants of service quality as found in the literature are presented in Table 2.6. The table illustrates the broad scope and absence of agreement in current research.
<table>
<thead>
<tr>
<th>Determinant</th>
<th>Description</th>
<th>Authors</th>
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<tbody>
<tr>
<td>access</td>
<td>physical approachability of service location, including ease of finding one’s way around the service environment and the clarity of route</td>
<td>Berry, Zeithaml and Parasuraman (1985)</td>
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<td></td>
<td></td>
<td>Johnston (1995a)</td>
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<td></td>
<td></td>
<td>Gronroos (1990c)</td>
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<tr>
<td>aesthetics</td>
<td>agreeable or pleasing service environment, appearance and presentation of facilities, goods and staff</td>
<td>Berry, Zeithaml and Parasuraman (1985)</td>
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<td></td>
<td></td>
<td>Parasuraman, Zeithaml and Berry (1985)</td>
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<td></td>
<td></td>
<td>Gronroos (1990c)</td>
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<tr>
<td></td>
<td></td>
<td>Chase (1991)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Johnston (1985a)</td>
</tr>
<tr>
<td>competence/knowledge</td>
<td>skill, expertise and professionalism with which the service is executed (includes carrying out the correct procedures, client instructions, degree of product or service knowledge exhibited by contact staff, giving sound advice, general ability to do a good job)</td>
<td>Berry, Zeithaml and Parasuraman (1985)</td>
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<tr>
<td></td>
<td></td>
<td>Mersha and Adlakha (1992)</td>
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<td>Johnston (1995a)</td>
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<td></td>
<td></td>
<td>Gronroos (1990c)</td>
</tr>
<tr>
<td>communication</td>
<td>ability of service providers to communicate with the client in a way they will understand (includes clarity, completeness and accuracy of verbal and written information for the client, ability of provider to listen to and understand the client)</td>
<td>Berry, Zeithaml and Parasuraman (1985)</td>
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<td></td>
<td></td>
<td>Witt and Stewart (1993)</td>
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<tr>
<td></td>
<td></td>
<td>Johnston (1995a)</td>
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<tr>
<td>handling of non-routine and emergency situations</td>
<td>flexibility, a willingness and ability on the part of the service worker to amend or alter the nature of the service or product to meet the needs of the client (recovery of failed situations)</td>
<td>Maister (1982)</td>
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<td></td>
<td></td>
<td>Albrecht and Zemke (1985a)</td>
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<tr>
<td></td>
<td></td>
<td>Bell and Zemke (1987)</td>
</tr>
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<td></td>
<td></td>
<td>Brandt and Reffett (1989)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bitner, Booms and Tetreault (1990)</td>
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<tr>
<td></td>
<td></td>
<td>Hart, Heskett and Sasser (1990)</td>
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<td></td>
<td></td>
<td>Chase and Bowen (1991)</td>
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<td></td>
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<td>Bowen and Lawler (1992)</td>
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<td></td>
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<td>Schweikhart (1993)</td>
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<td>Johnston (1995a)</td>
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<td></td>
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<td>Spreng, Harrell and Maackoy (1995)</td>
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<td></td>
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<td>Walker (1995)</td>
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<td>Brandt (1989)</td>
</tr>
<tr>
<td>reliability of service</td>
<td>reliability and consistency of performance of facilities, goods and staff (includes punctual service delivery, ability to keep agreements made with client) and is considered the technical quality or outcome of the core service</td>
<td>Schneider (1980)</td>
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<tr>
<td></td>
<td></td>
<td>Berry, Zeithaml and Parasuraman (1985)</td>
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<td></td>
<td></td>
<td>Parasuraman, Zeithaml and Berry (1985)</td>
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<tr>
<td></td>
<td></td>
<td>Zelthaml, Berry and Parasuraman (1988)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bitner, Booms and Tetreault (1990)</td>
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<td></td>
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<td>Gronroos (1990c)</td>
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<tr>
<td></td>
<td></td>
<td>Chase and Bowen (1991)</td>
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<tr>
<td></td>
<td></td>
<td>Hart, Schlesinger and Maher (1992)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mersha and Adlakha (1992)</td>
</tr>
</tbody>
</table>

46
Importance of various service quality determinants. Many authors consider that consumers identify reliability as the single most important dimension of service quality (see Table 2.6 above) (Parasuraman, Zeithaml and Berry 1985; Kingman-Brundage 1991). Yet assessments of reliability is predominantly a source of dissatisfaction rather than satisfaction (Johnston 1995a). Kingman-Brundage (1991) also considered competence an important determinant. Competence means possession of the required skills and knowledge to perform the service, and is assumed to involve the personal effort of individual providers.

Additional determinants have been reported. Gronroos (1990c) added reputation and credibility. Albrecht and Zemke (1985a) suggested care, concern and spontaneity. One might expect that satisfaction with the process of problem resolution will be more important than initial service attributes in influencing overall satisfaction and those intentions (Bitner, Booms and Tetreault 1990; Hart, Heskett and Sasser 1990; Berry and Parasuraman 1991; Bowen and Lawler 1992; Schweikhart 1993; Spreng, Harrell and Mackoy 1995). Therefore, the process of problem resolution can be an important determinant of service quality. Taylor (1994; 1995) found that delays in service delivery do affect evaluations of services, particularly the tangible and reliability attributes of the service. The longer the delay the lower overall evaluation of service (Parasuraman, Zeithaml and Berry 1985; Maister 1988; Davis and Heineke 1993).

Some quality determinants are important to clients across a number of service industries. Others determinants apply to a specific service industry or service. High and low contact services differ considerably in terms of quality attributes and their implementation. In low contact services, quality essentially means how well the
service conforms to specifications. In high contact services it is not appropriate to define quality as simply. The human encounter cannot be completely specified. High contact services must satisfy higher order human needs to a much larger extent than low contact services (Bitran and Hoech 1990).

Certain attributes of good quality may be ranked low for services in general but conversely are ranked high in particular services. This reflects the unique characteristics of the specific services. For example, for physicians services, a follow up after the initial service is ranked relatively high whereas for fast food restaurants prompt service is ranked the number one quality attribute (Mersha and Adlakha 1992). Therefore, unique features of a particular service as well as generic attributes of quality should be attended to.

In summary, the determinants of service quality are dependent on the particular service. Service reliability is consistently rated as important. The literature reviewed in Section 2.3.7 does provide an overview of the important determinants of service quality enabling comparisons to the findings of this research. Health care quality measurement and determinants provide an opportunity to assess service outcomes and client perceptions of quality (Plsek 1995).

2.3.8 Health care quality
Growth in the service sector and other factors such as deregulation and increasing competition, has also resulted in services management and marketing receiving attention (Lovelock 1991). For a long time, the health care sector in Australia was not interested in marketing. Marketing health services represents a particular challenge to both health care and marketing professionals. It incorporates the typical challenges of services marketing plus the unique complexities of health care. Health care revenue can come from public or private insurance sources, yet purchasing choices are made by private clients. Patients use health services, yet health care providers decide how many of which type on their behalf (MacStravic 1991). In Australia, professional health care services are also marketed to organisations such as workers compensation boards, rather than only to the final client (the patient) (Mattsson 1993).
Generally, organisations do not become aware of marketing until their market undergoes a change. Health care is slowly changing in Australia to focus on the service requirements of their patients. Non-competitive operations, such as public health care, have traditionally been based on the provider’s logic or lack of logic. The system does not need to be client friendly to survive. Of the systems of these types, the bureaucratic legal paradigm is dominant and is applied in health care (Gumnesson 1993). In simplest terms, the organisation takes resources (inputs) from the larger system (the environment), processes these resources and returns them in changed form (outputs) (Wild 1977; Gibson, Ivancevich and Donnelly 1979; Schoderbek, Schoderbek and Kefalas 1990). Management control of health care services has been traditionally internally orientated, ignoring the service requirements of patients.

Participative service delivery is now demanded in health care (McMahon 1976). One of the clearest trends in contemporary organisational literature is that which rejects centralisation of power, influence, and decision making, and supports the involvement and exercise of influence by many organisational members (McMahon 1976; Argyris, Putnam and McLain Smith 1987; Consumers Health Forum 1993; Consumers Health Forum 1995b; Consumers Health Forum 1995a). Participative systems are considered superior to low participation systems in organisational theory (McMahon 1976). Therefore, to facilitate participative systems, management control can make visible the activities aimed at achieving client satisfaction, not just a focus on efficiencies (Kullven and Mattsson 1994).

A current approach in health care is 'self efficacy'. This began in the management of arthritis and is becoming more widely accepted (Lorig et al. 1989). Bandura (1997) considered participation could be maximised using the approach of maximising self efficacy. “Self efficacy is achieved with explicit guidelines on how to enable people to exercise some influence over how they live their lives” (Bandura 1997, p. 10). It is a judgement of personal capability (Bandura, Jeffrey and Wright 1974; Bandura 1986; Lorig et al. 1989; Bandura 1991; Bandura 1997). When performance determines the outcome of a service, Bandura (1997) argued that variation can be expected according to the ability of the person to realise self efficacy in a health service
situation. Self efficacy can be expected to continue as an important variable in health care quality.

Quality assessment is an important topic, particularly in times of cost containment. In the health sector, assessing and controlling the quality of health care provided by institutions or individuals are complex matters. Until recently, the prevailing approach to defining and measuring quality was similar to what Garvin (1988) called the 'manufacturing approach'. Quality was assessed in terms of engineering and manufacturing practice, as conforming to specifications (Donabedian 1980; Donabedian 1988; Lytle and Mokwa 1992; Stiles 1994; Turner and Pol 1995). It was primarily seen as the responsibility of the health care provider. Hospital management saw quality as technically complicated. As a result they turned over primary responsibility for its measurement and control to medical staff (Institute of Health Care Improvement 1996). Consequently, the quality issue had no meaningful client orientation.

Client orientation, as part of a market orientation, has only recently emerged in health care practice and policy. Given the preoccupation of the health care field with quality (Kotler and Clarke 1987), and given the strategic importance of this variable for health care providers, an important issue is how the market perceives the quality delivered. A second issue is the client's perceptions of quality.

Since the mid-1980s many studies have been carried out to investigate how quality is perceived by patients and professionals. Few studies are found which consider more than one stakeholder in any research. Table 2.7 presents some of the studies based on services marketing theories. Many of these studies use a modified version of SERVQUAL. This is because the authors thought it necessary to adapt the SERVQUAL dimensions to the health care setting.
<table>
<thead>
<tr>
<th>Research focus</th>
<th>Sampling method</th>
<th>Measurement</th>
<th>Authors</th>
<th>Results on service quality dimensions¹</th>
<th>Overall research findings on the measurement of service quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 physician vs patient perceptions of physician professional services, gap analysis</td>
<td>probabilistic patients: n=1000 response 99% physicians: n=1000 response 57%</td>
<td>3 dimensions 10 statements 5 point Likert scale</td>
<td>Swartz and Brown (1989)</td>
<td>Important dimensions of services (patient): professional credibility, professional competence, communications</td>
<td>inconsistencies in expectations between client and professional have adverse effect on evaluation of service performance</td>
</tr>
<tr>
<td>2 physician versus patient perceptions of physicians professional services</td>
<td>modified SERVQUAL 10 dimensions</td>
<td>Brown and Swartz (1989)</td>
<td>gaps between patient expectations and between patient experiences and provider perceptions of patient experiences, create less positive patient evaluations of services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 determine influence client perceptions service quality on satisfaction and intention to return in two hospitals</td>
<td>proportional stratified² response 32%</td>
<td>modified SERVQUAL 5 dimensions 7 point Likert scale</td>
<td>O'Connor, Shewchuk and Bowers (1991)</td>
<td>reliability, responsiveness, assurance and empathy are individual constructs and together with service quality are major determinants of patient satisfaction</td>
<td>service quality positively influences patient satisfaction which in turn mediates the effect of intention to return</td>
</tr>
<tr>
<td>4 prior satisfaction with previous hospital experiences influences current hospital experience at 3 hospitals</td>
<td>probabilistic n=1500 response 24%</td>
<td>modified SERVQUAL 11 dimensions 5 point Likert</td>
<td>John (1992)</td>
<td>important quality determinants: previous experiences and prior impressions</td>
<td>prior impressions important therefore aim to satisfy all patients at all times, as well as friends and relatives</td>
</tr>
</tbody>
</table>

¹ Of studies involving more than 5 variables, only the 5 most important are presented. Order of the variables indicates order of importance (first mentioned being most important)
² Total sample on which 32% response is based not mentioned by authors
<table>
<thead>
<tr>
<th>Research focus</th>
<th>Sampling method</th>
<th>Measurement</th>
<th>Authors</th>
<th>Results on service quality dimensions</th>
<th>Overall research findings on the measurement of service quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 investigate impact of an objective outcome on patient based perceptions of health care quality</td>
<td>probabilistic n=1500 response 40%</td>
<td>modified SERVQUAL 11 dimensions 5 point Likert</td>
<td>Lytle and Mokwa (1992)</td>
<td>variables with highest mean scores: friendly and courteous, personal interest, well dressed and neat</td>
<td>core product benefits or objective service outcomes moderate influence of health care delivery variables on patients' perception of health care quality</td>
</tr>
<tr>
<td>6 capture patients' experience of two diagnostic services</td>
<td>total population n=2200 response 60%</td>
<td>modified SERVQUAL 7 dimensions, 19 statements, 4 points Likert, semantic differential</td>
<td>Peyrot, Cooper and Schnapf (1993)</td>
<td>variables explaining satisfaction: staff behaviour, examination comfort, appointment convenience, pre-examination comfort, pre-admission information sufficient</td>
<td>physicians believe public has lower opinion of them that what is true; physicians overestimate client's interest in health care topics</td>
</tr>
<tr>
<td>7 determine physicians perceptions of service quality determinants</td>
<td>convenience sample n=649 response 32.7%</td>
<td>modified SERVQUAL 7 dimensions 10 point scale</td>
<td>Walbridge and Delene (1993)</td>
<td>important quality determinants, reliability, professionalism, empathy, assurance, core medical services</td>
<td>process determinants were rated higher in relative importance than outcome quality determinants; older physicians give higher importance ratings</td>
</tr>
<tr>
<td>8 determine standards of excellence by former patients, physicians, hospital employees and insurers</td>
<td>convenience sample physicians n=52 patients n=147 insurers n=13 employees n=188</td>
<td>critical incident technique 2 statements 7 dimensions</td>
<td>Longo, Connor and Barnhart (1993)</td>
<td>physicians: communication and support services; patients: personal nature of care; insurers: convenience and minimal interruptions; employees: employee recognition</td>
<td>overall largest percentages of insurer, physician, and employee critical incidents were classified as administrative policy issues; patients reported nurturing incidents as critical to quality perceptions</td>
</tr>
<tr>
<td>Research focus</td>
<td>Sampling method</td>
<td>Measurement</td>
<td>Authors</td>
<td>Results on service quality dimensions</td>
<td>Overall research findings on the measurement of service quality</td>
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</tr>
<tr>
<td>9. Determine link between perceived service quality and intention to complain,</td>
<td>Probabilistic</td>
<td>Modified SERVQUAL</td>
<td>Headley and Miller</td>
<td>Reliability, dependability and empathy</td>
<td>Patients intention to complain, compliment, repeat purchase and switch providers predicted on important quality determinants</td>
</tr>
<tr>
<td>compliments, repeat purchase and switch providers in a primary care clinic</td>
<td>n=159</td>
<td>22 items</td>
<td>(1993)</td>
<td></td>
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<tr>
<td></td>
<td>Response 16%</td>
<td>7 point Likert</td>
<td></td>
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<tr>
<td></td>
<td>n=20</td>
<td></td>
<td></td>
<td></td>
<td>Quality comes from medical technical competence, physical technical conditions, action of care givers and organisational culture</td>
</tr>
<tr>
<td>11. Influence of referent opinion (one’s own opinion) and recommendations of</td>
<td>Probabilistic</td>
<td>Modified SERVQUAL</td>
<td>John (1994)</td>
<td>Important quality determinants: competence, credibility, reliability and availability</td>
<td></td>
</tr>
<tr>
<td>others has on evaluation of hospital care</td>
<td>n=1500</td>
<td>14 dimensions</td>
<td></td>
<td></td>
<td>Referent opinion and the recommendations of relevant others influences patient perceptions of quality; demographic profile mediates this influence; females significantly more likely than males to be influenced by own opinion, and to lesser extent, a spouse’s opinion, in hospital choice</td>
</tr>
<tr>
<td></td>
<td>Response 24%</td>
<td>5 point Likert</td>
<td></td>
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</tr>
<tr>
<td>12. Define service quality and antecedents at 14 physiotherapy clinics</td>
<td>Convenience sample</td>
<td>Modified SERVQUAL</td>
<td>McIntosh, Mayo and Stymiest (1994)</td>
<td>One clinic empathy most important, three clinics assurance most important</td>
<td>Important quality determinants are access, treatment and results</td>
</tr>
<tr>
<td></td>
<td>n=532</td>
<td>5 dimensions, 26 questions</td>
<td></td>
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<td></td>
<td></td>
<td>10 point scale</td>
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<tr>
<td>Research focus</td>
<td>Sampling method</td>
<td>Measurement</td>
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<td>Results on service quality dimensions</td>
<td>Overall research findings on the measurement of service quality</td>
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<tr>
<td>13 determine how service quality determined by dyadic perspective of health care providers and patients, expectations congruence generally and simultaneously in a multispecialty clinic</td>
<td>probabilistic</td>
<td>modified SERVQUAL 5 dimensions&lt;sup&gt;3&lt;/sup&gt;</td>
<td>O'Connor, Shewchuk and Carney (1994)</td>
<td>physicians rated patient expectations of reliability, responsiveness, assurance and empathy lower than did administrators, patient contact personnel and patient</td>
<td>physicians uniformly underestimated patient expectations for five dimensions, except for tangibles—overestimated</td>
</tr>
<tr>
<td>14 relationship between service quality, satisfaction and purchase intentions of patients of dental practices</td>
<td>sample of convenience</td>
<td>SERVQUAL and SERVPERF 10 dimensions</td>
<td>McAlexander, Kaldenberg and Koenig (1994)</td>
<td>SERVPERF superior to SERVQUAL as has measures of quality as a performance not expectations</td>
<td>service quality and satisfaction strong reciprocal influences neither precedes, purchase intentions are influenced by both satisfaction and overall service quality assessments</td>
</tr>
<tr>
<td>15 patient satisfaction with nursing care</td>
<td>sample of convenience</td>
<td>modified SERVQUAL 5 dimensions 7 point Likert</td>
<td>Scardina (1994)</td>
<td>reliability and empathy, responsiveness, and tangibles</td>
<td>SERVQUAL applicable for satisfaction measure of nursing care</td>
</tr>
<tr>
<td>16 hospital patients perceptions of quality</td>
<td>sample of convenience</td>
<td>modified SERVQUAL 7 dimensions 7 point Likert</td>
<td>Tomes, Chee Peng Ng (1995)</td>
<td>intangibles and two intangibles of food and physical environment</td>
<td>unfulfilled expectations in relationship of mutual respect and understanding of illness and variables related to communications between doctors and patients</td>
</tr>
</tbody>
</table>

<sup>3</sup> Scale not mentioned
Table 2.7 shows a number of studies of the evaluation of hospital services by patients and professionals. The dimensions most important in evaluating health service quality by patients appear to be the functional or process dimensions, such as confidence, reliability and care (Boerkamp 1995). A meta-analysis of satisfaction literature in medical care found that humaneness and technical quality of medical care ranked highly, while the bottom five ranks were occupied by aspects of care that reflected the providers attention to other patients' needs and the patient's relation to the system as a whole (Hall and Dornan 1988). One study focused on the perception of professional service quality by practising physicians (Walbridge and Delene 1993). Interestingly, process quality determinants were rated higher in importance than outcome determinants when patients evaluated physicians (Gombeski et al. 1993; Walbridge and Delene 1993).

Other researchers have paid attention to the comparison of health care providers' and patients' perceptions of service quality, for example Swartz and Brown (1989). They found that patients have more confidence in physicians and are less likely to believe that physicians are at fault in malpractice suits than physicians realise. On the other hand, physicians overestimated patients' interest in and use of health care information. Therefore, another factor influencing perceived service quality is the client's perception of the service provider. Quality factors can be particular to the service offered and related to the professionals input such as empathy and professionalism. However, client perception of the service is not necessarily an indication of the technical quality of the service (Freeman and Dart 1993). In the absence of previous experience with the health service, clients are most likely to rely on lay referrals and the experiences of friends, co-workers and relatives (Taylor and Cronin 1994). Other researchers found when applying SERVQUAL that dimensions of reliability, dependability and empathy are most predictive of a patient's intent to complain, compliment, repeat purchase or switch providers (Headley and Miller 1993). Responsiveness to the unusual situation is a high indicator of perceived service quality (Roth and Amoroso 1993; Scardina 1994). However, care is needed when applying SERVQUAL to health care as the model may translate poorly because of the high client involvement and risk nature of health care (Taylor and Cronin 1994).
It can be concluded that in the marketing literature the emphasis has been on measuring the patient’s perception of care and investigating the quality of care. These articles reflect the discussion and developments going on in the health care field to measure quality of care. They emphasise that patients are a relevant source of information on certain aspects of care but also caution in the use of patient assessments since they do not correlate highly with ‘objective’ (health professional defined) measures of care (Swartz and Brown 1991; Boerkamp 1995). However, given the many stakeholders involved in health care, more research is needed to understand quality from viewpoints other than the patient. Research is also needed which considers all stakeholders and synthesises their views of quality.

2.3.9 Understanding health services quality
One of the unique aspects of health services marketing is the complex nature of the health care “customer” (MacStravic 1991, p. 526). In most businesses, clients purchase goods from producers and together these players are the primary beneficiaries of the exchange. However, in the health care system, patients receive the services, third parties (insurers) finance the exchange, and a variety of service providers receive payments for the exchange. Thus, there are three equally important categories of ‘clients’ in the system, each with quite different priorities and expectations. Each negotiate for their own satisfaction yet all must be balanced against the requirements of the other clients (MacStravic 1991; Lengnick-Hall 1995).

Most service quality research in health care has focused on the patients’ evaluation of health care services. However the provider and the insurer are also clients. A complete understanding of the service quality construct necessarily requires an examination of expectations and performance perceptions from the perspectives of all parties involved in the transaction. Focusing just on patient expectations and perceptions of performance can only yield partial understanding (Hall and Elliott 1995). A multidimensional approach to measuring health care quality is needed. This should focus on access, health care personnel, clinical outcomes and patient satisfaction (Turner and Pol 1995).
The standards for quality service levels may vary according to each group's evaluation criteria. Consequently, expectations may not only vary according to the client group, but may also overlap as client groups overlap (George and Gibson 1991).

The organisation must openly commit to the patient as the first priority, by providing the quality the patient requires, and assisting providers and employees to deliver quality (Murphy and Ruflin 1993). The outcome of health services often extend beyond the individual directly involved to include the patient's family and friends. Intimacy and a high level of involvement of the provider and client are often found in the health care process. As a result possibilities exist for extremely high satisfaction or dissatisfaction to occur (Swartz and Brown 1991).

Two of the 'customers', patient and health care professional, will now be considered in light of their contribution to service quality.

Professionals. The professions have traditionally employed a two pronged approach to ensure quality. The first has been rigorous educational admission requirements, usually involving testing by universities and the relevant profession. This has the effect of restricting entry to the practice to those most capable. The second control method has involved establishing governing bodies with the power to hear complaints or allegations from dissatisfied patients and, where appropriate, to discipline the offending professional. However, rather than reacting to complaints, a more proactive approach to quality measurement is needed, particularly the assessment of quality from the patients perspective (Freeman and Dart 1993).

The difficulties of assessing quality come from the norms of professional autonomy that thrive amongst health care providers. Professional service providers are generally unaware of 'normal' client complaints. Thus the provider may be under the false impression that consumer needs are being met. This pseudosecurity maybe enhanced by the professional's perception of his or her own expertise and authority (French and Raven 1960; Mintzberg 1979; Swartz and Brown 1991; Schweikhart 1993).
Adding to the difficulty is that quality is negotiated during the service encounter. The buyer-seller interface is sequential and interactive. The offer to solve a problem is not given beforehand. Rather, it is gradually arrived at through the interaction process in which representatives of the buyer and seller solve successive application problems (Mattsson 1993). However, the tendency remains to depict clients as being separated from the core technology and to treat them only as consumers, not as producers. This impedes service quality further (Larsson and Bowen 1989).

Professional service quality is an area in need of further research (Brown and Swartz 1989; Bitner, Booms and Tetreault 1990; Palmer and Maani 1993). The difficulties in assessing quality in professional services may be the cause of this lack of research (Freeman and Dart 1993). Assessment of professional health services is difficult because:

- the interaction is highly complex, therefore the performance is difficult to judge (Hite and Fraser 1988)
- the effects of the performance are often delayed, making postpurchase judgement difficult (Hite and Fraser 1988)
- usage may be infrequent so that the client is unable to collect enough information to develop informed expectations of quality (Hite and Fraser 1988)
- there are virtually no tangible prepurchase qualities with professional services, thus the client is unable to compare preservice expectations (Hite and Fraser 1988)
- professional service associations have traditionally concentrated on improving the technical skills of their members rather than client orientated skills (Brown and Swartz 1989).

The difficulties associated with quality assessment have meant a corresponding lack of development of quality dimensions specific to professional services. Attempts to apply general service quality instruments such as SERVQUAL to professional services have been unsuccessful, providing opportunities for further research (Freeman and Dart 1993).

Patients. Health care services provide some unique challenges when assessing quality. Patients generally lack the knowledge to accurately assess the technical competence of medical personnel (Murphy and Ross 1987). Furthermore, their physical or emotional ill health, when seeking health services, can easily impede
judgement. Patients can be influenced by 'non-medical factors' such as the interpersonal skills of the provider. A good bedside manner can easily mask doubtful technical quality. Moreover, patients are often reluctant to disclose what they really think because of their sense of dependency or prior failures in patient-physician communication (Nelson 1990). Yet, the actions of patients have a direct causal connection to the quality of service outcomes (Kelley, Donnelly and Skinner 1990; Lengnick-Hall 1995).

The patient presents the professional and health care organisation with input uncertainty. The organisation faces uncertainty about the participation of the provider and the patient (Larsson and Bowen 1989). Patients present the organisation with incomplete information regarding either what is to be serviced toward which desired outcomes (for example, the patient's mind, body or goods), or what actions they will contribute in the service co-production (Larsson and Bowen 1989).

Patients want to be involved in decision making about their care (Powell et al. 1994). There is a trend to move away from the older model where decisions were unilaterally made by the health care professional (MacStravic 1991). A frequently cited benefit of patient participation is patient satisfaction. Participation in making treatment decisions restores to patients a sense of control and positively affects their satisfaction (Elsesser 1988; MacStravic 1988; Consumers Health Forum 1993; 1995b; 1996). Patient satisfaction also influences provider satisfaction (MacStravic 1988). To improve health care, providers need to move to the partnership or collaborative model (see Table 2.8) of a service quality approach (Elsesser 1988; Young 1995). The empowerment of health care providers and patients can lead to improved services and this can be achieved with higher involvement and control (Hart, Heskett and Sasser 1990; Bowen and Lawler 1992; Schweikhart 1993).

Patient participation in health care can also mean that the patient is encouraged to take an active role in caring for their specific illness and general health. Table 2.8 illustrates the four roles a patient can assume in health care decision making.
Table 2.8 Patient roles in the health care decision-making process (Hult and Lukas 1995, p. 42)

<table>
<thead>
<tr>
<th>Patient role</th>
<th>Implication</th>
</tr>
</thead>
<tbody>
<tr>
<td>traditional</td>
<td>physician or health care provider decides; patient trust and confidence replace the need for consent</td>
</tr>
<tr>
<td>information consent</td>
<td>physician or health care provider decides with the patient’s consent</td>
</tr>
<tr>
<td>collaboration</td>
<td>joint decisions</td>
</tr>
<tr>
<td>patient choice</td>
<td>patient decides with the physician’s or health care provider’s consent</td>
</tr>
</tbody>
</table>

The trend is for the patient to adopt the role of ‘patient choice’ rather than the ‘traditional’ role which allows the health care provider to decide (see Table 2.8).

As with any service encounter, the patient needs to participate to achieve quality. The patients “appear twice as a consumer in the market segment and as part of the service delivery system” (Normann 1984b, p. 51). Patients are also needed as active participants in producing and delivering the service (Gronroos 1978). Service quality relies on the patient cooperating, following instructions, and collaborating in the delivery process (Goodwin 1988). Patients must accept personal responsibility for, and make a direct contribution to, their health care (Lengnick-Hall 1995). Patients as partners could contribute to their health care by engaging in health promotion activities, controlling use of painkillers, complying with medical advice, seeking care and caring for themselves, and making informed decisions (MacStravic 1988; Kelley, Donnelly and Skinner 1990; Lehtinen and Lehtinen 1991; Gore et al. 1994).

In health care, patients cannot ethically be rejected if they do not agree to participate in their care. Health care organisations are expected to deliver consistent quality services. This is despite wide variations in patients and a limited ability to establish an extensive human resource quality standard (Lengnick-Hall 1995). The service provider cannot screen or select clients (Lovelock 1991; Goodwin and Radford 1993). In health care, there can be no pre-selection of patients, nor are patients trained, motivated or rewarded in the health care system (Johnston 1989). The reliability of health care diagnosis may depend on the patients’ ability and willingness to describe their illness (Bowen and Schneider 1988).
Adding to this input uncertainty, health care is provided in a highly fragmented manner. It is often left to the patient to move through the system, receiving diagnoses and treatments from providers who operate independently (Hoffer Gittell 1997). Some authors consider that this lack of coordination increases health care costs and decreases the quality of care (Argote 1982).

In addition therefore, patients must possess another quality, an ability to navigate through the health care system. They need to be more influential members of the health care system and having the discretion in decision making. Curtailing patient power encourages patients to abdicate responsibility or intentionally disrupt system activities. A collaborative atmosphere should be built for effective suggestions about quality improvements (Lengnick-Hall 1995).

Lengnick-Hall (1995) considers patients play four roles in health care when defining and measuring quality:

- **Supplier** — patients supply information for health care activities and supply the transformation efforts to bring about service quality (Deming 1986).
- **Participant** — patients participate and take an active role in the service.
- **Products** — patients embody the primary outcome from the health care system, they are the products which has undergone change.
- **Recipient** — realistic patient expectations are needed and may be shaped by the health care professional.

The inputs to the system are the patient as a supplier and a participant. Patients incorporate system outcomes in the roles of product and recipient (Lengnick-Hall 1995).

Given the four roles of the patient and the importance of their participation, this research adopts the view that the patient and provider roles are connected and intertwined. Therefore both have a role in quality and productivity (DeBruicker and Summe 1985; Normann and Ramirez 1993). There is also a shifting and sharing of responsibilities between the patient and the organisation (Hult and Lukas 1995). This research adopts a position which contrasts with the view that the patient and provider roles are well defined and separate (Czepiel 1980; Solomon et al. 1985).
As the role of the patient and professional are intertwined, sharing responsibilities with the health care organisation, research on health service quality must consider all stakeholders. The stakeholders include the patients, health care professionals and the health service organisation including the payer. This research adopts the approach of including all stakeholder views of professional health service quality.

2.3.10 Description of professional health service quality
This review of the service quality in health care has facilitated an understanding of the current discussion on these topics. As shown, service quality has been defined in many ways. Most consistently it includes a consideration of the client’s needs and expectations. As services are processes, the actual steps involved in delivering and receiving the service ('service operation') impact on service quality evaluations (Fisk, Brown and Bitner 1993; Gummesson 1994). Service marketing scholars have a special opportunity to incorporate clients' needs into design and delivery of services (Celuch and Longfellow 1992). Service strategy, design and execution will continue to be key areas for scholarly and managerial inquiry (Brown, Fisk and Bitner 1994). Any service quality strategy must aim for maximising participation and customisation of services when considering health care services.

The existing service quality models are static and not easily applied to professional services. Professional health services, require unique consideration and further research. Studies in health care rarely incorporate the views of payer, provider and client (Andersson 1992). Some studies exclude clients, whilst others only consider management views of quality. Research of all stakeholders views of professional health service quality is needed.

A professional services quality model must meet the unique features of health care. The model responds to the challenges of health care of:

- the needs and expectations of all stakeholders
- highly complex service interactions
- professionals being unaware of 'normal' client complaints
- patients lacking the ability to accurately assess the technical competence of professionals
• patients presenting as input uncertainty for the professional, as a participant and as a product
• intimate and extended contact during service delivery.

A description of professional health service quality for this research is a global judgement of performance across multiple service encounters. Professional health service quality can be described as the delivery of the service quality determinants by the professional, management of patient perceptions to determine, negotiate and meet expectations with maximal patient and professional participation.

2.4 Service management for quality
Service management has evolved from a product orientation and it is questionable if product measures can be applied to services (Celuch and Longfellow 1992). The review of the literature on service management and service design is undertaken to facilitate an understanding of the developments in the service management area and their applicability to professional health services.

2.4.1 Service management
A field called service management has emerged during the last decade as a holistic, client-driven and quality-orientated management perspective. The focus has been on service provider orientated concerns (Gummesson 1993; Gronroos 1994b). Yet service quality requires leadership and management attuned to achieving quality for both the patient and provider (Albrecht and Zemke 1985b; Bowen 1986; Rosenstein 1986).

The purpose of service management is to provide a set of plans and policies to manage the expectations and perceptions that will provide the organisation with a competitive advantage (Johnston 1987). Service management includes developing an organisational structure and technology which supports, encourages and motivates service providers to achieve service quality (Shostack 1987; Gronroos 1988; Kingman-Brundage 1991; Schlesinger and Heskett 1991).

A service design will support service management by focusing on the processes of service delivery (Gronroos 1990c; 1990d; Randall 1993). Service design responsive to
service characteristics is the method of implementing a service quality strategy. Service design is the mental plan or scheme in which the means to an end are laid down (Kingman-Brundage 1991). For service systems, the end is the service value received by the client, the means refers to the service system required to create that value. Structural process design can be used to 'engineer' services on a more scientific, rational basis (Shostack 1987; Stockley 1995).

Service design needs to integrate the setting of expectations in service quality strategies (Bitran and Hoech 1990; Gronroos 1990c). This integrated design is needed particularly for those services where client contact intensity is high, and services are produced and consumed simultaneously (Schlesinger and Heskett 1991; Shostack and Kingman-Brundage 1991). Professional services fits this description.

Models of service design. Initially, one dimensional models based upon high and low client contact services were developed (Larsson and Bowen 1989). Second, two dimensional models followed with either the two dimensions of client contact and customisation (Lovelock 1983; Chase and Bowen 1991) or the two dimensions of number of demands or complexity, and the degree of client participation (Goodwin and Radford 1993; Hult and Lukas 1995). Customer contact has been defined as "the physical presence of the customer in the system" (Chase 1978, p. 138).

Following on from Lovelock (1983), Kelley, Donnelly and Skinner (1990) proposed a service design based upon the nature of the service act and the degree of customisation in the service delivery. Services with a high level of customisation require a high level of employee and client technical quality. Those services directed at people require a high level of employee and client functional quality.

These service design models have limitations. The characteristics of the service are used to describe the service design. They do not classify service designs according to the contingency of the situation which the organisation faces (Larsson and Bowen 1989). Health care organisations require a design which is responsive to the situations the clients and other intermediaries present to the organisation.
In health care, the patient is, in effect, paying for individualised and personalised attention (Surprenant and Solomon 1985; 1987). A personalised or customised service is more expensive, and some control of the service is relinquished to the patient (Chase 1978). Offering the patient alternatives or choices within the service setting increases their decisional control. However, both the provider and patient have a need for control. Recognition of this need must be included in any service design (Bateson 1985; 1991). Service design must incorporate the fact that health care is very personalised and that satisfaction in health care is related to the opportunities to exercise choice in the decisions available and feelings of control for the client (Surprenant and Solomon 1987). The very essence of service quality rests on the service encounter.

Service encounters have been described as “face to face interactions between a buyer and a seller in a service setting” (Solomon et al. 1985, p. 100). The service encounter is the moment of interaction between the client and the firm (Bitner, Booms and Tetreault 1990). It can be in person, over the telephone or through other media. It is a discrete event occurring over a definable period of time.

Different conditions of input uncertainty can be matched with different service designs. A customisation design follows the logic that the higher the demand diversity in the service offering, the greater the need for customisation rather than standardisation. If patients want uniqueness, they are willing to pay a premium price for differentiated services (Porter 1979; Levitt 1983; Porter 1985; Porter 1987). If customisation is less important to the patient, then speed, consistency and price savings (through standardised mass production) may be more important to many clients than customised service (Lovelock 1991).

Patient involvement has risk elements too, such as the risk of making the decision for themselves. Service design must respond by reducing the feeling of risk for particular services. For example, health care is considered riskier than a more product based service such as lawn care (Celuch and Longfellow 1992).

To facilitate service quality, a professional service firm needs a balance of professional judgement, service processes and management of clients behaviour.
Haywood-Farmer (1987) proposed a service design for quality incorporating these three elements. This design draws on previous work using the three dimensions of:

- degree of contact and interaction
- participation or degree of labour intensity
- degree of service customisation (Haywood-Farmer 1987).

In this model, as the customisation increases the other two dimensions of contact and labour intensity also increase (Haywood-Farmer 1987)

Professional health services are highly customised and thus require high interaction and participation. Service designs should aim to maximise participation and be customised for the health care service. For high contact divergent services, such as health care, a service design which enables patient self management and professional peer reference techniques is considered the most effective to achieve service quality (Mills, Chase and Margulies 1983; Mills and Morris 1986). This facilitates patient and professional participation and self efficacy (self determination).

Professional health services require consideration of more stakeholders than the professional and patient to achieve service quality. The viewpoint of all stakeholders will be used in this research to maximise the service quality of the professional health service encounter.

2.4.2 Professional services management for quality
The services literature emphasises the need for organisation-wide commitment to service quality and orientation to service for the client. Health care continues to question *who is the client? and which is the organisation attuned to quality?* When health care organises for quality, the health care organisation quality is considered (in this research a government body for workers' compensation). In addition, the professional's quality (another organisation) is considered. Therefore, there are many groups and individuals who need to consider leadership, culture and climate for service. The understanding of these many groups and individuals of service management for quality is largely unknown in professional health care.
Professionals normally have an incomplete idea of the critical success factors to achieve quality service, yet these factors are ultimately the limits within which economical service customisation is possible (Kingman-Brundage 1991).

Service leadership is considered the make or break issue in achieving good service performance (Berry 1995). Service leadership is committed to a culture and climate for service. It is needed in both the profession and the health care organisation, including the government health care authority. The profession's norms and autonomy require that the service leadership is generated within the profession. Professional groups provide a culture with membership, identity and means of socialisation (Schneider 1988). The other health care organisation needs to deliver systems that support efforts of professionals to deliver quality and provide a service culture. A change in culture in health care must be to focus on the patients (Tomes and Chee Peng Ng 1995).

A professional and organisational culture tells service providers how to respond to new, unforeseen and even awkward situations (Schneider 1988). The culture has a vital impact on how service oriented its providers are, and thus how they act as 'part-time marketers' (Bowen and Schneider 1988). Service providers can be empowered and have latitude to go beyond the routine in performing their jobs. Research clearly demonstrates the role of enhanced authority and supervisory latitude in increasing overall job satisfaction and client satisfaction (Hart, Heskett and Sasser 1990; Schlesinger and Heskett 1991; Bowen and Lawler 1992).

Professional networks set their own culture. Socialisation to the professions begins with formal education and observing role models, and is reinforced by a code of ethics (Davis 1994). Economic relationships are not usually entered into between those of the same profession (Easton and Araujo 1992). Therefore, non-market governance systems operate (Heide 1994). A system of cooperation operates instead, although cooperation is an element of interactions in any network or group (Axelsson and Easton 1992). It is through this cooperation and peer influence that changes to a service culture can be achieved. Teamwork, provider role congruence and perceived control in the service encounter all add to service quality. Role
ambiguity and role conflict with poor communication systems hinder service quality (Solomon et al. 1985; Zeithaml, Berry and Parasuraman 1988).

Quality delivered by an organisation is determined by the quality inherent in the organisation itself, the potential of service providers and the service encounter (Levitt 1972; Solomon et al. 1985; Surprenant and Solomon 1985; Davis 1995). A link between internal factors aimed at delivering quality with the external performance of the firm is needed, neglecting the link leads to failure of the service (Kordupleski, Rust and Zahorik 1993). Stakeholders understanding of the internal and external factors which deliver quality is largely unknown. Understanding the determinants or critical success factors of quality will form part of this research in its consideration of the views of all stakeholders.

The literature does recognise that the service encounter is crucial to assessments of quality, and it is difficult to predict and control (Albrecht and Zemke 1985b; Hart, Heskett and Sasser 1990; Walker and Nelson 1995). There is no agreed method of managing the service encounter. However, it is agreed that quality in the service encounter must include the participation of the service provider and client (Sasser 1976; Berry, Zeithaml and Parasuraman 1985). This is inextricably linked to managing client expectations to participate (Schneider 1980; Bitran and Hoech 1990). Client expectations are considered pivotal in quality assessments.

Client expectations can be managed by two organisational initiatives. Firstly, *external marketing communications* to the client; and secondly, by *modification of unrealistic expectations* through client education (Parasuraman, Zeithaml and Berry 1985; Zeithaml, Parasuraman and Berry 1990; John 1992). Although expectations can be managed, health care professionals are in a position to more easily determine the technical needs of the patient. The subjective needs, the expectations, of the patient are not really obvious (John 1992; Roter and Hall 1992). To the health professional, patient expectations can be largely unknown.

*External marketing communications.* Socialising and introducing the client to the organisation can assist in setting expectations. This organisational socialisation can assist clients to perform behaviours which increase their participation in the service
(Gummesson 1987b; Goodwin 1988; Larsson and Bowen 1989; Kelley, Donnelly and Skinner 1990). Clients can understand what then is expected of them (Kelley, Donnelly and Skinner 1990). Therefore, expectations and perceptions of the organisation and the client may be more closely aligned. Methods of organisational socialisation include formal socialisation programs, organisational literature, environmental cues, reinforcement and observation of other clients (Kelley, Donnelly and Skinner 1990).

A cognitive script is a “type of schema, or mental plan representation of knowledge” (Smith and Houston 1983, p. 60). Solomon et al (1985) considered that information about the role of expected behaviour, or the result of the organisational socialisation, would be called a ‘service script’. A script can guide a service encounter but the client plays a large part in helping the service employee to diagnose the problem (Larsson and Bowen 1989). As patients are an intimate part of health care delivery, service scripts can be used to systematically manage patient involvement in a way that is focused, productive and directly contributes to health care quality (Goodwin 1988; Gore et al. 1994; Lengnick-Hall 1995).

*Modifying unrealistic expectations.* Patient education begins by assessing expectations and, if necessary, modifying expectations. Initial assessment of individual patient expectations prior to the service experience would enable providers to anticipate potential influences on evaluations of quality by the client (John 1992). If expectations are not realistic the provider can educate the client about what can realistically be expected from the system and the health care encounter (Schneider 1980; DeBruicker and Summe 1985; Illingworth 1991; Kotler 1991; Swan 1992). Therefore patient expectation and concepts of good health care performance are negotiable (Mills, Chase and Margulies 1983; Swan 1992).

In other industries, the timely revision of goals has been called *time paced evolution*. Here change is keyed to the passage of time rather than the occurrence of particular events. Time paced evolution and management of change provides a proactive, regular opportunity to reassess service provision (Brown and Eisenhardt 1997). In contrast, event paced change, which is the dominant perspective in traditional thinking, emphasises reactive change in response to failure. Event paced change can
lead to obsolete or poor courses of actions in fast changing and uncertain environments.

At some stage, either the client or the service firm will consider the service complete. However, there may be disagreement about when the client's participation should end. For example, in health care clients may form an attachment to their doctor and attend long after they need to. This occurs when it is ambiguous when the service will be considered complete. Therefore, the service will need to signal to a client that their participation should end (Mills and Morris 1986). However, this is difficult if the signals are ambiguous and the client has motivation to continue attending. Secondary gain, such as expressive or social benefits may accrue from attending health care. The client's judgement of what is completion of the service can therefore differ from that of the service provider (Mills and Morris 1986). Expectations need to be negotiated and outcomes determined in advance. Yet many professionals do not know the expectations of their patients.

Professional health service quality requires the professional and health service organisation to determine, understand and meet stakeholders expectations. This research will clarify the role of stakeholders of professional health services by synthesising a model of service delivery which incorporates a consideration of the expectations of all stakeholders.

2.4.3 Marketing relationships
Successfully managing and modifying expectations to achieve service quality assessment relies on understanding marketing relationships. An emphasis on marketing relationships emerged in the marketing literature in the late 1970s and the 1980s. Simultaneously, but independently, researchers in the United States and Europe started to look beyond the simple dyadic transaction and began to explore the notion of dyadic relationships. The first large scale study into dyadic relationships was conducted by the predominately Swedish, Industrial Marketing and Purchasing (IMP) group (Hakansson 1982). Thus, research in both Nordic countries and the United States of America brought about the emergence and development of relationship marketing (Bowring-Greer et al. 1997).
Original work, normally associated with the IMP group, extended the buyer-seller marketing relationship dyad to a structure of complex relationships involving three or more stakeholders (Axelsson and Easton 1992). Other recent work extended the marketing relationship dyad concept to incorporate numerous relationships radiating between the focal firm and other partnerships (Morgan and Hunt 1994; Gronroos 1997). Relationships have also been placed in a broader perspective. Gronroos (1994a) considers the marketing strategy as a continuum from transaction marketing to relationship marketing.

Explanations of marketing relationships fall into three broad categories (Bowring-Greer et al. 1997):

- **relationship** marketing: a dyadic buyer-seller relationship which is consolidated through time but which tends to ignore the role of other elements in the distribution channel and the role of other stakeholders
- **neo-relationship** marketing: the marketing relationship is still dyadic but goes beyond the buyer-seller relationship to include all marketing activities directed towards establishing, developing, and maintaining successful relational exchanges
- **network** theory: a more complex structure of networks involving three or more actors.

**Relationship marketing.** Barbara Bund Jackson was recorded as having used the term ‘relationship marketing’ as early as the 1970s in the field of industrial marketing (Gummesson, Lehtinen and Gronroos 1997). However, Berry (1983) began the discussion of relationship marketing with a services perspective in the United States of America. He used the concept to explain how multi-service industries were enhancing client relationships and defined it as “attracting, maintaining and—in multi-service organisations—enhancing customer relationships” (Berry 1983, p. 25). Berry and Parasuraman (1991, p. 133) later refined the definition to be “relationship marketing concerns attracting, developing, and retaining customer relationships”.

Relationship marketing focuses almost entirely on the buyer-seller relationship where the buyer focus is usually the final consumer of the product. This focus tends to ignore the role of other elements in the distribution channels. It also ignores the part that other stakeholders play in the building and management of long term customer relationships.

*Neo-relationship marketing* expands the definition of relationship marketing to include other stakeholders involved in marketing activities. Morgan and Hunt (1994, p. 4) concluded that “relationship marketing refers to all marketing activities directed toward establishing, developing, and maintaining successful relational exchanges”. Furthermore, Gronroos (1990c, p. 138) claimed that relationship marketing “is to establish, maintain, and enhance relationships with clients and other partners, at a profit, so that the objectives of the parties involved are met. This is achieved by a mutual exchange and fulfilment of promises”. The relationship can be divided into two parts: attracting the client, and then building the relationship (Paul 1988; Gronroos 1994a).

The key difference between neo-relationship marketing and relationship marketing is the unit of analysis. Whilst still dyadic, the dyad can be other than the buyer–seller relationship and more than one dyad can be involved in any given situation. These distinguishing characteristics have been identified by numerous authors (Shani and Chalasani 1992; Christopher, Payne and Ballantyne 1993; Morgan and Hunt 1994; Gronroos 1997; Gummesson, Lehtinen and Gronroos 1997).

Despite this difference between neo-relationship marketing and relationship marketing, there is a tendency in more recent literature for both to be labelled under the same common heading of relationship marketing (Morgan and Hunt 1994; Bowring-Greer et al. 1997; Gronroos 1997).

*Network theory*. Networks differ from relationship marketing, neo-relationship marketing and numerous fields exist under the term ‘networks’. Marketing is the primary discipline behind industrial networks. The interaction or network approach
to industrial marketing was begun in Sweden during the 1960s and has since spread to a large number of countries (Gronroos 1994a). Network theory evolved when researchers started looking beyond simple dyadic relationships and began to concentrate on more complex structures which involve three or more stakeholders.

Network theory has since been supported by many researchers (Hakansson 1992; Hakansson and Johanson 1992; Lehtinen 1996). In contrast, Normann (1993) proposes that professionals are so embedded in buyer-seller networks of great subtlety, that they could be described instead as ‘value constellations’ of related interest. The related interests are of value to those involved and are what brings them together.

More recently, network theory has been used on the actors-activities-resources model which suggests that networks are dynamic entities exhibiting interdependence and connectedness between actor bonds, activity links and resource ties (Hakansson 1982; Hakansson 1989; Charan 1991; Hallen, Johansson and Seyed-Mohamed 1991; Hakansson and Johanson 1992; Hult and Lukas 1995). Although the evolution of network theory has been strongly influenced by the IMP group, network theory has been used by American, Australian and British authors to explain interfirm relations. It has also been used to explain current understanding of the strategic management of firms (Christopher, Payne and Ballantyne 1993; Hult and Lukas 1995; Welch et al. 1996a; Welch et al. 1996b; Gummesson, Lehtinen and Gronroos 1997).

Marketing relationships are important in achieving service quality in health care. The research in this area is limited in health care. Defining marketing relationships assists in identifying and understanding their role in service quality. Drawing on the literature review undertaken the following definitions will be adopted (Bowring-Greer et al. 1997):

- *relationship marketing* is concerned with simple, dyadic, long-term relationships
- *neo-relationship marketing* is the influence and interaction of other stakeholders and participants, other than the buyer and seller, however the unit of analysis is dyadic from a business perspective
- *network theory* is concerned with examining complex structures when the unit of analysis can be a single actor, a group of actors or even the whole organisation.
2.4.4 Strategy

Achieving service quality requires a strategic approach to incorporate and manage the elements of health care quality. Strategies for services can be based on core competencies and networks.

*Strategy* is the art of creating value to clients. It relies on knowledge and relationships of an organisation’s competencies and clients. Strategy is primarily the art of positioning a company in the right place on the value chain with the right business, the right products and market segments, the right value adding activities. Successful companies conceive strategy as the continuous design and redesign of complex business systems (Shapiro 1988; Normann and Ramirez 1993).

A *strategic intent* for coordinated services is a desired leadership position which establishes the criterion the organisation will use to chart its progress (Hamel and Prahalad 1989). The *strategic architecture* is an organisation without boundaries, supported by a network. It is the operating mechanism through which trade-offs are made amongst the participants. It is also the flow of information, power and trust among these participants that shares how those trade-offs occur (Hamel and Prahalad 1989; Prahalad and Hamel 1990; Charan 1991). The strategic architecture is a broad map of evolving linkages between client functionality requirements, potential technologies and core competencies (Prahalad and Hamel 1990).

Selznick (1957) first coined the term ‘distinctive competencies’ to describe the leadership capabilities that were responsible for transforming a public organisation into a successful operation (Lado, Boyd and Wright 1992). Competencies are a match of internal organisational capabilities with environmental opportunities (Lado, Boyd and Wright 1992). Core competence is communication, involvement, and a deep commitment to working across organisational boundaries (Prahalad and Hamel 1990). Core competencies provide potential access to a wide variety of markets and make a significant contribution to the perceived client benefits of the end product (Prahalad and Hamel 1990). To exploit the dialogue between competencies and clients, management strategy is needed to create a better fit between the company’s competencies and the needs of clients (Normann and Ramirez 1993). Building on the
resource-based and knowledge-based view of the service organisation (Conner and Prahalad 1996), past research has emphasised leveraging service organisations’ competencies to raise service quality. The idea is to capitalise further on what the service organisation or professional does well.

Core competencies can be the technologies, specialised expertise, business processes and techniques a company has accumulated over time and packaged into its offerings (Normann and Ramirez 1993). Core competencies are things in which firms develop expertise that can be conveyed into product or service innovations (Prahalad and Hamel 1990). The innovations need to be translated into product or service benefits perceived by clients as satisfying their needs. Managers are encouraged to create products that clients need but have not yet imagined (Hamel and Prahalad 1989; Prahalad and Hamel 1990).

Gummesson (1994) says in order to exist in the long term, a network organisation must have a ‘heart’, a core of competence. This core is usually associated with a unique product or service, an ability to innovate, a unique marketing method or a financial strength. From that core, alliances can be woven and the boundaries of the organisation fade away and merge with other organisations (see Figure 2.3).

Figure 2.3 The traditional hierarchy of an organisation with clear boundaries (left) and the network corporation with a continuously changing shape with fuzzy boundaries around a core competence (right) (Gummesson 1994, p. 80)

Networks are distinct from market hierarchical arrangements (left in Figure 2.3). In networks there is a heavy reliance on reciprocity, collaboration, complementary
interdependence, reputation and relationship as a basis for communication, and an informal climate for mutual gain (right in Figure 2.3). By comparison, market governance arrangements rely primarily on price for control and administrative authority (Larson 1992).

The pattern of activities between stakeholders shapes the bonds between them. This leads to the creation and exchange of resources which, in turn, influences the activities which occur. Over time, this leads to evolution in the relationships and the network, similar to the findings of Hakansson (1992) in industrial networks. Developed networks link competencies to improve individuals and group performance (Saul 1989).

*Network development* is not preplanned or something that can be specified (Larson 1992). Rather, there are developed and emerging role specifications for parties in networks (Heide 1994). However, as networks are commonly goal orientated, the roles emerge and develop under this direction (Charan 1991). Larson (1992) believes that it is the corporate values and reputation of partners, together with prior relations, which influence network development. In network formation, reputation, trust, reciprocity and mutual interdependence are important variables (Crosby, Evans and Cowles 1990; Gronroos 1990b; Shemwell, Cronin and Bullard 1993).

Those likely to engage in networks are “those exchanging difficult to codify, knowledge intensive skills that are best transferred through processes of collaborative information sharing” (Larson 1992, p. 77). Professional health care is one example of knowledge intensive skills being applied. The participants exhibit high levels of collaboration and cooperation in stable relationships. These alliances are evaluated by participants as contributing significantly to their success and growth (Larson 1992; Mohr, Fisher and Nevin 1996).

Networks and interfirm relationships play an important part in the delivery of health care. A number of actors work within a professional culture and interact in a network where the exchange is not financial (non-economic) but instead, directed towards a mutual goal (Easton and Araujo 1992). These networks can be built on firm reputations and develop into mutual dependence (Mohr, Fisher and Nevin
1996), where the outcomes of one professional for the patient are dependent on the activities of another. Reciprocity is seen as patients are referred between the actors as 'new business' (Smith and Laage-Hellman 1992).

Little is documented in the literature about networks providing service quality in health care. This research will seek to understand the determinants of service quality from the perspective of all stakeholders. In doing so, this research will consider networks as a possible service quality determinant.

2.4.5 Description of professional health service management
This review of the literature has demonstrated the current thinking on service management. Some of the developed theories and research have been previously applied to products or manufacturing organisations. Their applicability to professional health services may be questioned. Nevertheless the benefits derived from the review of the literature include current opinions of:

• service management
• the evolution of service design and networks typologies
• the unique situation of professional health services management.

Professional health service management can be described as providing a service design of high interaction, participation and customisation.

2.5 Research issues and question
This research will explore the determinants of professional service quality as assessed by participating stakeholders, when the payer is independent of the patient and of the provider of the service. The expected outcome of the research is the generation of theory about the nature of service quality in health care.

Criteria by which this exploration will be judged successful are:

• definitions of quality
• demonstration of how selected measures contribute to quality
• quality indicators for each stakeholder.
Professional health services, as currently managed, appear less than optimal in delivery. This research will explore the perceptions of stakeholders with a view to identifying areas where changes in management could lead to improved stakeholder satisfaction and assessment of service quality.

From the literature review important variables for service quality have been discussed. Figure 2.4 shows the possible relationship between the variables for service quality for each stakeholder leading to service quality overall.

Figure 2.4 is a theoretical framework drawn from the literature to integrate the various concepts discussed. The theoretical framework is used to develop the research problem and questions.

The research problem is to describe and evaluate professional health service quality that is meaningful to all stakeholders with a view to developing strategies for improving service quality. The following research questions are to be answered: *What is quality in professional health services? How should it be managed?*

The research questions are relevant to stakeholders raising the following questions:

- what are the indicators of good or poor quality services?
- what is the relative importance of various service quality indicators?
- how effective is the service system in actively supporting employee efforts to render service dependably, accurately and consistently?
- how does service design affect service quality?
- what is the potential for service scripts to improve quality?
Figure 2.4 Model of service quality variables in professional health services

- neo-relationship marketing and network with stakeholders
- Health care organisations
- Service design for quality
- Relationship marketing with professionals
- Other health care providers
- Professionals service quality
- Customised service, delivered with high pace expectations, facilitates client participation
- Navigate health system
- Participation expectations
- Service quality
- Influences of others in network
- Manage expectations, coordinate activities between professionals
- Marketing and networks participate in activities between professionals
- Figure 2.4 Model of service quality variables in professional health services
2.6 Conclusion
This chapter has reviewed and analysed various definitions of professional service quality and client satisfaction in the literature. Although no consensus has emerged, researchers have identified a number of unique characteristics and considerations for delivering quality in professional services. Professional service management was discussed and elements of other service management theories considered in the context of health care. Against this background, the questions for research were developed. The research problem is to understand quality in professional health services and how it should be managed. A method of describing and evaluating professional health service quality that is meaningful to all stakeholders can inform future practice with the potential for improved stakeholder assessment of service quality.
3 Methodology

3.1 Introduction
The review of parent and relevant disciplines, and of previous research on professional health services in Chapter 2 led to the development of the research question. This chapter describes the methodology utilised to collect data for this research. This methodology chapter follows closely the logic and structure of Riege (1996) who used a multiple embedded case study research design.

The methodology chosen was a case study because case study research methodology usually investigates a contemporary phenomenon within its real life context when the boundaries between phenomenon and context are not clearly evident (Yin 1994). The research method used is qualitative and highly interpretative.

This chapter reviews the requirements and selection of the appropriate research design and research execution for the case study. The features of the case study design are then reviewed, including validity and reliability considerations. The chapter structure is set out in Table 3.1.

<table>
<thead>
<tr>
<th>Methodological strategy</th>
<th>Activity</th>
<th>Section location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Justification of the design</td>
<td>justification of the paradigm</td>
<td>3.2</td>
</tr>
<tr>
<td></td>
<td>justification for the methodology</td>
<td>3.3</td>
</tr>
<tr>
<td>Research design</td>
<td>criteria for case selection and number of cases</td>
<td>3.4</td>
</tr>
<tr>
<td>Research execution</td>
<td>case study procedures</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>case study protocol</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td>case study interview</td>
<td>3.7</td>
</tr>
<tr>
<td></td>
<td>pilot case studies</td>
<td>3.8</td>
</tr>
<tr>
<td></td>
<td>case study analysis procedures</td>
<td>3.9</td>
</tr>
<tr>
<td></td>
<td>limitations of the design</td>
<td>3.10</td>
</tr>
</tbody>
</table>

Having identified the case study as a possible research method, it was necessary to establish whether this could be carried out in an ethical manner. Consideration of
ethical concerns is not a part of the research method as such but forms part of a set of accepted standards which researchers are obliged to follow (Sekaran 1992).

The following specific ethical considerations were relevant to this research:

- participation by respondents must be voluntary
- participation must not result in any harm to respondents
- the solicitation of participation by respondents should not involve any pressure to respond
- complete anonymity of respondents and their responses must be assured.

Observational methods seek real world information and the preservation of the natural state of service phenomena. Concealed observation raises delicate ethical issues. Observing people without their knowledge may violate their rights to privacy, confidentiality and freedom from exploitation (Grove and Fisk 1992; Kellehear 1993). This form of observation is, therefore, inappropriate in health care where it might violate the confidential nature of the patient–health care professional relationship.

Ethical approval for the method to be used in this study was granted by the University of South Australia, Human Research Ethics Committee. The consent forms, information sheets and letter to participants are provided in Appendix C.

3.2 Justification of the paradigm
This section examines the paradigms appropriate for the purpose of this research of theory development. In doing so, it examines four different research paradigms: positivism, critical theory, constructivism and realism. Realism is considered an appropriate paradigm for the exploratory case study research aiming for theory development.

A paradigm is a “fundamental model or scheme that organises our view of something” (Babbie 1995, p. 61). Similarly, a research paradigm is a “basic belief system or worldview that guides the investigator” (Guba and Lincoln 1994, p. 105). A paradigm encompasses three elements: ontology, epistemology and methodology. Ontology raises basic questions about the nature of reality and is a set of
metaphysical assumptions or presuppositions. *Epistemology* provides the criteria for evaluating knowledge, questioning what specifically can be learnt. *Methodology* focuses on how knowledge is gained. It is the nature of ways of studying a particular phenomenon (Guba and Lincoln 1994).

There are two major approaches to theory development in the field of social science: deductive theory testing and inductive theory testing (Bonoma 1985; Parkhe 1993). The difference between the two approaches can be viewed in terms of scientific paradigms. The *deductive* approach using theoretically derived hypotheses is commonly linked with the *positivist* paradigm. The *inductive* approach exploring genuinely open questions is commonly linked with the *phenomenological* paradigm which includes critical theory, constructivism and realism (Patton 1990; Easterby-Smith, Thorpe and Lowe 1991; Sekaran 1992; Denzin and Lincoln 1994).

*Positivists* assume that only knowledge obtained by means of measurement and objective identification can be considered to possess truth (Gummesson 1988). Neutrality and distance are preserved and personal biases can be avoided. Positivists believe that as the world exists externally, objective methods can be used, so that the researcher is independent and propositions can be tested (Patton 1990). Positivists base research on the natural science model in which a belief in universal laws and law-like generalisations can be found (Holloway 1997).

In contrast, *phenomenological* inquiry uses a qualitative and naturalistic approach to inductively and holistically understand human experience in the context of specific settings (Patton 1990). Phenomenology is a philosophical approach to the study of 'phenomena' (appearances) and human experiences (Holloway 1997). It uses a personal interpretative process to understand 'reality'. Language takes on a central role, qualitative assessments partially replace quantitative data and general characteristics become of lesser interest than specific features (Gummesson 1988).

The essence of qualitative research lies in two elements:

1. the use of close-up detailed observation of the natural world by the investigator
2. the attempt to avoid prior commitment to any theoretical model (Yin 1994, p. 25).
Paradigms reviewed in this research are both positivist and phenomenological. The phenomenological paradigm can be divided into three subtypes: critical theory, constructivism and realism (Guba and Lincoln 1994). Therefore, the four different paradigms considered in this research are positivism, critical theory, constructivism and realism. Philosophical assumptions which support the four different paradigms of social science are described according to one’s basic ontological, epistemological and methodological assumptions (Table 3.2). The review of the four different paradigms which follows provides a foundation for demonstrating the appropriateness of the chosen paradigm, realism.

Table 3.2 Basic belief systems of alternative inquiry paradigms adapted from Guba and Lincoln (1994, pp. 109, 112)

<table>
<thead>
<tr>
<th>Item</th>
<th>Positivism</th>
<th>Critical theory</th>
<th>Constructivism</th>
<th>Realism</th>
</tr>
</thead>
<tbody>
<tr>
<td>ontology</td>
<td>naive realism— 'real' reality but apprehendable</td>
<td>historical realism— virtual reality shaped by social, political, cultural, economic, ethnic, and gender values; crystallised over time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>epistemology</td>
<td>dualist/ objectivist; findings true</td>
<td>subjectivist; value mediated findings</td>
<td>subjectivist; created findings</td>
<td>modified dualist/ objectivist; critical tradition/ community; findings probably true</td>
</tr>
<tr>
<td>methodology</td>
<td>experimental; verification of hypotheses; chiefly quantitative methods</td>
<td>dialogic/ dialectical</td>
<td>hermeneutical/ dialectical; researcher is a 'passionate participant'</td>
<td>modified experimental— case studies/ convergent interviewing; triangulation, interpretation of research issues mainly qualitative methods</td>
</tr>
</tbody>
</table>

3.2.1 Positivism
The positivist approach is based upon quantitative, empirical studies to test hypothetical deductive generalisations (see Table 3.2). Statistical analysis of data which has been collected by means of descriptive, comparative studies and
Primary data collection techniques include controlled experiments and sample surveys which are outcome oriented and driven by natural laws where the primary mode of the research inquiry is deductive (Riege 1996). Data is usually collected in a structured manner, with the researcher remaining objective and not intervening in the phenomenon of interest, but rather seeking for theory confirmation or contradiction (Patton 1990; Easterby-Smith, Thorpe and Lowe 1991; Emory and Cooper 1991; Parkhe 1993; Robson 1993; Babbie 1995).

Approaching a phenomenon from a positivist view when working with humans may cause some difficulties (Riege 1996). Treating respondents as independent objects “ignores their ability to reflect on problems and situations, and act upon this” (Robson 1993, p. 60). Positivists aim for objectivity and neutrality from the worlds they study, while phenomenologists participate in the real life world so as to better understand and express its emergent properties and features (Denzin 1978; Riege 1996). However, quantitative methods can only be used when the study is amenable to quantification and by pursuing the quantification. The potential to lose data integrity must be minimal. This study’s aim is for theory development. The theory will be built on information gained from the data. Theory is generated throughout data analysis. This research could not be bounded by quantitative methods of analysis (Calder 1977). The research did not seek to provide causal explanations as a positivist would wish, but sought to understand the research problem, reflecting, forming and revising meanings and structures from the experiences of those involved in the research (Hirschman 1986; Riege 1996). The research looked for the fit between existing theories and the data collected, but the data was never forced into theory (Holloway 1997).

3.2.2 Critical theory and constructivism

Critical theory seeks to produce transformations in the social order, producing knowledge that is historical and structural, judged by its degree of historical situatedness and its ability to produce praxis, or action (Denzin and Lincoln 1994). These theorists are critical of the ‘scientific’ version of truth and objective reality and
stress the influence of value, judgements and interests of humankind (Holloway 1997). Research enquiries are long term ethnographic and historical studies of organisational processes and structures (see Table 3.2). Assumptions are subjective and hence knowledge is grounded in social and historical routines, and is therefore value dependent (Guba and Lincoln 1994). Finally, critical theory produces idiographic or sample specific knowledge. Critical theory, therefore, holds that the truth content of its knowledge claims can be known, even though that truth can only be known within the boundaries of a particular social group's constructed reality (Easton 1982; Riege 1996). This paradigm was not appropriate here as this research is neither long term oriented nor grounded in historical studies.

Constructivism is orientated to the production of reconstructed understandings, the traditional positivists' criteria are replaced by the terms of trustworthiness and authenticity. The created knowledge depends on the interaction between and among interviewer and respondent (Guba and Lincoln 1994). It is distinguished by a commitment to questions of knowing and being (see Table 3.2), rather than specific methodologies with studies being of the world from the point of view of the interacting individual (Schwandt 1994).

The constructivist's belief system was not appropriate for this research because this research was concerned with more than purely a social phenomenon, and the created knowledge depended on more than the interaction between interviewer and respondent.

3.2.3 Realism
Realism is the preferred paradigm for case study research seeking to understand and develop theory in professional services. Realists believe that although there is a real world to discover it is only imperfectly apprehendable (Dubin 1982; Hunt 1991; Guba and Lincoln 1994; Riege 1996). Realists acknowledge the difference between the world and their particular view of it. That is, they hold that there is an external reality but the complexity of the world and limitations of any researchers' mental capacity makes triangulation of data essential to refine observations of that reality (Tsoukas 1989; Hunt 1991).
The ontological assumptions of the realist view of science, following the logic of Riege (1996), include the real, actual and empirical domain as illustrated in Table 3.3. The real domain is that in which generative mechanisms, existing independently of, but capable of producing, patterns of events, reside. The actual domain is that in which observed events or observed patterns of events occur. The empirical domain is that of experienced events. Checkmarks (✓) in Table 3.3 indicate the domain of reality in which mechanisms, events, experiences, respectively reside (Bhaskar 1978; Tsoukas 1989).

| Table 3.3 Ontological assumptions of the realist view of science adapted from Bhaskar (1978, p. 13) |
|-------------------------------------------------|-----------------|-----------------|
| Mechanisms                                     | Real domain     | ✓               |
| Events                                         | Actual domain   | ✓               |
| Experiences                                    | Empirical domain| ✓               |

The discovery of observable and non-observable structures and mechanisms independent of the events they generate is central to realism (Tsoukas 1989; Robson 1993; Riege 1996). The present research aims to discover, identify and describe the structures and mechanisms of professional services.

From the realist point of view, causal explanation is not about the deterministic association of patterns of events, nor about experiences, but the ascription of causal powers to objects. To ascribe a power to an object is to specify what it is capable of doing in the appropriate set of circumstances. Causal powers operate as tendencies whose activation are not given but contingent (Tsoukas 1989). The realist wants to know what are the structures, generative mechanisms and contingent factors responsible for the observed patterns. The realist paradigm uses explanatory, and idiographic (specific to the case) studies. This is epistemologically valid because realists are concerned with the clarification of structures and their associated generative mechanisms, which have been contingently capable of producing the observed phenomena (Tsoukas 1989).

Realists share the positivist aim of explaining and predicting social phenomena. However, where phenomena have not yet been fully discovered and comprehended
realist investigation is accepted as a more appropriate form for identifying phenomena. It is then possible to transform people’s experiences into verbal experiences of the researcher (Deshpande 1983; Tsoukas 1989; Sykes 1991; Parkhe 1993; Robson 1993; Riege 1996). Table 3.4 summarises the positions of realism and positivism on selected practical and methodological issues.

<table>
<thead>
<tr>
<th>Issues</th>
<th>Positivism</th>
<th>Realism</th>
</tr>
</thead>
<tbody>
<tr>
<td>direction of research inquiry</td>
<td>measurement and analysis of causal relationships between variables that are generalisable</td>
<td>development of idiographic knowledge based social experiences such as human ideas, beliefs, perceptions and values</td>
</tr>
<tr>
<td>nature of knowledge</td>
<td>verified hypotheses established as facts or laws</td>
<td>non-falsified hypotheses that are probable facts or laws</td>
</tr>
<tr>
<td>aim of investigation</td>
<td>prescriptive, causal, deductive, theory confirming</td>
<td>exploratory, descriptive, theory building, inductive and analytical</td>
</tr>
<tr>
<td>causality</td>
<td>cause and effect relations</td>
<td>causal tendencies and generative mechanisms</td>
</tr>
<tr>
<td>methodology</td>
<td>outcome and verification oriented</td>
<td>process and discovery oriented</td>
</tr>
<tr>
<td>sample size</td>
<td>large</td>
<td>small</td>
</tr>
<tr>
<td>research strategies</td>
<td>experiment, survey</td>
<td>case study, action research and convergent interviewing</td>
</tr>
<tr>
<td>data collection</td>
<td>structured with use of inanimate instruments</td>
<td>unstructured with researcher as primary instrument</td>
</tr>
<tr>
<td>interaction of interviewer and phenomenon</td>
<td>independent</td>
<td>mutually interactive</td>
</tr>
<tr>
<td>respondent's perspective</td>
<td>emphasis on ‘outsiders’ perspective and being distanced from data</td>
<td>emphasis on ‘insiders’ perspective and being close to the data</td>
</tr>
<tr>
<td>information per respondent</td>
<td>varies being specific to question</td>
<td>extensive and broader to question</td>
</tr>
<tr>
<td>type of data gathered</td>
<td>replicable, discrete elements, statistical</td>
<td>information rich, contextual, non-statistical, subjective reality</td>
</tr>
<tr>
<td>hardware, software</td>
<td>questionnaires, statistical software programs</td>
<td>tape recorders, interview guides, transcripts, visual methods</td>
</tr>
<tr>
<td>type of data analysis</td>
<td>objective, value free, statistical methods</td>
<td>interpretive, value laden, theory laden, non-statistical</td>
</tr>
</tbody>
</table>
In this research, an interpretive approach will be taken. An interpretive approach is used for the production of meaning and fits the realism paradigm (Stake 1994). The interpretations will include the perspectives and voices of the people who are studied. Interpretations will be sought in order to understand the actions of individual or collective actors being studied. It is not considered sufficient merely to report or give voice to the viewpoints of the people, groups or organisations studied (Strauss and Corbin 1994).

A realist and interpretative approach is most appropriate to gain understanding of the service phenomenon. That services are dynamic, experiential processes has been well documented in the marketing literature (Shostack 1977; Solomon et al. 1985; Zeithaml, Parasuraman and Berry 1985; Kingman-Brundage 1991). Services are subjectively evaluated experiences (Shostack 1977; Berry 1980; Bitner, Booms and Tetreault 1990), and are difficult to investigate through positivist research methodologies.

A crucial advantage of the realistic and interpretative approach is the suitability for the study of processes, since service quality includes both process and outcome dimensions (Gronroos 1984b; Parasuraman, Zeithaml and Berry 1985). The processes are the ‘raw material’ by which services are constructed (Shostack 1987). In addition, the setting must be preserved and not manipulated as it often would be in positivist research.

Appropriate data collection techniques for the realistic and interpretative approach are, for example, case studies, action research or convergent interviewing (Riege 1996). These are process orientated and do not investigate cause and effect relations but are, rather, concerned with underlying causal tendencies or powers (Denzin 1978; Robson 1993; Yin 1994). Data analysis is usually summarised in an interpretive, value and theory laden, non-statistical mode applying qualitative techniques (Perry 1996).

For this research, the appropriate paradigm position was a realist mode of inquiry. Research in professional services and services marketing has been based on positivist science, quantitatively oriented, along a linear deductive path. However,
the position in marketing research is changing and has implicitly assumed a realist perspective (Deshpande 1983; Hunt 1991; Riege 1996). The approach taken in this research accords with that change.

3.3 Justification of the methodology
A qualitative case study methodology was applied in this research. There are a number of reasons for using a qualitative methodology for this research. The first is the lack of research and theory in business to business relationships in professional services (Haywood-Farmer and Nollet 1993; Walbridge and Delene 1993; Yucelt 1994; Palmer and Maani 1995; Young 1995). As there is a lack of research studies, no one methodology has been established as most appropriate for business to business professional services. These services exist between physiotherapists and doctors, and any other health professionals. Qualitative research can be applied to understand the phenomena in the respondents own language and develop theory in this area.

There is, in any case, no agreement about what comprises sound scientific method in marketing (Calder 1977). The general issue is whether, and under what circumstances, ‘traditional’ scientific methods are helpful when behavioural phenomena are under study. The dilemma is the inability of any single research method to minimise multiple threats to data validity and generalisability (Bonoma 1985).

Qualitative methods, such as case studies, address theory construction and theory building rather than theory testing and verification (Bonoma 1985; Guba and Lincoln 1994). In the early stages of theory development, where phenomena are not well understood and the relations between phenomena are not known, quantitative methods can lead to inconclusive findings (Parkhe 1993). Theory is built by making comparisons, looking for similarities and differences in collected data, and identifying future questions to be examined (Eisenhardt 1989a). This process of theory building will be used in this research.

Observational methods are well suited to capturing the process nature of service phenomena because they can examine service interactions unobtrusively as they occur (Grove and Fisk 1992). However, the confidentiality of the health care
experience meant that observation of the health service was not suitable in this particular research.

The second reason for using a qualitative methodology, is the need to get an understanding of the phenomena. The primary objective is to understand the phenomena under research and interpret the respondents' experiences and beliefs (Parkhe 1993; Riege 1996). This depth and detail of qualitative data can be obtained only by getting physically and psychologically close to the phenomena under study (Dubin 1982).

The nature of the phenomena of interest, professional health services, is so complex that a qualitative technique was used. The study was not designed to test hypotheses. The literature on the processes involved in professional services is not rich enough to suggest formal relationships among variables. Instead, insights were sought by collecting observations about service quality from payers, providers and 'customers' (patients) in the service delivery (Zeithaml, Berry and Parasuraman 1988).

One of this case study objectives is to research practices, new relationships, concepts and understanding, rather than verify a predetermined hypothesis (Eisenhardt 1989a; Perry and Coote 1994). This helps to understand the meaning of those experiences and beliefs and also particular settings. The research situations can be seen in their context (Easton 1982; Ragin and Becker 1992). Once an understanding of the phenomenon has been established, other more deductive approaches may be applied to research the problem further (Deshpande 1983; Bonoma 1985).

The third reason for the qualitative case study methodology is the required identification and classification of interrelationships between the categories under scrutiny in this research (Eisenhardt 1989a; Perry and Coote 1994; Riege 1996). As theory building in professional services is the focus of this research, the role of describing and classifying professional services, and comparing the complexity of several organisational operations and managerial experiences becomes pertinent (Bonoma 1985).
The qualitative goal is often to isolate and define categories during the process of research; the quantitative goal is to isolate and define categories before the study is undertaken, and determine the relationship between them (Guba 1981; Parkhe 1993; Stewart-Hunter 1997). Therefore, qualitative research usually looks for patterns of interrelationships between many categories rather than sharply delineated relationship between a limited set of them (Riege 1996). For this reason, a case can address a research problem that delves into the complexities and processes of the organisations (Patton 1990). The case study method used in this research enables investigation of a particular phenomenon and the context within which the phenomenon is occurring (Yin 1993). This is important when the context is extremely relevant to the study.

A naturalistic theme of inquiry was used. Naturalistic inquiry involves "studying real-world situations as they unfold naturally; [it is] non-manipulative, unobtrusive, and non-controlling" (Patton 1990, p. 40). Naturalistic inquiry has a dynamic process orientation (Patton 1990). The data for evaluation includes whatever emerges as important to understanding the setting. Therefore, naturalistic inquiry was appropriate to this study and its research question.

This research aims for theory development using a qualitative case study methodology within the realism paradigm. The methodology uses an inductive and naturalistic inquiry. This approach is appropriate for theory development in professional health services.

3.3.1 Comparison with alternatives
This section compares the case study methodology with alternatives and justifies the choice for this research.

Yin (1994) provides a detailed analysis of five research methods. A case study approach is only one of various ways of carrying out social science research; others are experiments, surveys, archival analysis and historical analysis. The following brief discussion outlines why a case study approach was chosen.
There are three conditions which determine the appropriate strategy for a particular research (Yin 1994):

1. the type of research problem and questions being posed
2. the extent of control an investigator has over actual behavioural events
3. the degree of focus on contemporary as opposed to historical phenomena.

Table 3.5 shows these five approaches and three conditions.

<table>
<thead>
<tr>
<th>Research strategy</th>
<th>Type of research problem</th>
<th>Requires control over behavioural events</th>
<th>Focuses on contemporary events</th>
</tr>
</thead>
<tbody>
<tr>
<td>case studies</td>
<td>how (but rarely causal explanations), why, what (if appropriate)</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>experiment</td>
<td>how, why</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>survey</td>
<td>who, what, where, how many, how much</td>
<td>no</td>
<td>yes</td>
</tr>
<tr>
<td>archival analysis</td>
<td>who, what, where, how, many, how much</td>
<td>no</td>
<td>yes/no</td>
</tr>
<tr>
<td>history</td>
<td>how, why</td>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>

**Types of research problem.** A research problem which focuses on 'how' questions requires an exploratory research approach. This is likely to lead to the use of case studies because 'how' questions “deal with operational links needing to be traced over time, rather than mere frequencies or incidence” (Yin 1994, p. 6). Other researchers have noted that case studies can also address ‘what’ questions instead of ‘how’ questions when other methodologies do not seem practical (Yin 1994; Riege 1996). The case study methodology is appropriate for the research questions raised in this thesis; namely, What is quality in professional health service? How should it be managed?

Given the complex dynamics involved in professional services, experimental research is an appropriate research strategy. Experiments aim to control the research in either a laboratory setting or a field study. This research, rather, attempts to explore the complex nature of the issues involved in professional services, and case studies provide that opportunity.
In contrast, for ‘who, what, where, how many and how much’ research problems, the researcher may prefer survey strategies or archival analysis. In these cases, the area of research is more likely to describe incidence or frequency of a phenomenon or when certain outcomes of this incidence can be forecast (Yin 1994; Riege 1996). The survey method is not appropriate for this research approach because it is not concerned with measuring events. An archival analysis is also inappropriate for this research because, although it may be concerned with describing and explaining contemporary events, records are often highly confidential in professional services and rarely accessible, and would not always yield the required information.

Historical analyses are appropriate when there is little or no possibility of access or control of data. However, historical research can be about contemporary events. In this situation, the historical analysis relies on many of the same techniques as a case study but, although the two techniques can overlap, the unique strength of case study methodology is its ability to use multiple sources of evidence including in-depth interviews, as well as documents. That is, sources which might be unavailable in the conventional historical study (Yin 1994; Riege 1996).

Table 3.5 also shows two conditions which can be considered to be the second and third distinction among the five research strategies identified by Yin (1994). One is the extent of control a researcher has over actual behavioural events, the other is the focus of research on contemporary events (Bonoma 1985; Eisenhardt 1989a; Yin 1994; Riege 1996). The case study is the preferred methodology when there is no control over behavioural events and the focus is on contemporary events.

Archival analysis, experiment, history and survey strategies are not appropriate for this research. There were no archives or history to analyse, and a survey would require both a large sample size and prior ability to identify research elements. Case studies are preferred when examining contemporary events where the relevant behaviours cannot be manipulated, and the investigator has little or no control over events. Cases which use quantitative methods lose richness and complexity and narrative order (Abbott 1992).
This research used *how* or *what* questions, therefore case studies are appropriate. The research problem of this study involves issues which are related to past and present events relying on multiple sources of evidence. The subjects of the research are those with previous and ongoing knowledge and experience of professional services from many different viewpoints. Therefore, case studies are more appropriate than historical analysis.

In summary, a qualitative methodology is justified for the type of research problem, issues and situations involved in this research of professional services.

### 3.3.2 Definitions

The term ‘case study’ as a research method will now be outlined to develop a definition for this research. Cases conventionally have been defined by the boundaries around places and time periods. A realist sees cases as empirically discoverable (Ragin and Becker 1992). Therefore, the cases are phenomena of some sort occurring in a bounded context (Robson 1993; Huberman and Miles 1994).

Yin (1994) defined a case study as “an empirical inquiry that:

- investigates a contemporary phenomenon within its real-life context; when
- the boundaries between phenomenon and context are not clearly evident, and in which
- multiple sources of evidence are used” (Yin 1994, p. 23).

A case study, when defined most generally, is a description of a situation (Easton 1982; Bonoma 1985). Case studies draw upon numerous data sources to triangulate perceptions and significant issues within a broader context (Bonoma 1985; Gummesson 1988; Patton 1990).

The case study provides an opportunity for the researcher to gain a fundamental knowledge of the studied organisation and its stakeholders. It also provides an opportunity to develop a language and concepts that are appropriate to the specific case, and to concentrate on processes that are likely to lead to understanding rather than a search for causal explanations (Gummesson 1988). The case study provides an opportunity for a holistic view of a process. The detailed observations in the case
study method enable a study of many different aspects, examined in relation to each other and viewed as a process within its total environment (Gummesson 1988; Grove and Fisk 1992). Therefore, this research used various data sources with a sensitivity to the context and research of the contemporary event of professional health services (Bonoma 1985; Robson 1993; Yin 1994). Case studies are a rigorous research approach concerned with the collection of multiple evidence about a few specific aspects of interest within a case (Riege 1996). It is often not possible or appropriate to research all aspects of a case in depth (Robson 1993).

Most importantly, case studies have a distinctive place in evaluation research with at least four different applications:

1. explanation of causal links in real life interventions that are too complex for survey or experimental strategies
2. description of the real life context in which an intervention has occurred
3. illustration of the intervention itself
4. exploration of situations in which the intervention being evaluated has no clear single set of outcomes (Yin 1994).

There is some debate as to whether case studies are a methodological choice or a choice of object to be studied (Stake 1994). It may be argued that as a form of research, case study is defined by the interest in individual cases, not by the methods of inquiry used. Stake (1994) describes three types of case study:

1. intrinsic case studies to understand a particular case
2. a collective case study which studies a number of cases to inquire into a phenomenon, population or general condition
3. an instrumental case study to provide insight or refinement of theory.

An instrumental case relegates the case to secondary interest where it plays a supportive role, facilitating our understanding of something else. The case is often looked at in-depth, its contexts scrutinised, its ordinary activities detailed, because this helps us pursue the external interest. The case may or may not be seen as typical of other cases (Stake 1994). The approach used for this research was of an instrumental case. The research does not seek to understand the intrinsic case or particular case of the specific health services organisation, or to understand a
number of cases. Instead, this research seeks to generate theory to understand professional services and, therefore, uses an instrumental case study approach.

Yin (1993) uses different terminology and describes the case as either exploratory, descriptive, or explanatory. An exploratory case study is aimed at defining the questions and hypotheses of a subsequent study or at determining the feasibility of the desired research problem. A descriptive case study, as used for this research, presents a complete description of a phenomenon within its context. An explanatory case study presents data bearing on cause-effect relationships, explaining which causes produced effects (Yin 1993).

The various definitions can be summarised as major themes. Following the work of Riege (1996), case study research:

1. concentrates on a particular contemporary phenomenon within its context, collecting multiple sources of evidence about a few aspects of interest (Merriam 1988; Ragin and Becker 1992; Robson 1993; Yin 1994; Riege 1996)
2. provides guidance in rigorously exploring the dynamic present with organisational settings (Bonoma 1985; Eisenhardt 1989a; Robson 1993; Yin 1994; Riege 1996)
3. analyses and outlines the findings in a more descriptive and analytical manner than the prescriptive and normative manner of some other types of research (Bonoma 1985; Merriam 1988; Yin 1994).

The definition of case study used in this research is a research method which focuses on a specific phenomenon within its context, and uses multiple sources of evidence in order to rigorously understand and analyse contemporary real life events.

This research uses an instrumental and descriptive case study approach. It uses a health services organisation, WorkCover and workers' compensation, to facilitate understanding of professional health services.

3.3.3 Building theory from case study research
Case studies can be used to accomplish various aims; to provide description, test theory or generate theory (Bonoma 1985; Eisenhardt 1989a). This research aims for theory generation from case study evidence. Theory generation draws upon the ideas of theoretical sampling, theoretical saturation, and overlapping coding, data
collection and analysis from the work of Glaser and Strauss (Glaser and Strauss 1967; Glaser 1978; Strauss and Corbin 1990; 1994).

*Theoretical sampling* is sampling on the basis of concepts that have proven theoretical relevance to the evolving theory” (Strauss and Corbin 1990, p. 176). In theoretical sampling, cases are chosen for theoretical not statistical reasons (Glaser and Strauss 1967). The cases may be chosen to replicate previous cases or extend emergent theory, or chosen to fill theoretical categories and provide examples of polar types. Although cases may be chosen randomly, random selection is neither necessary nor even preferable. Therefore, the goal of theoretical sampling is to choose cases that are likely to replicate or extend the emergent theory (Eisenhardt 1989a).

*Theoretical saturation* is the point at which incremental learning is minimal because the researchers are observing a phenomenon seen before (Glaser and Strauss 1967). This means when no new or relevant data is emerging, the category development is dense, all of the paradigm elements are accounted for and the relationships between categories are well established and validated (Strauss and Corbin 1990). This research stopped adding cases when theoretical saturation was reached (Eisenhardt 1989a).

Theory building uses a grounded theory approach and was used for this research. Grounded theory is a general methodology for developing theory that is grounded in data systematically gathered and analysed (Strauss and Corbin 1994). Research which builds theory from case studies often overlaps data analysis with data collection. For example, Glaser and Strauss (1967) argue for joint collection, coding and analysis of data. A key characteristic of qualitative research of all types is the continuous, ongoing analysis of the data (Kuckelman Cobb and Nelson Hagemaster 1987). The theory evolves during actual research, and it does this through continuous interplay between analysis and data collection and the constant comparative analysis (Strauss and Corbin 1994). The *constant comparative* method is often cited as a technique to achieve this and was applied in this research (Glaser and Strauss 1967). It involves comparing indicator to indicator, then indicator to concept (Glaser 1978). In discovering theory, conceptual categories or their
properties are generated from the evidence, then the evidence from which the
category emerged is used to illustrate the concept (Glaser and Strauss 1967; Easterby-

By overlapping data collection and analysis, this enabled a flexible data collection
strategy which, in turn, enables the theory building approach to make adjustments
during the data collection process. These adjustments can be the addition of further
cases to probe particular themes that emerge (Eisenhardt 1989a). This research used
grounded theory with a constant comparative analysis approach to ensure a flexible
data collection strategy.

Theoretical issues related to the topic of study provide specific guidance to the case
study (Yin 1993). However the research question may shift during the research, and
the study is begun as close as possible to no research question and no theory under
consideration. Therefore, a research problem and identification of some potentially
important variables using the literature review in Chapter 2 formed the basis of this
case study (Eisenhardt 1989a).

A grounded theory is one that is inductively derived from the study of the
phenomenon it represents (Strauss and Corbin 1994). Proponents of grounded
theory advise against premature use of theory or prior conceptual categories (Glaser
and Strauss 1967). Because of the desire to avoid premature conceptualisation,
typical research questions for grounded theory may simply identify the
phenomenon to be studied. The opening question in this research was ‘What is
quality physiotherapy?’ To go much further than specifying this question at the
outset of the study would jeopardise the strengths of grounded theory, which are to
develop new insights and theory (Yin 1993).

Glaser and Strauss (1967) distinguished between theory generation and theory
testing. They were concerned with the generation of theory, the attempt to find new
ways of approaching reality, and the need to be creative and receptive in order to
improve one’s understanding. Theories and models should be grounded in actual
empirical observations rather than governed by the established, traditional
approaches. Glaser and Strauss (1967) argued that it is possible to establish theories
and models that purport to have some degree of general applicability on the basis of a case study. "Since accurate evidence is not so crucial for generating theory, the kind of evidence, as well as the number of cases, is also not so crucial. A single case can indicate a general category or property, a few more cases can confirm the indication" (Glaser and Strauss 1967, p. 30).

The approach of theory building from cases, adopted in this research, has the advantage of increasing the likelihood of generating novel theory. The emergent theory is likely to be testable with constructs that can be readily measured and hypotheses that can be proven false. Another strength of the approach is that the resultant theory is likely to be empirically valid (Sternthal, Tybout and Calder 1987; Eisenhardt 1989a).

The theory building approach does have weaknesses. Theory based upon empirical evidence can be rich in detail but lack the simplicity of overall perspective. The theory can be too narrow, unable to raise a generality, or simply be idiosyncratic (Eisenhardt 1989a).

This research will focus on generating not testing theory. Therefore, the research will be inductive, drawing conclusions directly from the data, rather than deductive. In a deductive approach formulated ideas and hypotheses are tested out in data collected specifically for the purpose (Sykes 1991). A case study approach is often not considered appropriate for causal research (Sekaran 1992).

The theory building approach will use triangulation, key informants and purposeful sampling in its methods.

*Triangulation* is the use of multiple strategies of field research or mixed strategies. This may be used to overcome problems of validity and bias (Bonoma 1985; Grove and Fisk 1992; Minichiello et al. 1995). Theory needs to be grounded on strongly triangulated measures (Glaser and Strauss 1967; Glaser 1978; Strauss and Corbin 1994). Theory building researchers typically combine multiple data collection methods. The triangulation approach in this research was to use multiple data
collection methods. This approach is considered to provide substantiation of constructs and hypotheses (Yin 1994).

Triangulation is used as a method of demonstrating validity, although this is not always a straightforward process (Jick 1979; Patton 1990). Triangulation for convergence relies on different measures of the 'same' construct, but structured instruments and interviews rarely measure precisely the same construct. Triangulation is also considered in Section 3.3.4 as a method of increasing construct validity.

Further verification might rely on key informants, knowledgeable others who understand the service environment under scrutiny (Grove and Fisk 1992). In doing so, comparisons across multiple data gatherers are possible and will assist validity (Grove and Fisk 1992). A key informants panel was used in this research to assist verification. Key informants are also considered in Section 3.3.4 as a means of increasing construct validity.

Sample sizes in qualitative research are generally smaller than in quantitative studies. The qualitative inquiry focuses in-depth on relatively small samples, selected purposefully (Patton 1990; Sykes 1991). Samples are selected, not on a random basis as with quantitative research, but on the basis of respondents' knowledge and participation in the case, and their willingness to cooperate (Wallace 1984). Qualitative research samples are described using terms such as purposive. Samples are selected to increase the chances of covering the range of issues, phenomena and types of individuals which are the subject of interest. However, they are not haphazard samples but based on a systematic approach (Sykes 1991; Krathwohl 1993).

The logic and power of purposeful sampling lies in the selection of information rich cases for in-depth study. Information rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research, hence purposeful sampling (Patton 1990; Sykes 1991). The purposeful sampling used in this research follows the principles of theoretical sampling.
One form of purposeful sampling is snowball sampling. The process begins by asking well situated people to recommend others. In most programs or systems, a few key names or incidents are mentioned repeatedly. The chain of recommended informants will typically diverge initially, as many possible sources are recommended, then converge as a few names are mentioned over and over (Patton 1990; Minichiello et al. 1995). This snowballing allows a flexible approach in keeping with theory generation. In this research key informants and respondents assisted in achieving snowball sampling.

The sample may be selected either to find similar findings to other stakeholders under the same conditions (literal replication) or to produce contrasting findings for predictable reasons (theoretical replication) (Parkhe 1993; Yin 1994). When pursuing sampling for literal replication, the research issues induced from prior research and pilot case studies can be expected to explain empirical evidence. For theoretical replication, the sampling pursues those cases theoretically expected to provide contrary results for predictable reasons (Parkhe 1993; Yin 1994).

The major components of the case study are:

1.bounding the case, conceptualising the object of the study
2.selecting phenomena, themes or issues—that is, the research question—to emphasise
3.seeking patterns of data to develop the issues
4.triangulating key observations and bases for interpretation
5.selecting alternative interpretations to pursue
6.developing assertions of generalisations about the case (Stake 1994; Yin 1994).

In this research, sampling was purposeful, seeking literal and theoretical replication. The research stopped adding cases when theoretical saturation was achieved. A grounded theory approach was used to build theory from the case study research. Triangulation of data and verification by key informants added to the data and served to strengthen validity and reliability.

The process of building theory from case study research is summarised in Table 3.6.
<table>
<thead>
<tr>
<th>Step</th>
<th>Activity</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>getting started</td>
<td>definition of research question</td>
<td>focuses efforts</td>
</tr>
<tr>
<td></td>
<td>possible a priori constructs</td>
<td>provides better grounding of construct measures</td>
</tr>
<tr>
<td></td>
<td>neither theory nor hypothesis</td>
<td>retains theoretical flexibility</td>
</tr>
<tr>
<td>selecting cases</td>
<td>specified population</td>
<td>constrains extraneous variation and sharpens external validity</td>
</tr>
<tr>
<td></td>
<td>theoretical, not random, sampling</td>
<td>focuses efforts on theoretically useful cases i.e. those that replicate or extend theory by filling conceptual categories</td>
</tr>
<tr>
<td>crafting instruments and</td>
<td>multiple data-collection methods</td>
<td>strengthens grounding of theory by triangulation of evidence</td>
</tr>
<tr>
<td>protocols</td>
<td>qualitative and quantitative data combined</td>
<td>synergistic view of evidence</td>
</tr>
<tr>
<td></td>
<td>multiple investigators</td>
<td>fosters divergent perspectives and strengthens grounding</td>
</tr>
<tr>
<td>entering the field</td>
<td>overlap data collection and analysis, including field notes</td>
<td>speeds analyses and reveals helpful adjustments to data collection</td>
</tr>
<tr>
<td></td>
<td>flexible and opportunistic data collection methods</td>
<td>allows investigators to take advantage of emergent themes and unique case features</td>
</tr>
<tr>
<td>analysing the data</td>
<td>within-case analysis</td>
<td>gains familiarity with data and preliminary theory generation</td>
</tr>
<tr>
<td></td>
<td>cross-case pattern search using divergent techniques</td>
<td>forces investigators to look beyond initial impressions and see evidence through multiple lenses</td>
</tr>
<tr>
<td>shaping hypotheses</td>
<td>iterative tabulation of evidence for each construct</td>
<td>sharpens construct definition, validity and measurability</td>
</tr>
<tr>
<td></td>
<td>replication, not sampling, logic across cases</td>
<td>confirms, extends and sharpens theory</td>
</tr>
<tr>
<td></td>
<td>search evidence for ‘why’ behind relationships</td>
<td>builds internal validity</td>
</tr>
<tr>
<td>enfolding literature</td>
<td>comparison with conflicting literature</td>
<td>builds internal validity, raises theoretical level, and sharpens construct definitions</td>
</tr>
<tr>
<td></td>
<td>comparisons with similar literature</td>
<td>sharpens generalizability improves construct definition, and raises theoretical level</td>
</tr>
<tr>
<td>reaching closure</td>
<td>theoretical saturation when possible</td>
<td>ends process when marginal improvement becomes small</td>
</tr>
</tbody>
</table>
3.3.4 Criteria for judging the quality of case study design
The quality of a research design rests on certain logical tests of validity and reliability. This section discusses how research achieves construct validity, internal and external validity and reliability through the use of a thorough design in case study research.

Validity is the extent to which the procedure undertaken gives the correct answer (Patton 1990; Sykes 1991). In other words, does the research describe reality with a good fit (Kirk and Miller 1986; Gummesson 1988; Minichiello et al. 1995)? The more the quality determinants repeat in the data collection, the more soundly validity will be shown. The lack of generalisation from case studies is closely related to validity though it may be acknowledged that case study design often optimises understanding of the case rather than permit generalisation beyond (Stake 1994). Therefore, understanding of the case study will not be compromised by giving preference to making generalisations about the case.

Reliability is the extent to which a measurement procedure yields the same answer however and whenever it is carried out (Kirk and Miller 1986). Therefore, two or more researchers studying the same phenomenon with similar purposes should reach approximately the same results (Gummesson 1988; Grove and Fisk 1992).

Several authors have demonstrated that validity and reliability can be achieved in case study research (Eisenhardt 1989a; Patton 1990; Parkhe 1993; Yin 1994). The four design tests of construct validity, internal validity, external validity and reliability, may establish the quality of the case study research and steps to be undertaken to achieve this (Table 3.7). These four tests can be compared to the evaluative criteria appropriate to qualitative inquiry of credibility, transferability, dependability and confirmability (Guba 1981; Lincoln and Guba 1985; Miles and Huberman 1994; Yin 1994). As well, the four tests can be compared to Guba’s (1981) criteria for trustworthiness.

The design tests of construct validity, internal validity, external validity and reliability will be used as the framework to consider the other qualitative design tests in this case study research. The outline in Table 3.7 will be followed.
<table>
<thead>
<tr>
<th>Construct validity</th>
<th>Internal validity</th>
<th>External validity</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>neutrality</td>
<td>truth value</td>
<td>applicability</td>
<td>consistency</td>
</tr>
<tr>
<td>confirmability,</td>
<td>credibility</td>
<td>transferability</td>
<td>dependability</td>
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<tr>
<td>being objective</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>and neutral</td>
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<tr>
<td>use multiple</td>
<td>within case</td>
<td>define scope and</td>
<td>congruence</td>
</tr>
<tr>
<td>sources of</td>
<td>analysis</td>
<td>boundaries of</td>
<td>between</td>
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<tr>
<td>evidence</td>
<td></td>
<td>reasonable</td>
<td>research</td>
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<tr>
<td>triangulation</td>
<td></td>
<td>generalisation</td>
<td>question and</td>
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<tr>
<td>establish a chain</td>
<td></td>
<td>for the research</td>
<td>case study</td>
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<td>of evidence</td>
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<td>comparison with</td>
<td>design</td>
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<td>key informants to</td>
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<td>literature</td>
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<td>review draft</td>
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<td>case study</td>
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<tr>
<td>analyses</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>confirmary audit</td>
<td>triangulation</td>
<td>thick description</td>
<td>dependability</td>
</tr>
<tr>
<td>peer debriefing,</td>
<td></td>
<td>cross stakeholder</td>
<td>audit, examine</td>
</tr>
<tr>
<td>key informants</td>
<td></td>
<td>analysis</td>
<td>and document</td>
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<tr>
<td>self monitoring of</td>
<td></td>
<td>specific procedures</td>
<td>the process of</td>
</tr>
<tr>
<td>researcher</td>
<td></td>
<td>for coding and</td>
<td>inquiry</td>
</tr>
<tr>
<td></td>
<td></td>
<td>analysis</td>
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</tbody>
</table>

*Construct validity* is how well the results obtained from the use of the measure fit the theories around which the test was designed (Sekaran 1992, p. 173). Construct validity is establishing correct operational ‘measures’ for the concepts being studied.
To meet the test of construct validity, "an investigator takes two steps:

1. select the specific types of changes that are to be studied (in relation to the original objectives of the study) and
2. demonstrate that the selected measures of these changes do indeed reflect the specific types of change that have been selected" (Yin 1994, p. 42).

This research achieved construct validity by carefully developing the constructs of service quality identified in the literature in Chapter 2 and by conducting a pilot study (Riege 1996). The types of constructs selected were not measured but rather explored to understand their types and meanings.

Case study research is considered to be more subjective than quantitative research inquiries because researchers have close, direct and mostly personal contact with people under research scrutiny. Therefore, construct validity of qualitative data depends on the methodological skills, competence, sensitivity and integrity of the researcher collecting the data, to avoid making subjective judgements during data collection (Patton 1990; Riege 1996). Subjectivity was minimised in this research through the careful selection of the case study respondents and a structured process for recording, writing and interpreting data (Lincoln and Guba 1985; Dick 1990). This is explained further in Section 3.6 on case study protocols.

During the data collection period it was important to achieve convergent lines of inquiry to provide congruence for respondents' perceptions. Therefore, the use of multiple sources of evidence was used to permit triangulation of data (Jick 1979; Denzin and Lincoln 1994). Triangulation serves as a process of using multiple perceptions to clarify meaning by identifying variances in interpreting the phenomenon under research (Jick 1979). As already noted, multiple strategies of field research or mixed strategies are used to overcome problems of validity and bias (Bonoma 1985; Grove and Fisk 1992; Minichiello et al. 1995). The multiple sources of evidence include documentation, archival records, and interviews (Yin 1994). One method used for this research was to ask the same questions of different sources of evidence, when all sources pointed to the same answer. In this case the data was judged to be successfully triangulated (Yin 1993).
This research used an approach of establishing a chain of evidence and having the draft case report reviewed by key informants (Yin 1994).

The research established a chain of evidence, to ensure construct validity in the data collection phase. The overall quality of the case study increases if the essential evidence has been carefully collected (Yin 1994). To ensure high quality research, citations of original data and a case study protocol were used.

The chain of evidence was achieved in two ways. Firstly, directly quoting the respondents in the analysis of data in Chapter 4 (Miles and Huberman 1994). Secondly developing a case study protocol provided a structured approach to exploring the research issues. Yin's (1994) approach was followed. This involved maintaining a chain of evidence to enable an external reader to follow the derivation of any evidence from initial research questions to ultimate case study conclusions. This was achieved by relating the quotations to the specific portions of the case study database and adhering to a case study protocol (Patton 1990; Yin 1994).

In addition, draft case study analyses were undertaken by key informants (Yin 1994). For this research, a group of key informants advised and commented on the case study. This served to corroborate the essential elements presented in the case report. It provided an opportunity for corrections and enhanced accuracy of the case study (Grove and Fisk 1992; Yin 1994). However, this process has been subject to some criticism. Checking by key informants may not lead to construct validity. Instead the informants have an investment in their own experiences and may have difficulty recognising other peoples' interpretations or experiences as variations of their own (Sandelowski 1993). Therefore, the process is likely to add to construct validity but the research process is essentially social in its checking of informants accounts. Care is required to ensure that the participation of informants is not simply to meet the expectations of the researcher, or to minimise conflict by suppressing disagreements with the researchers interpretation. Further, informants may not be interested in such an exercise and their comments may be of limited value. Consensus or convergence may be inappropriately sought, or the wrong expertise may be sought, or peers may be motivated by certain interactional constraints (Yonge and Stewin
1988; Sandelowski 1993). This research recognised the complexity of these strategies, analysed them critically, and selected carefully the process used.

Cases usually require a considerable amount of revision to take account of the factual errors, the defensive responses and the genuinely alternative responses (Miles 1979). To be regarded as valid, the research has to be placed in the public domain so that it can be debated and defended (Easterby-Smith, Thorpe and Lowe 1991).

In this study, key informants were convened as a critical review group. This group consisted of persons with knowledge of the professions, patients and the organisation which formed part of the study. A representative of one stakeholder group, employers, declined to participate. The key informants undertook to oversee the project and performed the important functions of:

- selecting participants for the study
- advising on data recruitment and access
- reviewing the draft case study on several occasions.

The terms of reference for the key informants panel are provided in Appendix D.

In addition, the draft case studies were sent to the appropriate professional organisation, university peers and colleagues for review.

The confirmability test aims to meet the concern in qualitative research that the researcher be neutral and personally distanced from the phenomenon of interest when interpreting experiences and meanings. The conclusions must be reasonable given the data collected and they can be confirmed by others. This test is likened to assessing neutrality and objectivity in positivism (Miles and Huberman 1994) which refers to what other researchers agree to as a phenomenon, in contrast to the subjective experience of the single individual (Robson 1993). Confirmability and construct validity meet the test of neutrality in naturalistic inquiries (Guba 1981).

Several techniques were used in this research to achieve confirmability. In particular, the researcher’s interpretations and conclusions were reviewed in detail by the key
informants. This review was based on field notes, documentation and other supportive evidence (Lincoln and Guba 1985). This process supported the interpretations and conclusions reached (Hirschman 1986). Also, the preservation of all collected data such as transcriptions of the recorded cassette tapes, interview notes, and other documentary evidence, allow other researchers to follow the path of the research inquiry and to test its conclusions.

*Internal validity* is the internal coherence of findings, the “snugness of the fit between the data and the findings or conclusions” (Sykes 1991, p. 10).

Internal validity is commonly used for explanatory or causal studies rather than for the qualitative research using descriptive or exploratory studies (Emory and Cooper 1991; Yin 1994). In qualitative research, internal validity is achieved by demonstrating links of the collected data to the reported results and conclusions. A high degree of internal validity is possible in qualitative research because of the opportunities it offers for responsive cross checking and reinforcement of ideas as they emerge out of the data. A review of key informants of interpretations of the data and triangulation add to internal validity. However, the internal validity may not always be open to scrutiny (Sykes 1991). Plausible and coherent accounts can always be provided but have the disadvantage of potential bias (Huberman and Miles 1994).

Qualitative researchers do not necessarily influence the collected data when natural or social phenomena are observed and recorded objectively. For this research, the respondents were totally independent of the researcher and described their perspectives as they wished, the researcher could not influence them (Hirschman 1986; Guba and Lincoln 1994). This increases the potential for internal validity.

Although the case study in this research is an exploratory study rather than a causal study, the research will infer events that are not directly observed. Therefore, the analytic tactic of constant comparative analysis will be used. This is further discussed in Section 3.9. Internal validity will be achieved using cross checking, within case analysis (detailed write up for each interview), constant comparative analysis, checking by key informants and triangulation.
A corresponding test to internal validity in positivism is *credibility* used in qualitative inquiry (Hirschman 1986). The research can be considered credible, if data collection methods can be identified and describe the subject matter (Hirschman 1986). The test is to give respondents or peers access to the research findings and to take their reactions into account because of the possibility of multiple constructed realities (Gabriel 1990).

This research used several techniques to increase its credibility of the research: triangulation of various collected data sources, review by key informants, peer examination and debriefing from colleagues within the university and profession, (Lincoln and Guba 1985). In addition, there was self monitoring by the researcher, and clarification of the researcher's assumptions and theoretical orientation (Merriam 1988). Data consisted of direct quotes by respondents and references to the transcripts and notes in margins taken from the interview tapes.

Credibility and internal validity methods enable this research to meet the criteria of *truth value* for trustworthiness of naturalistic research (Guba 1981).

*External validity* establishes the domain to which a study's findings can be generalised beyond the immediate case study (Emory and Cooper 1991; Yin 1994). However, generalisability can, in itself, be something of an illusion since every research situation is ultimately about a particular researcher in interaction with a particular subject in a particular context. From the qualitative perspective, generalisability is based on a context-free structure that does not exist and the assumption that the multiple realities in any given situation can be controlled to illuminate the effects of a few variables (Sandelowski 1986). This can only be achieved in this research in a limited way.

External validity was attempted using a specified population and analytic generalisation. Choosing a specified population to research constrains extraneous variation and sharpens external validity (Eisenhardt 1989a).
Statistical generalisation uses a "correctly selected" sample to generalise about a larger population (Eisenhardt 1989a; Miles and Huberman 1994; Yin 1994). In contrast, in aiming for analytical generalisation case study researchers aim to generalise the research results to some broader theory (Yin 1994). In this research, analytic generalisation was considered in the comparison of previously developed theories, presented in Chapter 2, and the conclusions drawn from the empirical results, presented in Chapter 5.

This realism oriented research approach using analytical generalisation achieved external validity through an embedded case study using rich description and analytical generalisation of real life situations within the case study. This was compared with previously developed theories. The extent of external validity possible should be treated with caution given the limited generalisability of a single embedded case study.

External validity enables the developed theories to have applicability (Guba 1981) to other research settings. The test of transferability in qualitative research is comparable to the function of assessing external validity in positivism (Lincoln and Guba 1985; Hirschman 1986; Gabriel 1990; Robson 1993). The realism inquiry does not aim for statistical generalisation of particular findings. The realism inquiry is concerned with the transferability of similarly or differently interpreted research findings amongst similar or different respondents by comparing the considered generative mechanisms (Hirschman 1986).

Transferability was achieved with the development of transcriptions of data and development of the case study database. This enabled cross stakeholder analysis (comparing results between stakeholder groups) and the use of specific and explicit procedures for coding and analysis (Merriam 1988; Yin 1993; Yin 1994). These techniques also meet the requirements of applicability and external validity.

Reliability demonstrates that the operations of a study, such as the data collection procedures, can be repeated with the same results (Easterby-Smith, Thorpe and Lowe 1991; Riege 1996). The goal of reliability is to minimise errors and biases in the study. In qualitative research, data on the same real life event can be collected by
different methods, different researchers, or at different times and may not converge into the one consistent picture advocated by quantitative researchers (Sandelowski 1986; Sandelowski 1993). However, such differences can be anticipated and provide a valuable source of information about real life events.

The aim is to make sure that the process of research is transparent (Sykes 1991). To help researchers precisely follow the steps selected for this research, a detailed case study protocol and case study database was recorded to facilitate replication of the study (Yin 1994).

The creation of a database is a distinctive way of synthesising, organising and documenting the mass of collected data. A database makes it easier for other investigators to review the evidence. The database, following Yin (1994), contains the following:

- case study notes and field notes
- narratives; the formal part of the database was open ended answers to the interview questions in the case study protocol
- case study documents; the numerous documents collected during the data collection phase were systematically ordered, the database facilitating storage and retrieval for later investigators
- tabular material, which embodied survey and other quantitative data, organised to allow for later search and retrieval
- all case study notes and documents which can be retrieved and sighted by any reader or later investigator.

The case study protocol and case study database will ensure reliability. These are provided in Section 3.6.

Analysis procedures similarly improve reliability in cases when more than one person is working on the analysis. Each person codes the data into a classification scheme separately and then the results of the coding are compared and discussed. Important insights can emerge from the different ways in which two people look at the same set of data, a form of analytical triangulation (Patton 1990).

The dependability test is similar to the function of assessing reliability in positivism (Hirschman 1986) and consistency in naturalistic inquiry. The dependability test aims
to demonstrate a consistent and stable construction of patterns and structures. Several techniques were used. The findings were discussed with key informants, supervisors and other researchers in order to ensure consistency of interpretation and provide a more dependable understanding of the nature of the phenomenon than relying only on just one researcher’s interpretation (Hirschman 1986). In qualitative research, multiple ways of interpreting the same phenomenon can be expected because each explanation results from a different human perspective.

3.3.5 Prior theory
A well defined, focused research problem enables accurate specification of the kind of data to be gathered and assessed (Mintzberg 1979) for it “permits the researcher to specify the kind of organisation to be approached ... and the kind of data to be gathered” (Eisenhardt 1989a, p. 536). The research issues developed and defined in Chapter 2 met these requirements.

Prior theory is usually used for the formation of hypotheses of cause–effect relationships and would be relevant to explanatory case studies. However, this research, using a descriptive and exploratory case study, is not an expression of a cause–effect relationship, rather a descriptive theory which encompasses the scope and depth of the case being described (Yin 1993). Prior theory was instead used to develop research issues and identify key variables.

Approach to research inquiry. In the present case, a pilot study was conducted after the researcher had developed prior knowledge from an initial survey of the literature. This process facilitated the development of a research problem and some initial broad research issues (Robson 1993). A more detailed literature review then identified research issues in a more focused way. This process of two dimensions is illustrated in Figure 3.1 with prior theory used in data collection and subsequent analysis related to the number of embedded interviews. The dashed lined circle in the lower left hand corner of the diagram shows the researcher’s position at the very beginning of this research when conducting the pilot study.

This initial inductive approach used convergent interviewing (see Section 3.7) and conducted a single pilot case study. This stage helped the literature review in two
ways. The literature provided identification of critical issues about quality in health care. This was useful in the development of the appropriate research issues.

Prior theory used in data collection and analysis:

<table>
<thead>
<tr>
<th>Stage</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>Initial literature review</td>
</tr>
<tr>
<td>Stage 2</td>
<td>Pilot studies</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Continued and more focused literature review</td>
</tr>
<tr>
<td>Stage 4</td>
<td>Main data collection</td>
</tr>
</tbody>
</table>

Figure 3.1 Research activities in five different research stages modified from Perry (1994)

The pilot case study (presented in Chapter 4), also served to build familiarity with the use of the case study methodology. The pilot study helped the researcher conduct a more focused literature review and helped develop the theoretical framework and identify research issues. After completing the literature review and methodology assessment, the case study protocol was established and refined in a real situation before the main data were collected.

For this research, a qualitative case study methodology was used for theory development. Research in professional health services requires an instrumental and descriptive case study approach. The case study design was chosen to achieve reliability and validity.
3.4 Criteria for case selection and their number

3.4.1 Case study design

A research design is the logic that links the data to be collected (and the conclusions to be drawn) to the initial questions of a study (Yin 1994). A research design is a plan that guides the researcher through the process of collecting, analysing and interpreting data. It is a logical procedure that allows the researcher eventually to draw conclusions about the research issues under investigation. The research design defines how interpretations can be generalised to a larger population or to specific situations. The research design for this study is a case study—a research strategy that focuses on understanding the dynamics present within single settings (Eisenhardt 1989a).

Case studies can involve single or multiple cases and numerous levels of analysis (Yin 1994). Case study designs vary in character but two types are of particular interest. Table 3.8 illustrates four basic types of case study design that can be chosen. One pair of categories consists of single case and multiple case designs. The other pair distinguishes between holistic and embedded designs. Each one can be seen in combination with either category of the first pair and is based on the unit or units of analysis to be covered. The matrix of Table 3.8 assumes that each type reflects a different design situation. The four different types of designs are:

1. single case—holistic
2. single case—embedded
3. multiple case—holistic
4. multiple case—embedded.

Table 3.8 Four basic types of case study design (Yin 1994, p. 46)

<table>
<thead>
<tr>
<th></th>
<th>Single case designs</th>
<th>Multiple case designs</th>
</tr>
</thead>
<tbody>
<tr>
<td>holistic</td>
<td>type 1</td>
<td>type 3</td>
</tr>
<tr>
<td>(single unit of analysis)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>embedded</td>
<td>type 2</td>
<td>type 4</td>
</tr>
<tr>
<td>(multiple units of analysis)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The difference between the two types of single case study depends on the aspects being researched. The first type of case study, single case holistic design, aims to derive general conclusions from a limited number of cases. The second type, single
case embedded, which is used for this study, aims to arrive at specific conclusions on the basis of the detailed analysis of a single case study (Glaser and Strauss 1967; Glaser 1978).

Single case study designs are analogous to a single experiment. Therefore, a single case study can be used as the critical case in testing a well formulated theory. Alternatively, a single case study may represent an extreme or unique case (Yin 1994). This research will consider the unique case, or to use Stake's (1994) terminology, the instrumental case, to provide insight professional health services.

The case study may involve more than one unit of analysis with attention being given to subunits. This is called an embedded case study design rather than a holistic design. Using an embedded design which focuses on the subunits is not chosen at the expense of investigating the larger unit of analysis (Yin 1994).

A single embedded case study can include collection and analysis of highly quantitative data including surveys within each case (Yin 1994). Such case data consist of all the information available about one case. This case will include interview data, documentary data, impressions and statements of others about the case, and data over time together with program documents, program reports and data (Patton 1990). Methods are selected and used to suit the research question (Minichiello et al. 1995). The combination of different methods in the same study is used to highlight different dimensions of the same phenomenon and to validate the findings by examining them from several vantage points (Minichiello et al. 1995).

Multiple sources of evidence were used. The use of multiple sources of evidence in case studies allows the investigator to address a broader range of historical, attitudinal and observational issues (Yin 1994). This research will use a single embedded case study design.

3.4.2 Choice of a single embedded case study design
The choice for this research of the single embedded case study design enabled specification of the population, control over extraneous variation, and definitions of the limits of generalisation from the findings (Eisenhardt 1989a). When the aim is
generating theory, sampling is theoretical not statistical (Glaser and Strauss 1967). Therefore, the embedded categories were chosen to fill theoretical not statistical sampling categories. Theoretical sampling chooses cases that are likely to replicate or extend the emergent theory (Eisenhardt 1989a). The definition of the case and therefore the unit of analysis defines the case’s theoretical significance (Abbott 1992; Yin 1993). However, it is important to recognise that the unit or case of a health care organisation is not of prime importance, rather that the understanding of quality in professional health services is the main interest (Ragin and Becker 1992; Wievioka 1992).

Overall, a single embedded case study design was used rather than a multiple embedded case study because of the difficulty of accessing data (Yin 1994). To complete a multiple case study would require repeating the research in several different locations outside the researcher’s place of residence in Australia. The time, resources and required access to data were simply unavailable. Also, the different legislative frameworks in different Australian states would shape the local environment and knowledge and limit some of the possible comparisons and confirmations of theory (Abbott 1992).

The single case study approach is appropriate for this research problem for the following reasons:

- the full variety of evidence is available (Yin 1994); evidence for case studies came mainly from interviews, but also archival records and documents
- it is a methodologically rigorous approach built upon theoretical saturation and replication logic in the subunits (Parkhe 1993; Robson 1993; Yin 1994); qualitative rigour comes from the use of triangulation between data sources and research methods to satisfy both theory generation and verification (Denzin 1978; Jick 1979; Deshpande 1983; Patton 1990)
- it can be used for the description and investigation of complex social phenomena (Patton 1990; Stake 1994; Yin 1994).

However, a multiple case study design is considered more robust and sound than single case studies because of the greater opportunity for triangulation of evidence (Bonoma 1985; Eisenhardt 1989a; Stake 1994; Yin 1994). The single case study cannot be used for theory generalisation. Multiple case studies provide more background for theory to be generated (Deshpande 1983; Bonoma 1985; Patton 1990). However,
this was not feasible and the differing legislative frameworks across potential multiple cases would, in any case, hamper theory generalisation.

A single case study carefully researched can lead to the development of new theoretical relationships. Classic case studies focus on comparisons within the same organisational context. The benefit a single case offers is the deep understanding of a particular social setting rather than the comparative insights of a multiple case study. It becomes a trade off between deep single case studies or multiple surface case studies (Eisenhardt 1989a; Dyer and Wilkins 1991; Eisenhardt 1991). The single case uses an interpretive paradigm.

In summary, the single embedded case study can offer multiple sources of evidence, provide triangulation of conducted data, and is valuable for theory building. However, it does not offer theory testing and is less robust in its triangulation than multiple case studies.

Embedding the case study was desirable in order to consider the views of each category of those involved in the case. Those selected offered the opportunity to replicate findings from other stakeholders under the same conditions (literal replication) or produce contrasting findings for predictable reasons (theoretical replication) (Parkhe 1993; Yin 1994). The approach, therefore, differs from population sampling. The case ignores 'types of events' when they are not narratively important, rather than including all collected variables. The case follows and looks for causal action, explaining and researching only what needs to be explained (Abbott 1992).

Literal replication of the research issues induced from prior research and pilot case studies can be expected to explain empirical evidence. Theoretical replication is sampling that is theoretically expected to provide results for predictable reasons (Parkhe 1993; Yin 1994).

In this research, both literal and theoretical logic is used: literal replication for the selected stakeholders within the same grouping such as physiotherapists; and theoretical replication for contrasting findings for the selected stakeholders, from different groups. Beliefs and responses were expected to differ between
physiotherapist and patient. However, it could be expected that beliefs and responses might well be similar among physiotherapists.

Multiple substudies were used as the single topic of professional health service quality is so diverse that multiple processes and outcomes are at work. Different substudies are needed to focus on these diverse parts or processes and outcomes, but the substudies as a whole are still part of the same case study (Yin 1993).

3.4.3 Number of selected embedded studies
In this research four major stakeholders were identified and, in the main data collection phase, 75 interviews were completed. The aim of the following paragraphs is to explain and support the decision regarding the number of stakeholders and interviews undertaken, and then the number of interviews within each stakeholder group.

The concept of a population is crucial to the research because the population defines the set of entities from which the research sample is to be drawn. The selection of an appropriate population controls extraneous variation and helps to define the limits to generalisation of the findings (Eisenhardt 1989a). The cases are chosen by theoretical sampling, not for statistical reasons (Glaser and Strauss 1967).

The definition and selection of the unit of analysis depends on the research questions that have been defined. For this research it is broadly: What is quality in professional health service?

The case is chosen so that the process of interest is ‘transparently observable’ (Eisenhardt 1989a). The goal of theoretical sampling is to choose cases that are likely to replicate or extend the emergent theory. The single case contributes to knowledge and theory building.

The more the object of study is a specific, unique, bounded system, the greater the usefulness of the epistemological rationale (Stake 1994). Therefore, a professional service quality case study was undertaken involving patients, health care professionals and the other stakeholders involved in compensable health care. The
patient and professional health care provider are independent but important stakeholders of the payer.

A case study of a service delivery program may reveal variations in program definition which depend upon the perspective of different actors. As ever, understanding the critical phenomena depended on choosing the case well (Patton 1990; Yin 1994).

A health services system in South Australia was chosen for this study. Legislation governs its methods of organisation and fee structure. This helped to set boundaries for the case. Organisational documents and a report of patient treatment patterns was made available to the researcher. The choice of case also avoided commercially sensitive concerns. Once determined and agreed in State Parliament, the fee structures are gazetted. Therefore, the case was further bounded and questions of price were not directly explored with the patient groups. For example, the relationship between cost and perceived service quality from a patient’s perspective was not explored.

Sampling followed a literal and theoretical replication logic (Yin 1993). The sampling choices were theory driven (Glaser and Strauss 1967), not driven by a concern for representativeness (Huberman and Miles 1994). Sampling choices inevitably determine the data considered and used in analysis. In addition, the sample chosen included a nested range of activities, processes, events, locations and times. This contributed to the ability to build theory (Lofland 1971).

This case considered all stakeholders involved in delivery of a professional health service (see Table 3.9). The sampling was literal, therefore stakeholders were identified and interviews conducted until theoretical saturation was reached when no further insights or information were being gained (Glaser and Strauss 1967; Strauss and Corbin 1990; Strauss and Corbin 1994). Sampling choices evolved through successive waves of data collection, as suggested by key informants and respondents. As indicated above, the issue was not generalisability but rather an understanding of the conditions under which a particular finding appears and operates: how and why it carries on as it does (Huberman and Miles 1994).
Table 3.9 Sampling for the research design

<table>
<thead>
<tr>
<th>Category</th>
<th>Stakeholders</th>
<th>Replication sampling</th>
<th>Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>patients</td>
<td>patients</td>
<td>theoretical</td>
<td>experience professional services in the same way</td>
</tr>
<tr>
<td></td>
<td></td>
<td>literal</td>
<td>experience the professional services differently if in different occupations</td>
</tr>
<tr>
<td>employees</td>
<td>theoretical</td>
<td>literal</td>
<td>represent union members uniformly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>literal</td>
<td>represent union members differently based upon consumer differences</td>
</tr>
<tr>
<td>consumer organisations</td>
<td>theoretical</td>
<td>literal</td>
<td>represent consumers uniformly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>literal</td>
<td>represent consumers differently based upon consumer differences</td>
</tr>
<tr>
<td>payers</td>
<td>employers and employer organisations</td>
<td>theoretical</td>
<td>provide services under the same organisational framework</td>
</tr>
<tr>
<td></td>
<td></td>
<td>literal</td>
<td>different size organisational capacities and understanding of the professional service</td>
</tr>
<tr>
<td>insurance agents,</td>
<td>theoretical</td>
<td>literal</td>
<td>provide services under the same organisational framework</td>
</tr>
<tr>
<td>claims managers</td>
<td></td>
<td>literal</td>
<td>differing company approaches to professional services</td>
</tr>
<tr>
<td>health care providers</td>
<td>fellow professionals greater involvement with profession under study</td>
<td>theoretical</td>
<td>relations between professionals implicit and expected</td>
</tr>
<tr>
<td></td>
<td></td>
<td>literal</td>
<td>differing professions take different roles depending on which profession</td>
</tr>
<tr>
<td></td>
<td>fellow professional lesser involvement with profession under study</td>
<td>theoretical</td>
<td>relations between professionals implicit and expected</td>
</tr>
<tr>
<td></td>
<td></td>
<td>literal</td>
<td>differing professions take different roles depending on position to the profession</td>
</tr>
<tr>
<td>providers physio-therapist</td>
<td>professionals in similar settings</td>
<td>theoretical</td>
<td>profession all working in the same organisational framework</td>
</tr>
<tr>
<td></td>
<td>professionals in different settings</td>
<td>literal</td>
<td>sampling of the profession differs with each setting</td>
</tr>
</tbody>
</table>
The sampling was also theoretical as there was an expectation that there would be contrasting findings for predictable reasons. As set out in Table 3.9, the professional group, divided by the setting of their service, had different experiences.

3.4.4 Data sources

Interviews were used for the pilot and case study. The pilot study used focused or semi-structured interviews. Unstructured interviews were used for the case study itself (Yin 1994) (see Section 3.7 on the case study instrument).

Documentation was also used as a data source. This included:

- administrative documents including physiotherapists guides and scheduled protocols to understand how expectations of services have been developed (Brandt and Reffett 1989; Grove and Fisk 1992)
- written communiques advising stakeholders about the health care organisation
- content analysis of documents that codify the process of service assembly for an organisation’s employees to determine the organisation’s service specifications.

These will be reviewed as part of triangulating data. The documents provide an opportunity to compare respondents’ perceptions with the service specifications of the health service organisation (Scheuing and Johnson 1989).

A single embedded case study design enabled multiple sources of evidence and is appropriate for a case study of a complex health service organisation. The number of selected studies followed literal and theoretical sampling using a case study protocol until saturation was reached.

3.5 Case study procedures

This section outlines the research procedures undertaken. The procedures were familiarisation with case study methodology and related skills, followed by detailed planning of the field work and undertaking the field work.

The preparation for collection of data included pilot studies, familiarisation with the case and development of a case study protocol (Yin 1994). Results of the pilot study are presented in Chapter 4.
The data collection process followed preconditions of:

- non-routine data collection—the interviews allowed for probing of further issues raised, leaving the researcher adaptive and flexible, and open to emerging new information
- unbiased researcher—maintaining an openness to contrary findings and not influencing the responses given (Patton 1990; Yin 1994).

3.6 Case study protocol
The case study protocol refers to the general rules that have been followed in the research. Evidence for this case study came from interviews and documents. Direct observation, participant observation and archival records were not appropriate and not used for as they did not fit with the realist approach of this research.

3.6.1 Recruitment for interviews
The stakeholders interviewed were recruited in various ways following the principles of purposive sampling for literal and theoretical sampling. These are outlined below.

Patients. The key informants recommended contacting patients and their representatives as another major stakeholder group. Patient representatives were found to be employee groups (union organisations) and community organisations. The unions contacted were involved in dispute resolution or advocating for the patient. They, in turn, recommended patients to be interviewed. Consequently, worker advocacy became a central theme so community health workers and organisations were also contacted.

Payers. The key informants recommended contacting the employers as a major stakeholder group. This group met regularly to advise the health care organisation on issues from the employers’ perspective. Each employer stakeholder was invited in writing to participate in an in-depth interview. Some declined but advertised the project to their employee organisation by direct mail or by advertisement in their newsletter. The key informants also advised on the nine insurance organisations contracted by the health care organisation. One organisation was not contacted as the
organisation was conducting research in a related area which would potentially bias this research.

**Health care providers.** The key informants recommended key health professional organisations which recommended individuals with large and small involvements with the injured worker. Medical providers, rehabilitation counsellors, occupational therapists and psychologists were recruited to the sample.

**Physiotherapists.** An advertisement was placed in the physiotherapy newsletter calling for participants. In addition, those physiotherapists working in injured worker clinics were directly recruited where larger numbers of patients on workers compensation were expected. They, in turn, recommended those physiotherapists with only a small number of injured patients on workers compensation.

Respondents identified for the study were each sent an introductory letter explaining the character and purpose of the study and inviting them to participate (Appendix C). One week later they were telephoned and an interview arranged with the participants willing to be interviewed. A follow up telephone call was made to non-respondents after a further week, then two weeks, to arrange an interview.

Those contacted by letter and who did not respond to the three telephone messages were considered non-respondents and no further contact was made.

Some of the approached participants declined to participate but either circulated the letter to their colleagues or placed an advertisement in their newsletter to assist in recruitment of participants for interview (Appendix E).

All participants were asked if they wished to check the transcript of the tape for accuracy and only one respondent chose to do this. The changes made were grammatical and did not affect the content of the interview. Care was needed when transcripts were checked by respondents as to whether their interpretation was value laden with expected responses or conforming to society’s perceived expectations (Sandelowski 1993).
3.6.2 Case study database
To organise and document the data collected for case studies as well as increase the reliability of the case, a data or evidentiary base was created (Yin 1994). This database served as a chain of evidence of how the case study was conducted.

A database of those contacted, dates of contact and where appropriate date of interview was recorded and catalogued according to stakeholder group.

Each interview, with the participants' permission, was taped. The tape was then fully transcribed verbatim. The transcription was checked against the tape by a second person. Any amendments were discussed and resolved in agreement. This was mainly necessary when the pronunciation on the tape was not clear or a technical term was used. The transcript was then amended and the tape was then scrubbed in accordance with ethical requirements. For those who declined to have the interview taped, extensive records of interview were taken and typed. The interviews were then ready to be analysed line by line for themes and theoretical concepts and categories.

The records of interview were then assigned a code to ensure anonymity and this code was placed as a footer for each interview to avoid any possible misplacement of the record. The codes were grouped according to stakeholder group.

Case study documents provided by participants were noted at the end of the interview record and stored with the record of interview.

A chain of evidence was maintained and field notes taken of impressions of the interview at the time.

3.7 Case study interview
The most common type of interviewing used for this study was of an individual in face-to-face verbal interchange. Some face-to-face group interviews were also used. Mailed or self-administered questionnaires and telephone surveys are alternatives which were not appropriate for this research and were not used (Fontana and Frey 1994).
The conduct of an interview presents a choice in the degree of structure in the interview (Robson 1993). More structured interviews, with a predetermined set of questions, means the interviewer has predicted, in detail, what is relevant and meaningful to the respondents about the research topic. In doing so the researcher has “significantly prestructured the direction of inquiry within their own frame of reference in ways that give little time and space for their respondents to elaborate their own” (Jones 1985b, p. 46). This approach can be used either in face-to-face interviews or in mailed, or self administered surveys. Accordingly, this research did not use prestructured interviews, preferring to interpret and understand the respondents views and be free to follow the information provided. A minimal amount of instrumentation was preferred (Huberman and Miles 1994).

The primary focus of in-depth interviewing is to understand the significance of human experiences as described from the stakeholder’s perspective and interpreted by the researcher (Minichiello et al. 1995). The researcher has personal interaction with the individuals and in their context (Kellehear 1993). This enables a flexibility of approach in interviewing which responds to the stakeholder’s perspective (Robson 1993).

The focused or semi-structured interviews in the pilot stage used the broad research topic to guide the interview. The interview guide or schedule was developed around a list of topics without fixed wording or fixed ordering of questions. Responses to questions of self report and self evaluation are relatively unaffected by order response (Bradburn and Mason 1964; Tourangeau et al. 1989).

The content of the interview focused on issues that are central to the research question but the type of questioning and discussion allowed for greater flexibility than the survey style interview. Although not using a survey reduces the comparability of interviews within the study, it provided a more valid explanation of the informant’s perception of reality (Minichiello et al. 1995).

The unstructured interviews used for the main study relied on the social interaction between interviewer and informant to elicit information. It is a controlled
conversation which is geared to the interviewer's research interest. The element of control used by the interviewer is regarded as minimal, but presented in order to keep the discussion on the research problem (Minichiello et al. 1995). A process of questioning called funnelling was used.

In funnelling, the interviewer controls the flow and type of information being asked by starting the interview with questions of a general and broad nature. These initial questions are designed simply to start the informant thinking about the issue in general terms. For this research, the starting question was 'what is quality in physiotherapy?' Then as the participants engage in conversation, the interviewer guides the informant's view towards more specific issues by using questions which narrow the area. Finally, the interviewer begins to ask specific questions directly about the issue being examined. By using this strategy, the interview process can be relaxed and non-threatening (Minichiello et al. 1995). It also means that the interviewer is not bound by a rigid questionnaire designed to ensure that the same questions are asked of all respondents in exactly the same way. This leaves the interviewer free to follow up interesting ideas introduced by the respondent (Walker 1985). This overall process is described as convergent interviewing. Convergent interviewing consists of a series of long interviews in which the content is unstructured. It is from the combination of unstructured content and structured case design and analysis that the approach derives much of its power (Dick 1990).

As the interview proceeds, it becomes more structured in the process of funnelling. In the later stages, the interviews become more focused than early interviews. The later interviews start in the same open-ended way as the early interviews. However, they conclude with questions that are used mainly to remove ambiguities arising from earlier interviews. The interviewers develop an interpretation of the data which is very tentative, however it gradually converges towards a firmer interpretation (Dick 1990). Convergence occurs both within each interview and over the series of interviews.

Two types of pattern are looked for in the emerging data, patterns of convergence or agreement, and discrepancy or disagreement (Dick 1990).
The opening question for this research was broadly: *What is quality in physiotherapy?* The purpose of the opening question is to encourage the respondent to begin to reveal attitudes to the topic without placing limits on the reply. Ideally, the question is value free and defines the issues at their broadest. The opening question needed to fit the following criteria, given in an approximate order of priority, according to Dick (1990, p. 29):

- defines the topic of interview without implying any constraints on the nature of the response
- is general enough for the interviewer to need few follow up questions
- allows the respondent to choose the amount of risk she undertakes in answering it
- will not arouse immediate defensiveness or emotionality in the respondent
- where possible, avoids encouraging the respondent to give verbal mythologies or conventional wisdom
- makes it easy ... to give a reasonable justification for asking such a question in the preamble which will precede it.

During the interview, other techniques were used. Probe questions were used as a mechanism through which similarities and dissimilarities were explored. Specific issues which had emerged from earlier interviews were also explored in more detail. Respondents were invited to provide a summary of their views. This was used when it was apparent that little more information could be secured (Dick 1990).

It is important to remember that no interview is completely unstructured or unbiased. The researcher begins with some broad questions in mind from their familiarisation with the research topic. Also, the more interviews they do and the more patterns they see in the data, the more likely interviewers are to use this grounded understanding to explore further research questions in certain directions rather than others. The making of choices in what to explore is the imposition of structure (Jones 1985b). Problems of ambiguity arise when there is a non-directive style and the respondent rambles in any direction. Therefore, defining the topic of interest with a broad question is imperative at the beginning to provide a context for both the researcher and the respondent (Jones 1985b; Walker 1985).
3.8 Pilot case study

The pilot study was used to refine data collection plans for both the content of the data and the procedures to be followed. It was not a pretest but an opportunity to develop relevant lines of questioning and to provide conceptual clarification (Yin 1994).

Pilot sample interviews broadly explored the research problem with private health insurers. These payers would not form part of the main study. They were chosen because, although similar, they insured a different health system and had experience with health care quality considerations. However, they were not part of the health care organisation under consideration.

In-depth personal interviews consisting of open ended questions were conducted with executives in each of twelve recognised private health insurance service organisations. The executives were selected by the company from marketing operations, provider relations or operations management. These executives were interviewed about a broad range of service quality issues. For example, customers expectations of service quality, what steps they took to control or improve quality and what problems they faced in delivering high quality services. The semi-structured interview questions are provided in Appendix F. The results of the pilot case study are considered in Chapter 4. The pilot case study data was coded and analysed using pilot case study codes, then re-analysed using the main studies codes. These codes are presented in Appendix G.

3.9 Case study analysis procedures

Data analysis is the basis for building theory from case studies (Eisenhardt 1989a). The analysis of qualitative data is a process of making sense, of finding and making a structure in the data and giving it meaning and significance (Jones 1985a). The development of analysis from extensive field notes needs to be clear, maintaining a chain of evidence (Huberman and Miles 1994; Miles and Huberman 1994; Yin 1994). This section indicates how the analysis of the data was undertaken so that the reader can make judgements as to the validity of the analysis. For qualitative research, this can be a controversial aspect as disagreement arises not from what is actually said but what it means. Therefore, the analytical process will be described and how
conclusions were drawn from several data sources so that the reader and other researchers can follow them. The intent is to avoid 'undisciplined abstraction' leading to concepts that bear little or no relation to the social world they refer to (Lofland 1971; Jones 1985a). In the analysis presented in Chapter 4, actual data is included to enable the reader to make their own determination of the analysis and interpretation.

Grounded theory analysis stresses an inductive approach (Strauss and Corbin 1990; Denzin 1994; Strauss and Corbin 1994). It is an open approach to data analysis and is particularly good when dealing with transcripts and when processing non-standard data (Easterby-Smith, Thorpe and Lowe 1991). Interpretation is separate from description, written in the form of memos that are ultimately integrated into a cohesive explanation of the data (Patton 1990). Explanations induced from the data are said to result in grounded theory, that is, theory grounded in the data (Krathwohl 1993).

Easterby-Smith, Thorpe and Lowe (1991) consider there are seven main stages to grounded theory analysis and these stages provide a useful framework for analysis. The seven stages are:

1 familiarisation: rereading the data transcripts enabling first thoughts to emerge and incorporating field notes into the analytic process

2 reflection: a process of evaluation and critique as research is evaluated in view of previous research, academic texts and common sense explanations; during this time the researcher asks questions such as:
   - Does it support existing knowledge?
   - Does it challenge it?
   - Does it answer previously unanswered questions?
   - Is it different?
   - What is different?
   During this process of reflection discussion with peers and supervisors helps to test hypotheses or ideas

3 conceptualisation: the many concepts or variables which seem important are reconsidered as to their validity and reliability; the researcher returns to the data and highlights the concepts using a coding mechanism; coloured pens and abbreviated codes are marked in the margin of the transcript to identify the codes (Jones 1985a)
4 cataloguing concepts: having established that the concepts do occur in people’s explanations, the concepts are collated and catalogued; the concepts are built by collating the codes using an index system which tracks the codes and their location for each concept; this approach is attractive, provides a systematic and transparent analysis but a more intuitive process may produce more ‘brilliant’ information than mechanising the cataloguing.

5 recoding: once concepts are established, the data are revisited to review their context and applicability; the recoding provides the opportunity for further interpretation and analysis; laddering, collapsing or enlarging codes, may also take place.

6 linking: the analytical framework and explanations now clearer, concepts can be linked together and a clearer hypothesis emerges; this involves linking empirical data with more general models and takes the form of tacking backwards and forwards between the literature and the evidence collected; at this stage a draft analysis was reviewed by colleagues for comment.

7 re-evaluation: feedback from colleagues is interpreted and reviewed taking into account criticisms and contradictions highlighted; may occur several times (Easterby-Smith, Thorpe and Lowe 1991).

In this research the major techniques of analysis were:

- data reduction and coding
- data display
- drawing and verifying meaning from data displays.

*Data reduction and coding* involves the data being reduced in an anticipatory way as the researcher chooses a conceptual framework (Huberman and Miles 1994; Miles and Huberman 1994). Meaning is given by the context and there is no appropriate unit of analysis. For example, it is not useful to debate whether the unit of analysis should be a word, phrase or sentence (Jones 1985a). The codes are derived from the words of the respondents as an attempt to maintain the semantics of the data (Wilde et al. 1993). There are basically two types of codes, substantive and theoretical. Substantive codes conceptualise the empirical substance of the area of the research. Theoretical codes conceptualise how the substantive codes may relate to each other as hypotheses to be integrated into theory (Glaser 1978).

This research used the work of Lofland (1971) who suggested that codes in any study can deal with the following phenomena, from micro to macro levels:

1 *acts*: action in a situation that is temporally brief, consuming only a few seconds, minutes or hours.
activities: actions in a setting of more major duration, days, weeks or months, constituting significant elements of people’s involvement

meanings: the verbal productions of participants that define and direct action

participation: people’s holistic involvement in or adaptation to a situation or setting under study

relationships: interrelationships among several persons considered simultaneously

settings: the entire setting under study conceived as the unit of analysis.

The codes developed for this research follow this pattern and are presented in Appendix G.

Data display is defined as an organised, compressed assembly of information that permits conclusion drawing (Huberman and Miles 1994; Miles and Huberman 1994). More focused displays may include network or other diagrams (Strauss and Corbin 1994), matrices with text rather than numbers in the cells (Eisenhardt 1989a; Eisenhardt 1989b; Yin 1993; Huberman and Miles 1994; Miles and Huberman 1994), creating data displays of flow charts to examine the data, tabulating the frequency of differences and events or putting information in a chronological order or other logical scheme (Miles 1979; Miles and Huberman 1994).

Drawing and verifying meaning from data displays can use a wide variety of mechanisms, ranging from comparing and contrasting data, noting patterns and trends, clustering and confirmatory tactics such as triangulation, looking for negative cases, following unexpected results and checking results with respondents (Huberman and Miles 1994; Miles and Huberman 1994). This research used ‘within case’ analysis, within and between stakeholder groups, in searching for patterns of data.

Within case analysis required a detailed write up for each interview. The write ups are pure descriptions and are central to the generation of insight. There is no standard format for the analysis (Eisenhardt 1989a).

Searching for cross stakeholder/group patterns involves looking at the data in divergent ways. This can be achieved by using multiple investigators for analysis. The use of multiple investigators has two advantages. First, they enhance the
creative potential of the study. The team members have complementary insights that add to the richness of the data, and their different perspectives increase the likelihood of capitalising on any novel insights that may be in the data. Second, the convergence of observations from multiple investigators enhances confidence in the findings (Eisenhardt 1989a). Convergent perceptions add to the grounding of the hypotheses, whereas conflicting perceptions keep the group from premature closure (Eisenhardt 1989a).

Pattern matching compares an empirically based pattern with a predicted one, or with several alternative predictions. If the patterns coincide, then the internal validity of the research is strengthened (Patton 1990; Yin 1994). When the case study is an explanatory one, the patterns are related to the dependent or independent variables of the research. However, the specification of variables was inappropriate for the theory building purpose of this research.

The use of more investigators builds confidence in the findings and increases the likelihood of surprising findings (Eisenhardt 1989a). Individuals are assigned a unique role which increases the chances that investigators will view the case evidence in divergent ways. One interviewer may tape, transcribe and code the interview. A second person may code the transcript.

The interviewer has the perspective of personal interaction with the informant, while the other retains a different, more distant view. The second investigator has not met the informants and has not become immersed in case details. This investigator is therefore able to bring a different view when interpreting the evidence. The second investigator is kept out of the field altogether and assigned the role of devil’s advocate (Eisenhardt 1989a).

Data analysis is combined with categorising, examining and tabulating or recombining the evidence to address the initial question of the case study research. An exploratory approach to data analysis is guided by a process of making sense of field data (Lincoln and Guba 1985). That is a process of bringing order, structure and meaning to the mass of collected data. In order to achieve this goal, the researcher’s field notes are used in addition to the transcripts.
Field notes, a running commentary by the researcher, are used to write down whatever impressions occur, therefore noting everything rather than sifting out what may seem important (Patton 1990; Krathwohl 1993). The field notes are descriptive, including comments on the setting, what social interactions were like and any information that will assist the researcher to return and reconsider the interview (Patton 1990). The second use of field notes is for ongoing reflection on the processes of selecting what was important to capture (Krathwohl 1993). In this research field notes were used to push thinking by asking questions such as: What am I learning? and How does this interview differ from the last? Sharing thoughts and emergent ideas with peers was a useful device for deriving advantage from overlapping data collection and analysis.

The interpretation or decision made cannot be said to be testable or verifiable. The interpretation can be appraised by applying norms or criteria that are compatible with the condition that is to be interpreted in the first place. To judge the accuracy of interpretation criteria may be applied. The following concepts of thoroughness, coherence, comprehensiveness and a consideration of whether the interpretation is useful and worthy of adoption can be used (Schwandt 1994).

This researcher started the discovery phase with a general analytical approach questioning the intention and purpose of the analysis (Yin 1994). A proven formula may lead the unpractised researcher into statistical analysis. The case study researcher, in contrast, depends much more on their own style and rigorous thinking (Miles and Huberman 1994; Yin 1994). Unlike the quantitative researcher, the qualitative researcher looks for an interpretation and understanding for the people and organisations that are studied. General statements, their similarities and differences are reviewed using the development of categories of triangulated data and their subsequent examination (Krathwohl 1993). The emphasis of this case study analysis was on appreciating the ‘meaning’ people place on phenomena rather than objective measurement.
In searching for cross case patterns three strategies were used:

1. selection of categories or dimensions of within group similarities, coupled with intergroup differences; dimensions were taken from the research problem and existing literature, and the researcher chose some dimensions; a constant comparative was used (Glaser and Strauss 1967; Glaser 1978) and pattern matching of an empirically based pattern with a predicted one (Yin 1994)

2. pairs of intergroup interviews were selected and a list of similarities and differences between each pair developed; this was extended into grouping interviews into threes or fours for comparison

3. data was divided by data or stakeholder source; when a pattern from one data source is corroborated with evidence from another, the finding is stronger and better grounded; when evidence conflicts, deeper probing was undertaken to understand the meaning of the differences (Eisenhardt 1989a).

The data analysis comprised three distinct phases:

1. ongoing discovery, identifying core themes and developing concepts and propositions

2. coding and refining the researcher’s understanding of the subject matter

3. discounting findings to understand the data in the context in which it was collected.

Computer software packages were not used for the analysis of data. This research used an inductive approach to the data. Computer software when used in inductive analysis can lead to premature closure of the enquiry (Patton 1987). The identification of significant themes, patterns and categories still has to be done by the researcher inspite of using computer software (Easterby-Smith, Thorpe and Lowe 1991). Computer software can alleviate the clerical task of sorting works, concepts and passages contained in transcripts (Easterby-Smith, Thorpe and Lowe 1991) and assist in reliably counting data (Weber 1990; Minichiello et al. 1995). However, this research was aimed at generating, not testing, theory.

3.10 Limitations of the design
Case studies have been criticised as a scientific method in three main ways:

1. case studies lack statistical validity

2. case studies can be used to generate hypotheses but not to test them

3. generalisations cannot be made on the basis of case studies (Gummesson 1988).
These criticisms were acknowledged as part of the research intention which is to build theory for which the case study methodology is appropriate.

The five main criticisms of case study research together with strategies to overcome them are outlined in Table 3.10.

Table 3.10 Criticisms of case study research and strategies to overcome them (Gummesson 1988; Eisenhardt 1989a; Parkhe 1993; Yin 1994; Riege 1996)

<table>
<thead>
<tr>
<th>Criticisms of case study research</th>
<th>Strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>results in overly complex theories</td>
<td>develop prior theories and specific research questions</td>
</tr>
<tr>
<td>external validity</td>
<td>use theoretical replication logic</td>
</tr>
<tr>
<td>difficult to construct and conduct</td>
<td>use case study protocol</td>
</tr>
<tr>
<td>no single approach is sufficient for sound theory development</td>
<td>view the research effort as part of the total journey towards theory development</td>
</tr>
<tr>
<td>researcher bias and lack of rigour</td>
<td>discussion with other researchers and validity check about research design and analysis</td>
</tr>
</tbody>
</table>

The first criticism of case study research is that it can result in overly complex theories which add little to the body of knowledge (Eisenhardt 1989a; Dyer and Wilkins 1991; Parkhe 1993). This shortcoming was recognised and this researcher examined it. The research questions were formulated to minimise the potential for overly complex theories.

The second criticism of case study research is its inability to achieve external validity. This research achieved external validity using replication logic in embedded case studies. It also used rich description and analytical generalisations of real life situations within the case study.

The third criticism of case study research is the possibility of unforeseen logistical problems. This renders it difficult to construct and conduct (Parkhe 1993). This research developed and implemented a case study protocol, containing procedures and general guidelines to conduct case study research (Yin 1994).
The fourth criticism of case study research is that a single methodology is insufficient for sound theory development (Parkhe 1993). While valid, this criticism would be equally true of other research strategies.

The fifth criticism is the potential for researcher bias. Researcher bias is considered in any qualitative interpretative methodology. Adherence to a case study protocol, the discussion of results with key informants, peers and the supervisor assists in the validity of the interpretation (Hirschman 1986).

The case study research methodology offers opportunities for theory development. The criticisms of lack of precision, objectivity and rigour can be addressed with a case study design and protocol (Yin 1994).

3.11 Conclusion
This chapter argues and justifies the appropriateness of the case study method for studying quality in professional health care services. The case study method was compared to other research methods and the research process was explained. Reasons for rejection of other research methods were given.

A single embedded case study design was chosen which uses multiple sources of evidence. The research considered the unique or instrumental case. Multiple case studies were not appropriate or feasible for the research aim and not used for this research.

Analysing data is the basis for building theory from case studies. The techniques of analysis chosen were data reduction and coding, data display and drawing and verifying meaning from data displays. The limitations of the case study design are recognised but do not invalidate the choice.
4 Results

4.1 Introduction
This chapter reports on findings of the research. The first section describes the pilot study used to familiarise the researcher with the case study methodology and the research topic. The second section presents the principal study's main findings as reported by the respondent groups and then by patterns of data.

4.2 Pilot study
The pilot study was of a related industry, private health insurance, which formed no part of the main study. The sample comprised ten completed interviews and a further three interviews with organisations having different funding arrangements. Some organisations declined to answer all questions because of the perceived commercial sensitivity of their answers. Semi-structured interview questions were used for the pilot study and are provided in Appendix F.

Subject selection. The Australian Health Insurance Association Limited provided the details of eleven private health insurance organisations in South Australia. Two organisations proved to be the same company, leaving nine companies available for contact. A further four organisations were contacted after searching telephone directories and another two organisations by contacting comparable Commonwealth and State groups which financed health services in the private physiotherapy sphere. A further organisation was contacted to enable comparisons amongst professional services groups. This organisation only reimbursed costs of medical services. In all, a total of 16 agencies were contacted.

A letter was sent to the manager or chief executive officer of the identified companies, requesting it be passed to the appropriate person in their organisation. An interview was then arranged. The company sizes and organisational structures varied. Some interviews were by telephone with an appropriate person such as the health service 'provider relations officer', who happened to be located interstate. Others were face-to-face with the managing director of smaller companies located
locally. In-depth personal interviews consisting of open ended questions were used. The executives were interviewed about a broad range of service quality issues. For example, patient expectations of service quality, what steps their company took to control or improve quality, and what problems they faced in delivering high quality services.

Strategies for ensuring quality. In general, the private health insurance companies or health funds do not have explicit strategies for ensuring quality physiotherapy for their members. Three of the ten companies interviewed only utilised patient complaints to achieve quality for their members. All funds recognised only registered physiotherapists when funding services.

Expectation of physiotherapy treatment. When asked about the expectations of physiotherapy treatment for their members, five of the ten responded that physiotherapy would be expected to provide a positive outcome or 'fixing' the patient. Two respondents also wanted cost efficiencies such as the best possible treatment at the cheapest cost. Time being spent with patients was an expectation for one organisation and one other expected that any treatment be done “with the best intention of the patient”, so that treatment goals and duration were only for patient benefit. Two insurance organisations felt that they should not have expectations, as it was a private relationship between the physiotherapist and patient.

There are various indicators of quality which are outlined in Table 4.1 below.
Table 4.1 Indicators of quality physiotherapy from analysis of data

<table>
<thead>
<tr>
<th>Quality indicator</th>
<th>Frequency*</th>
<th>Responses of most important good quality**</th>
<th>Responses of most important bad quality (negative of statement)***</th>
</tr>
</thead>
<tbody>
<tr>
<td>none at all volunteered</td>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>patient satisfaction</td>
<td>5</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>cost efficiency and few treatments</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>clinical efficacy</td>
<td>5</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>clean facilities</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>physiotherapy staff courteous and helpful</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>patient fully consulted about treatment plan</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>physiotherapist up-to-date and active in continuing education</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>out of hour treatment available</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>time spent with patient</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*multiple responses
**highest number indicates highest rank, three organisations declined to answer
***highest number indicates highest rank, two organisations declined to answer

4.2.1 Techniques used to monitor physiotherapy services

The techniques found to be used to monitor physiotherapy services were limited. Five organisations did nothing to monitor services, four used their database of the number of services per physiotherapist and four used surveys of their members or patient complaints. Readmission or reattendance rates were not used by any organisation.

For one organisation the techniques were chosen because they were the only techniques available. For four organisations the techniques were chosen as they had proven worthwhile in the past. The techniques chosen were used regularly (five organisations). These techniques are at the discretion of the appointed member of the organisation (three organisations) and two declined to comment on this. If a decision is made to intervene then it is done on the basis of patterns of service for that provider; details for this decision are neither an organisational policy, public domain...
information or standardised. Therefore questions about how techniques to monitor services are implemented was either not answered or answered poorly.

If further pursued, any concerns about physiotherapist care for a member, would be by personal contact with the individual provider concerned (two organisations). Alternatively referral to the Australian Physiotherapy Association is undertaken (two organisations) or the provider is not contacted at all (seven organisations).

Data collected by the organisations does not enable identification of acute as distinct from chronic conditions. Six organisations considered those conditions to be no different and three organisations saw them as different in their management by physiotherapists. One organisation declined to answer.

The cost of physiotherapist services is collected by the ten organisations. Initial treatment is more expensive than subsequent treatment. In their data collection, separation of initial and subsequent treatment data was reported by only five organisations.

The number of visits per patient was reported by seven organisations and the number of visits per health care provider was reported by only six organisations, from the total of 16 organisations interviewed. As many funds limit the number of rebates for services, more organisations might have been expected to collect this information.

4.2.2 Other payers
Three other organisations were contacted. These organisations completely fund the costs of physiotherapy. They have more information about the physiotherapists' patients, such as a database on type of injury and date of injury. However, their responses and mechanisms of monitoring did not differ markedly from the private health insurance organisations which only partially fund the care.
4.2.3 Management approach
The insurance organisations aim to increase the benefits to their members in order to retain them as their client. Providing rebates for physiotherapy services is part of their strategy. In providing a service to their members they do not wish to directly interfere with the confidential relationship between member and physiotherapist. However, to manage the risk or liability of providing insurance services, some quality measures and monitoring are needed. Most limit the number of services that will be rebated per annum, such as a ceiling of 20 treatments per annum. The considered risk or opportunity for overservicing is limited by this ceiling.

Many organisations acknowledged their inability to judge the quality of physiotherapy given they are not medically trained. Although the member or patient’s improvement would be a clear example of quality, it is difficult to establish from whose perspective this should be judged. Neither less nor extended treatment indicates patient improvement. One of the quality mechanisms that is available is to note and monitor patient complaints. Others did not use this information but merely directed their members to the Australian Physiotherapy Association to handle these complaints. When responding to patient complaints or concerns over treatment patterns, contact was made with the physiotherapist informally in the first instance.

The data collected by the organisations under consideration is limited. Difficulty arises when complex or chronic cases require extensive or prolonged treatment. The insurers do not collect information on the member’s condition and would, it seems, be unable to detect complex cases. This can lead to incorrect identification of bad quality in professional service. For example, cost inefficiency or unjustified overservicing is bad quality.

4.2.4 Conclusion
Physiotherapy was generally well regarded by the health insurers and few member complaints were received. The need for physiotherapists to provide communicable indicators of quality to insurers is evident, to assist them in judging quality. One possibility is the formal accreditation of practices where explicit professional standards are met. Another is to provide mechanisms to help insurers and
physiotherapists manage patient complaints. All parties need to be well informed of patient complaints so that more successful outcomes can be reached.

The need for 'efficacy data' or literature demonstrating the effectiveness of physiotherapy treatment is again highlighted. However, this need must be balanced by a consideration of benefit received and the patient's perspective of what that health benefit is.

The pilot case study allowed familiarisation with the case study protocol and the research area. The group forming the pilot case study did not form part of the main study.

### 4.3 Main study

The main study was a single embedded case study of a health care system in South Australia. The health care system was the workers' compensation system which is conducted by WorkCover Corporation, commonly referred to as WorkCover. WorkCover divests its liability for insurance to nine insurance organisations. The two groups, WorkCover and the insurers, fall under the same legislation. Although seen by some as the same group, the two have different roles and objectives. This research considers them separately. The insurers in the main study are separate and different from those considered in the pilot study.

The legislation for workers' compensation in South Australia is largely provided by:

- *Occupational Health, Safety and Welfare Act 1986 (as amended)*
- *Workers Rehabilitation and Compensation Act 1986 (as amended)*
- *WorkCover Corporation Act 1994*.

The Workers Rehabilitation and Compensation Act provides, amongst other requirements, that:

- registered physiotherapists and legally qualified medical practitioners are considered medical experts and are able to charge for their services, s3
- services are reimbursed for reasonable costs which are reasonably incurred, s32
- a prescribed medical certificate enabling time off work for the worker can only be issued by a legally qualified medical practitioner, not a physiotherapist.
The system is adversarial. This means that the patient must establish the insurers’ responsibility and the patients’ need for continuing health care. This is commonly based upon the patients’ account of the injury and medical assessment of the impact. The insurer acts to mitigate their losses through checking that these costs are their responsibility by examining the claims and seeking additional medical opinions. This can lead to patients feeling distrusted and not believed, even threatened.

In this research, references to the ‘system’ include the health care organisation, WorkCover and its subsystems, the insurers. The focus is on the professional health care provider of physiotherapy although many other professionals provide clinical care in this case study.

4.4 Respondents
The recruitment of respondents followed the methodology outlined in the previous chapter. The results are presented in Table 4.2 by stakeholder group. These groups respect each respondents’ anonymity.

The final number of respondents reflects an adherence to the case study methodology. Respondents were recruited on the basis of literal and theoretical sampling. Interviews continued until sampling achieved theoretical saturation.
Table 4.2 Research design with number of selected stakeholders and interviews

<table>
<thead>
<tr>
<th>Category</th>
<th>Stakeholders</th>
<th>No. interviews</th>
<th>Total contacted</th>
</tr>
</thead>
<tbody>
<tr>
<td>patients</td>
<td>patient</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>employees</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>consumer organisations</td>
<td>8</td>
<td>49</td>
</tr>
<tr>
<td>payers</td>
<td>employers</td>
<td>7</td>
<td>12 and 3 advertisements</td>
</tr>
<tr>
<td></td>
<td>insurance agents</td>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>health care providers</td>
<td>doctors</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>occupational physicians</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>other health providers</td>
<td>2</td>
<td>4 and one advertisement</td>
</tr>
<tr>
<td></td>
<td>rehabilitation coordinators</td>
<td>9</td>
<td>23</td>
</tr>
<tr>
<td>physiotherapists</td>
<td></td>
<td>28</td>
<td>29</td>
</tr>
<tr>
<td>total</td>
<td></td>
<td>75</td>
<td>150</td>
</tr>
</tbody>
</table>

4.5 Patterns of data for each stakeholder
Comments within each of the following sections are made from the point of view of those interviewed in that stakeholder group. Respondents were asked: What is quality in physiotherapy?

4.5.1 Patients
The patient group comprised interviews with patients, employees and consumer organisations.

Patients
Patients were difficult to recruit as participants in the study. Patients were concerned as to the confidentiality of their workers’ compensation claims. Therefore patients were not identified using the workers’ compensation authorities data or the physiotherapists data. Particular care was taken not to make patients feel obliged to participate or to tell the researcher what she wanted to hear by using open ended questions. Voluntary participation was ensured by having a union representative, as an independent third party, invite patients to participate. Those who did participate
were patients who had a long association, such as more than six months, with the management of their health care problem. Findings from the three patients were corroborated, in part, by interviews with community and union representatives.

The patients reported of their own experiences and also of their observations of their colleagues who had used the health care organisation. Patients felt that they didn’t know the system and felt lost and scared within it. They cited examples of how this affected their own injury claims. Many simple workplace injuries were left unreported with the result that a problem could grow without health care or preventive management. Patients were fearful when on WorkCover. This manifested itself in several ways. For example, patients assumed they would not be believed.

The management of their claim was often their main problem and this overwhelmed their actual health care; they felt powerless. They didn’t know they could go to a doctor or physiotherapist of their choice until they had already been part of the system for a while or had contacted their union representative out of desperation to access methods to facilitate their recovery. The union representative informed them of their rights and of the operation of the system. It seemed that no-one else had.

These comments from patients help explain their feelings:

The attitude from the case manager (of the insurer) is, she’s there, you’ll do as we say and that’s it. We’ve got the upper hand now.

I think the patient needs all the help they can get in dealing with WorkCover, I honestly do ... And now with the WorkCover ... to me, it’s putting people on scrap heaps, it is.

Patients reported being very concerned about being disbelieved and distrusted. There is a “stigma label of bludger especially if the injury is not visible, for example back injury”.

Patients do, however, have expectations of their health care. Their need and desire for information was felt to be underestimated. Patients who received a range of different opinions felt confused about their condition and wanted communication between doctor and physiotherapist to be better and clearer rather than contradictory.
Concern about quality is summed up by this quote:

I think first of all, listening to what a person’s got to say about their injuries and explaining the treatments that they’re going to have, give an ... overview of what the treatments will be to let people know what they’re going to do, when they’re going to do it. I know it's pretty hard to give an outcome of how you will finish up because everybody's different.

In addition, patients needed alternatives to managing their condition, not just surgery or referral to the pain clinic. It was also perceived that “lots of physios use machines, (workers) need other forms of treatment which are accessible to workers for pain relief, for example, maintenance at least once per week in between physio treatments”.

Overall, patients expect of their physiotherapy treatment:

- an improvement in their condition
- an explanation of their condition
- an explanation of the physiotherapist’s role in the ‘process’.

The explanation of the physiotherapist’s role was part of building trust in the relationship with the physiotherapist. The feelings of fear about their work injury re-emerged as feelings of fear about disclosing aspects of their injury. Patients didn’t know if information about their health would be viewed as detrimental to their case overall or, if the information was to be released to a third party, whether this would be detrimental to their case. Trust is obviously fundamental to the relationship between patient and service provider for effective health service delivery.

Employees

Patients as a larger grouping were considered as ‘employees’ in the case study. Employees represented by union officials gave four interviews. Unions were mainly involved when there were difficulties with the bureaucracy of the health care organisation. Unions were particularly concerned that patients did not know their entitlements under workers’ compensation legislation. Patients often did not seek help until some time had elapsed because of their fear of reporting it. By this time they were in more difficulty with their injury. Often patients just wanted to get out of the system.
Problems arose when an injured patient felt unable to access treatment pending determination of their claim by the health care organisation. It was perceived by patients that unions had helped but that no treatment could commence until the claim was accepted. Patients felt pressured about payment for physiotherapy treatment and might not have sought timely treatment, missing the opportunity for effective early intervention.

Unions saw the main problems with the service system as:

- employers not wanting to accept the claim
- agents “go against patient knowing they are not going to win” but do so anyway giving rise to enormous stress on the patient, “Some insurers are very bad and treat people with a lack of respect and push them through the system”
- complaints about the requirements for retraining the patient so they were eligible for income maintenance
- the profit motive has become paramount to the detriment of patient care; “WorkCover is the tower that was developed, we are going to control”.

There was also a concern that ‘return to work’ was the main emphasis for the patient, but rather a safe return to work was what was needed. One unionist commented:

Rehabilitation people need to see to ‘return to work’ and negotiate between the insurer and employers. The rehabilitation people are not doing rehabilitation, what they are doing is job assessment etc.

Unions heard complaints about physiotherapy if the patient reported being:

- worse after treatment
- overserved (not very frequent).

The unions would like to see:

- physiotherapy treatment commenced quickly to give the best chance a successful for return to work of the patient
- more communication between the doctor and the physiotherapist with better and more information given to the patient so that they can be actively involved in managing their condition
- agreement on treatment between doctor and physiotherapists so that no contradictory advice is given
- physiotherapists remain independent.
Unions relied on the physiotherapist’s report to understand the patients claims, as the physiotherapist witnesses the severity of pain and is well placed to assist in determining if the “claim is genuine”. The opinion of the treating professionals was seen as more influential than an opinion from a one-off consultation, such as a specialist’s second opinion.

Other concerns referred to WorkCover guidelines. For example, guidelines developed for back care and stress should not “only be used in a negative way, for example, to stop treatment”. Unions recommended that any new physiotherapy guidelines not include any detailed treatment regimes, given the potential for them to be used to stop treatment.

*Ethnic workers’ special concerns*
Ethnic workers’ special concerns were investigated by recruiting those who had direct involvement with ethnic patients in community health services, grant in aid agencies and cultural groups. In total eight interviews were undertaken, two of which were group interviews. These ethnic and community groups explained their observations as advocates for injured patients as well as assisting in convening groups of injured patients to discuss their beliefs about quality in physiotherapy. Results from these convened groups were then reported to the researcher, who was not present at the time of the interview. Group information was included in the patient data above. Specific ethnic patients’ concerns as observed and reported to ethnic workers are considered in this section and are quoted below.

In general, a lack of understanding of the role of the interpreter combined with not being able to speak for themselves has lead to non English speaking background (NESB) patients not always trusting interpreters. Injured patients were unsure if concerns and description of symptoms were adequately conveyed to the health care provider. It seems that provision and access to interpreters was ‘hit and miss’, and interpreters were not always provided for their health care appointments. Few patients knew how to access interpreters and some found them intrusive. “Sometimes it’s very hard to explain your feelings through an interpreter.”
Interpreters were sometimes thought to be used inappropriately. For example:

WorkCover suggests the use of staff (fellow workers) to (be the) interpreter ... there is a need for an independent person.

Not knowing the system and how professionals communicate led to the comment “they don’t know how the dealings are between professionals”. Patients often needed to retell their story to each professional leading to a loss of trust in the professional health care relationship. The lack of information about the system and its processes creates an environment of distrust:

Sometimes they don’t trust the doctor, they don’t understand, they’re not sure because the doctor may be on the other side, on the company’s side or their side.

I think they’re very nervous of the whole process. One because they got involved with WorkCover, especially, I’ve got a patient/friend — once the doctor said they put them on the claim for WorkCover, they’re scared they’ll lose their job — the first one is the job, so they said, no don’t go with WorkCover, so they suffer.

Patients had difficulty dealing with medical and physiotherapy jargon. The respondents suggested:

After the first session, follow up with the patient, did you understand the treatment, do you need interpreter anymore? As a general rule, if there is a female patient, there should be a female interpreter

Physiotherapists should also be more aware of culturally specific issues. An example is not having both genders in hydrotherapy for some patients. The ethnic culture impacts in other ways on the injured patients. Here is another example:

In my community, the patient, once they get involved with WorkCover, they are very fearful because that information goes to community etc. Another example, I got involved with WorkCover ... because they looked down on me because they thought I was just a bludger, to get money and they spread the worst information, they said, she’s not ill, she looks healthy. And also the interpreter was not confidential because she or he, the interpreter will get the information out in the community.

Other issues raised were related to the perceived poor treatment of patients from non English speaking backgrounds (NESB). These included:

- being forced to sign documents without translation with the threat of no treatment or job if they do not sign
- the long time for determination of the claim drains the patient of available funds
- light duties given without much understanding may be worse than the usual job.
**Patient group expectations and quality indicators**

In summary, the patient group comprising patients, employees and ethnic workers provided data on expectations and quality indicators of physiotherapy. These are presented in Table 4.3.

<table>
<thead>
<tr>
<th>Table 4.3 Patients expectations and quality indicators</th>
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<tbody>
<tr>
<td><strong>Expectations</strong></td>
</tr>
<tr>
<td>Patients</td>
</tr>
<tr>
<td>improvement in their health condition</td>
</tr>
<tr>
<td>explanation of their condition</td>
</tr>
<tr>
<td>explanation of physiotherapist's role in the 'system'</td>
</tr>
<tr>
<td>trust in the service relationship</td>
</tr>
<tr>
<td>Employees</td>
</tr>
<tr>
<td>information about the health care system</td>
</tr>
<tr>
<td>information on patient's role in health care</td>
</tr>
<tr>
<td>timely and prompt determination of claims and system deliverables</td>
</tr>
<tr>
<td>safe return to work</td>
</tr>
<tr>
<td>communication between the doctor and physiotherapist which is effective in providing details to both parties about the patient's condition</td>
</tr>
<tr>
<td>information given to the patient to manage their condition</td>
</tr>
<tr>
<td>Ethnic workers</td>
</tr>
<tr>
<td>explained role of interpreter to all parties</td>
</tr>
<tr>
<td>role congruence</td>
</tr>
<tr>
<td>access to interpreters</td>
</tr>
<tr>
<td>health care language</td>
</tr>
<tr>
<td>appropriate use and interpreted for the patient</td>
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</tbody>
</table>
4.5.2 Payers
The payer group comprised employers and insurance agents; their responses are now considered in detail.

Employers
The employer interviews were made with employers and employer representative organisations. A total of seven interviews were conducted, one of which was a group interview. A further three employer organisations felt they could not assist the research by being interviewed but generously agreed to promote the project via advertisement to their members. These advertisements yielded another two interviews only.

Those employers interviewed recognised that they are not medically qualified to determine treatment. They also recognised that management of patients' injuries is not an exact science which can be accurately predicted. This group spoke freely about their needs and expectations and drew on their experiences of having workers injured and of managing an organisation. Some remarked that they "had no comment on physiotherapy either positive or negative".

Physiotherapy was not "a big issue or complaint" and the costs of physiotherapy were minimal compared to that of time off work. Claims management could be improved so that physiotherapists could be involved on "day one and short cut the problem". This arose out of frustration with the system and feelings that "WorkCover does not understand workplace demands".

The employers wanted early intervention and management for their patients, including, when appropriate, early referral to physiotherapy, not a "blanket three months off work given by the doctor". Early liaison with the employer was desired in the spirit of a joint venture between the physiotherapist and employer for the return to work of their employee.

This was reinforced by those employers who wanted physiotherapists to have a "good return to work attitude". One employer described it this way:

Physiotherapists need to highlight with the patient that it's not a 'death' sentence, but an injury. This depends on the individual patient. But it should be part of
physiotherapy treatment technique to discuss and negotiate the patient being involved in their recovery.

The employers wanted the physiotherapist to help them by providing:

- assistance in understanding the patient’s capacity after injury
- advice on possible light duties for the injured patient
- proactive management aimed at prevention of future injuries by considering the cause of the injury
- help in understanding the special requirements of the injured patient’s workplace.

The outcomes from physiotherapy they expected for their patients were to:

- be fit and return to work
- have as much physical capacity as possible.

Employers recognised that patients in some industries have physical degenerative changes and a legacy of historical poor work practices. Therefore, although the need is for prevention of degenerative changes arising from work practices, those with existing degeneration can require medical management to stay at work. Physiotherapy for ‘maintenance’ was supported, (presumably within reasonable limits). In addition, there was recognition that if these people were injured then recovery could be slower and require more physiotherapy.

Employers also commented that their employees didn’t know when to stop attending treatment and did not feel able to choose to stop attending physiotherapy. This became evident when they reported to the employer that the physiotherapy did not seem to help. This highlights their need for further information about their treatment.

*Communication* between the physiotherapist and the doctor was expected by employers to be continuous. If the relationship between the two professionals appeared to be good then the employer contacted the doctor not the physiotherapist. This good communication between physiotherapist and doctor was expected and thought to help in the treatment of injured patients.
Some employers also commented that physiotherapists should avoid being an intermediary between the patient and the employer. This arose in industrial issues when the physiotherapist had only been presented with the patient’s opinion of the issues.

*Exempt employers* felt that because they carried more of the liability for work injury, they had increased the profile of occupational health and safety in their organisations. In addition, they had become more involved in the management of their claims, for example:

> As exempt employers, there is a budget for each claim and if there is further expenditure which is not approved, then it is no … payment.

In order to manage injury costs, some employers kept a stock of splints and other equipment, such as Transcutaneous Electrical Nerve Stimulation (TENS) machines. Therefore, the employer preferred the physiotherapist to consult with the employer before purchasing any equipment on behalf of the patient. “Communication to the employer and claims agent should be regular (not just when they see the bill).”

The employers expressed differing views which were not uniformly related to whether the employer was an exempt employer or not. Some wished the physiotherapist to communicate with the doctor, not them. Others wanted the physiotherapist, once they had seen the patient, to give them a prediction of the following:

- estimated number of treatments
- possible time frame of treatment
- likely outcome of treatment.

Problems arose when physiotherapy treatments needed to be extended. The employers questioned whether appointments needed to be during work time.

Employers comments about workers’ compensation can be summarised as concerns about:

- the validity of the claim submitted by the injured patient
- the lack of progress of the patient
- resolution of the claim.
Overall, employers had little involvement with physiotherapists. They recognised their limitations in managing claims and wanted help from the physiotherapists on providing light duties and managing the overall return to work for their employee.

**Insurance agents**
The insurance agents provided *five interviews*. In one completed interview, the respondent reported little involvement with physiotherapy and felt they could not assist the research by being interviewed. Four interviews were further analysed and the results are reported below.

Opinions about physiotherapists varied. One opinion was:

> I think that what's happening now is they're (physiotherapists) doing everything that we need them to do, like saying, they've had x amount of treatments and that I don't consider further physio would be beneficial. The physios are already doing that. So they're doing everything. As I said, as a profession, that they're very ethical most of them.

Another commented in contrast:

> To go back to the problems we do have traditionally ... the problems tend to be lack of communication between the physio and us ... to break down the misconception that once someone gets a workers comp claimant they're going to overservice and all that. Because we do get a lot of bad ones, but there are a lot of good ones as well.

Physiotherapists were regarded by respondents as well placed to do case coordination and wanted physiotherapy involvement in other aspects of patient care such as case conferences and work site visits.

All insurers recognised that those physiotherapists perceived as continuing beyond benefit to the patient and labelled as 'overservicing' were in the minority. Problems arose with lack of communication between physiotherapist and insurer. To the insurers good quality consisted of feedback about:

- what the treatment was achieving
- the extent of the physiotherapy needed, including a time frame
- what part of the body was being treated.
Other insurers' attitudes were less trusting of physiotherapists, and wanted to take control of treatment choices and patient management as “we’re ultimately paying for the physio bills”. This was reflected by comments of claims agents supervisors who said:

Yes, we’ve got some case managers in the past ... who were early twenties and a bit of power and my god they went berserk. It is tricky because a case manager is a very powerful person and in most cases the case managers are very young and quite inexperienced in life. That’s generalising.

In some cases, the less experienced case managers employed by the insurer didn’t know what information to ask of a physiotherapist and did not want the language to be too technical given their lack of medical background. The risk of mixed or confused communication was obvious. There was an assumption by case managers that something was amiss if a diagnosis of a sprain became a fracture. The lack of understanding of the difference between initial and ongoing diagnoses was evident. This was interpreted as the health care professional not knowing their practice or an attempt at deception. In addition, when the less experienced case managers noted an increase in the number of treatments for a claim, they “screamed overservicing”, without full knowledge or understanding of the case.

The terms ‘claims agent’ and ‘case manager’ were used interchangeably in the insurance settings. However, the definitions are quite different. A claims agent is the insuring organisation of the workers’ compensation claim. The case manager is the individual who has a greater role in management of the claim and in the decision making about the claim. The expectation from some stakeholders is that the insurance organisation has only the role of ‘paper processor’ and no active role in decision making about the claim. However, tensions arise when the insurer acts as a case manager and directs the expenditure on health care. Role incongruence usually leads to frustration and indignation at any attempt to direct a professional’s clinical decision making.

To some insurers, the physiotherapist became a conduit of information when communication between the insurer and the doctor was ineffective. The physiotherapist has an expectation that communicating back to the doctor was appropriate and the more efficient way to contribute to the information about the
claim or case. Instead, the physiotherapy information was 'bottle necked' with the doctor and not shared with the case manager. In contrast, when some insurers had difficulty with physiotherapy management, they questioned the treating doctor as to the appropriateness of the physiotherapy.

Communication between doctor and physiotherapist was seen as very important. As one insurance agent commented:

The problem cases that do come across my desk, the physio's not communicating well enough with the doctor or the doctor thinks this and the physio thinks something different and the patient will cling to whoever's the most negative about their prognosis.

Insurers as well as employers wanted the physiotherapist to keep the patient positive about their return to work. Insurance agents suggested the physiotherapist told the patient their diagnosis, involved them in their treatment and returned them to work. However, the employer also needed to be involved, and educated about providing a supportive return to work, especially if long term changes were needed to job descriptions to maintain the patient at work.

A quote from one insurance agent best summed up their opinions:

So I suppose it's having them (physiotherapists) not look at us as the big bad agent, looking at us as an important player in the whole rehab process, because the way case management works now, there's the case manager, they're not just the claims person.

This quote points to some role conflict between the professionals in the team and mixed expectation about what the insurance agents' role in patients' compensation is. Insurance agents believe they are contributing to health care and demand an active decision making role. The health care professionals view insurance agents' role as the management of the "paper work" rather than active involvement in treatment. Direct involvement with treatment is met with resentment by the professional health care provider. Role incongruence leads to inefficiencies in the system and tensions arise causing delays or refusals of payment for health care.

Payer group expectations and quality indicators
The payer group comprised employers and insurance agents. Both provided data on expectations and quality indicators of physiotherapy (see Table 4.4).
Table 4.4 Payer expectations and quality indicators

<table>
<thead>
<tr>
<th>Expectations</th>
<th>Quality indicator</th>
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<tbody>
<tr>
<td>Employers</td>
<td></td>
</tr>
<tr>
<td>physiotherapy intervention early in injury management</td>
<td>physiotherapy initiated in allocated time (early intervention)</td>
</tr>
<tr>
<td>physiotherapist to have a positive attitude about patient outcomes and keep the patient positive</td>
<td>outcome, return to work</td>
</tr>
<tr>
<td>act as translator or agent in explaining the patients’ needs to them and matching these to the workplace</td>
<td>outcome, patients available physical capacity is congruent with job requirements</td>
</tr>
<tr>
<td>negotiate involvement and participation of patient, including possible closure of service</td>
<td>management of the service encounter which always includes strategies for patient participation</td>
</tr>
<tr>
<td>communication between health professionals involved in patient management</td>
<td>information sharing between participating health professionals</td>
</tr>
<tr>
<td>prediction of service requirements and outcomes</td>
<td>clinical judgement of treatment required and potential outcomes of service</td>
</tr>
<tr>
<td>Insurance agents</td>
<td></td>
</tr>
<tr>
<td>prediction of length of service, outcome and negotiated closure</td>
<td>clinical judgement of treatment required, potential outcomes of service and how treatment will be assessed as concluded</td>
</tr>
<tr>
<td>management of the patient’s case</td>
<td>role congruence, roles of professional understood by all stakeholders</td>
</tr>
</tbody>
</table>

4.5.3 Health care providers

The health care provider group comprised doctors, occupational physicians, other health providers and rehabilitation coordinators. Physiotherapists are considered separately in Section 4.5.4.

Doctors

The doctors interviewed ranged in experience, practice size and location. Seven general practitioners were interviewed and a further four doctors were interviewed as group representatives of a medical association.

Doctors had needs in clinical activities and management activities. They recognised that physiotherapists had a role to play in the rehabilitation of the injured patient.
The clinical needs from physiotherapists were to:

- provide a diagnosis and summary of their findings, and communicate this to the doctor
- devise a treatment or management plan, and communicate this to the doctor and the patient
- plan and provide a graded exercise plan
- educate patients about their injury and give them a self management plan
- reconsider and manage an alternative plan if progress is not as expected.

One doctor explained his expectations as:

The good quality in my practice ... are those people (physiotherapists) that are able to teach people to use their permanently damaged joints, and I'm thinking particularly of back education or shoulder girdle education ... The number of people that can do that on a one-to-one basis and specific to the lifestyle that they (the worker) have, their social expectations and their work are very small. Many do it, but the quality is so variable, it then becomes an empirical basis of everybody goes to someone you know is good at it.

The management needs from physiotherapists were:

- in addition to communication requirements listed above, report on the response of the patient's condition following treatments
- communicate regularly
- find out the other practitioners involved and let them know when they are to be involved
- consider the work situation and understand the impact of the actual environment on the injury.

Doctors reported conflicting role expectations of management of the injured workers' case and concerns about claims agents. "I get an impression from some people now that some doctors are bypassed and the case managers are coming in to decide treatment choices or availability". However, the case manager's decisions could not be based on medical knowledge. The doctors saw their role clearly as central coordinators, otherwise patient care was fragmented and uncoordinated between health care providers.
Doctors also reported concerns about the workers' compensation system interfering with patient's recovery. Comments about these issues dominated some respondent's interviews. For example:

One of the biggest problems with WorkCover is that unless it's handled well, the system makes people sick. Makes them really sick and locks them into their sick role and part of it is the antagonistic response people get from their employer.

So I mean, half my work is counselling and psychological stuff and I put a lot of emphasis into the psychological to try and get people to keep their medical/legal stuff separate from their rehabilitation.

Occupational physicians
Occupational physicians are medical practitioners who have undergone a specialisation process in occupational medicine. The primary patient group of occupational physicians are injured workers.

The occupational physicians were supportive of the research and five interviews were conducted. Comments which concurred with those of the other doctors were included in the section above. Some of the comments included here were also made by other doctors but are reported in this section to avoid repetition.

As a broad generalisation, occupational physicians saw more complex and chronic cases than other doctors. Patients often consulted these professionals after some time had elapsed since injury and when more than one health care provider had become involved.

The comments from these professionals could be grouped, firstly as dealing with the chronic patient and secondly dealing with a multi-disciplinary team in a patients' compensation environment.

The chronic patient required physiotherapy care from someone with practice in a wide number of techniques and an ability to choose from the different techniques for the effective management of the patient. 'Passive modalities' generally require little input by the patient and involve the physiotherapists in providing treatment to the patient, rather than involving the patient. Using passive modalities was considered to have the potential to entrench pain and disability. The patient could become passive, feeling a loss of control of their health care. This, in part, required the
physiotherapist and other health care professionals to recognise that different approaches would suit different personalities and people.

All respondents wanted to see physiotherapists provide advice to their patients, including teaching exercises and new techniques, such as manual handling, enabling patients to manage their condition more effectively. Therefore, physiotherapists who had access to a gym or hydrotherapy pool were well regarded. In addition, ‘maintenance’ treatment, — that is, occasional physiotherapy which maintained the person at work — was generally supported. All respondents recognised that the physiotherapist was well positioned to develop strong rapport with the patient, influence what the patient thinks is wrong with them and, more importantly, keep them positive about their recovery.

The physiotherapy management was best when part of some overall plan, so that “I don’t feel as though it’s just an endless process that’s not getting anywhere”. However, when the physiotherapist was not achieving an outcome then:

What they should do is think and say, why do I get this response to this treatment, what does this mean? Rather than plug on with the same treatment

Difficulties arose when claims agents reported that the patient had had “physiotherapy for a year, as if it is all the same thing”. This brought difficulty with payment for further physiotherapy which might have been using a different approach. This difficulty hindered the patient’s recovery.

Occupational physicians believe that a multi-disciplinary team is the best way to manage the return to function and work for the patient. Physiotherapists were relied upon to be part of a team, providing their own unique and valued contribution to the team of health professionals. This team structure relied on each team member having knowledge of the other disciplines involved and what they have to offer.

The involvement of many health care providers required effective coordination and structure to work effectively. The occupational physicians had developed networks of physiotherapists they would refer to and know. Therefore, they accepted the approach that one patient could see different physiotherapists for different ‘parts’ of the condition.
This network of physiotherapists is individual to the occupational physician and has arisen from previous frustration and disappointment with physiotherapists. The previous disappointments could have come from:

- **lack of communication** when the occupational physician and physiotherapist do not know what the other has done. An example of this is when the treatment and management of the patient is taken in an entirely different directions, without due regard for the other's opinion

- **poor communication** that was not respectful of alternative views of other professionals. For example, not recognising differing opinions were possible, or overused physiotherapy terminology or abbreviations.

The views of occupational physicians were summed up by:

A lot of the letters I get say absolutely nothing. They give no hint of what they’re doing, not what the physio’s doing (for the patient). What they tried or they haven’t tried. Why they think what they say.

The occupational physicians wanted feedback that helped in managing the patient’s claim. When good information was received, it was used to inform management and other members of the team. The occupational physicians expect the physiotherapist to communicate to the doctor. They could then interpret these letters for employers, WorkCover or others.

As part of a team, some agreed or implied structure in the management of work injuries was generally used. All respondents had expectations of some structure of care. This included:

- find out who else is involved
- let the others involved know (when as a physiotherapist they become involved)
- communicate with them what’s happening (with the patient’s care) and what your involvement will be.

The relationship and function of the team needed to be explained to the patient from the physiotherapist’s perspective. Recommendations by occupational physicians to physiotherapists include:

- introduce yourself and your position in the process of care
- explain with respect and courtesy what you are going to treat
follow the principles of informed consent, letting them know they can see anyone else they choose

have a practice policy on patient confidentiality and how information is released about patients, making these policies overt to the patient

explain any conflict of interest.

Other health workers
Two interviews were completed to consider the interests of different health workers. They were an occupational therapist and a psychologist. They reinforced different health workers general comments on quality. That is, health care for injured patients was not successful if it became an illness model which can lead to patients dislike of decreasing their dependency. A coordinated approach was needed, which particularly takes into account the work situation of the patient.

Communication was very important and should not be via the patient. The communication should include goals of treatment and progress of the patient during treatment. Physiotherapist's reports were more useful to health workers when information was included in terms of the patient's function. The communication could most usefully be directed through the treating doctor "because I think it's probably a matter of respect". The doctor can then facilitate a coordinated approach to the patient's health care.

Rehabilitation coordinators
The researcher completed nine interviews with rehabilitation coordinators. Physiotherapy was considered to be a key service in the treatment of injured patients. They needed physiotherapists to:

- outline the treatment planned and relate this to job demands. For example, for a job jumping in and out of a truck include exercises which will facilitate the patient resuming this job
- predict possible outcomes of treatment
- give an opinion as to possible light duties the patient could undertake.

Their indicators of quality physiotherapy were:

- providing an opinion of what is being seen during treatment in an objective way. For example, strength or range of movement of the patient
• being proactive and a fully integrated member of the team planning the patient's return to work whilst "discouraging illness behaviour"
• avoiding short term relief of symptoms
• participating in a manner that "moves the case along"
• aiming for restoration of function not a cure
• mapping out return to work plans in a manner which an employer can implement. For example not just saying "minimal bending"
• looking at the bigger picture to see if the patient's condition is influenced by other things, such as an unsupportive workplace.

Overall rehabilitation coordinators saw their role as:

I need to make sure that we're all working toward the same objective, so initially I say, 'well what are we trying to achieve with this treatment', and normally with the physio, it's strength, endurance, mobility, things like that, and (then I ask) what is our end point going to be?

The rehabilitation coordinators also discussed the difficulties physiotherapists faced in closing cases, from observations of difficulty in ceasing treatment. Negotiation and conflict resolution skills could be emphasised when dealing with these cases. In addition, the physiotherapists would benefit from knowing who to refer the patient to if there were other issues outside physiotherapy, for example industrial issues. One rehabilitation coordinator said: "if it's an insurance company who's paying and if it's a compensable patient, the insurance company won't pay for the extra time that physio puts in".

There was mutual recognition and respect for the skills the physiotherapist has to offer. However, they openly admitted they did not know the physiotherapist's treatments. Instead "we work together, I don't like to be the decision maker, I like (to) employ consultation (with the physiotherapist)".

In the main, rehabilitation coordinators expected the doctor to manage the claims process and the case. Therefore, some preferred the doctor to be kept informed so the doctor had information as a basis for decisions (such as issuing the prescribed medical certificates). Communication between the physiotherapist and the doctor could be in the "same language". Other rehabilitation coordinators wanted communication directed to them, rather than the doctor. Yet the language used
would need to be different, providing descriptions of the functional levels the patient had achieved being used rather than technical language and abbreviations.

There was some discussion about the role of the physiotherapist by rehabilitation coordinators. Employers were not seen as understanding physiotherapy or the breadth of services that it included. For example, graded exercise programs. Physiotherapists needed to promote what they do so it would be better understood by others in the team. Also, any health care provider involved should avoid placing themselves in a conflicting role by keeping their treatment and advocate roles quite separate.

When discussing the differences between the management of a country and city based patient, and their access to resources, little difference was seen by the rehabilitation coordinators. One described it as:

That’s part of living in the country because it’s the same with specialist appointments, they have to come down to Adelaide. Their chosen doctor often isn’t in the town where they live.

Health care workers expectations and quality indicators
In summary, the health care worker group provided data on expectations and quality indicators of physiotherapy. This group comprised doctors, occupational physicians, other health providers and rehabilitation coordinators (see Table 4.5).
Table 4.5 Health care workers' expectations and quality indicators of physiotherapy

<table>
<thead>
<tr>
<th>Expectations</th>
<th>Quality indicator</th>
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<tbody>
<tr>
<td>Doctors</td>
<td>communication about the service encounter</td>
</tr>
<tr>
<td>communication of diagnosis, proposed management plan and response to treatment</td>
<td>provision of graded exercise plan</td>
</tr>
<tr>
<td>provide a graded exercise plan for the patient, maximise patient participation</td>
<td>knowledge of patient to enable customised service</td>
</tr>
<tr>
<td>knowledge of patients' physical, social and work needs</td>
<td>exercise program which shifts production to patient</td>
</tr>
<tr>
<td>Occupational physicians</td>
<td>service encounter always performed with confidentiality and informed consent</td>
</tr>
<tr>
<td>facilitate participation with provision of exercise, advice and new methods of management the patient can implement</td>
<td>service encounter outcomes negotiated and agreed</td>
</tr>
<tr>
<td>act with professional courtesy and responsibility</td>
<td>service provided which responds to patients' needs</td>
</tr>
<tr>
<td>Other health workers</td>
<td>service provided which responds to patients' needs</td>
</tr>
<tr>
<td>Negotiate closure of treatment</td>
<td>participation</td>
</tr>
<tr>
<td>customised service</td>
<td>negotiate expectations of treatment outcomes</td>
</tr>
<tr>
<td>Rehabilitation coordinators</td>
<td>service provided which responds to patients' needs</td>
</tr>
<tr>
<td>meet patients needs and maximise physical capacity as is possible not necessarily what would be ideal</td>
<td></td>
</tr>
<tr>
<td>consider all factors which impact on the service encounter including social and workplace influences</td>
<td></td>
</tr>
</tbody>
</table>

4.5.4 Physiotherapists
The 28 physiotherapists interviewed had varying work practices in city and country areas.

The physiotherapists expressed their frustration with the WorkCover system which they saw as complex and slow to respond to the needs of all stakeholders, but particularly the patients. The claims agent wanted to dominate the direction of the patients claim by dictating treatment options. All physiotherapists interviewed felt that the service system contributed to poor outcomes for the patient.
That patients do not manage their situation well in the system was evident by the following response:

Problems ... occur when the doctor is not involved in managing the claim and the physiotherapist wants to stop treatment but the patient wants to keep coming (to the physiotherapist).

From the physiotherapists’ perspective quality consisted of the following actions:

- finding out what work the person is doing
- finding out how long they are going to be off work, but not necessarily contact the employer
- knowing when the patient is returning to the doctor
- communicating with the doctor through a return letter
- being as accurate as possible with a diagnosis of the patient’s condition
- developing a treatment plan and goals.

Physiotherapists needed to understand and participate in the WorkCover ‘system’. This requires:

- knowledge of the WorkCover Act
- developing a communication structure to other stakeholders
- developing referral networks, for example for extra assistance in managing the return to work or perhaps to another physiotherapist
- an understanding confidentiality requirements when distributing reports
- an understanding the stigma placed upon WorkCover patients.

Physiotherapists also have to be direct with the patient about their role:

WorkCover have got information on the rights of patients (in a brochure). We actually have a statement that we give to WorkCover patients that tells them what their rights are, and their responsibilities, because it’s a two sided coin. They have a responsibility to us.

Another physiotherapist commented:

I think the first thing you need to do is to ascertain the role of the physiotherapist in any certain situation. Firstly, there’s the clinical role and second is the responsibility of the physiotherapist to, if you like, the system — and I see the system as being, the corporation as being the financially responsible body, as well as being the employer, as well as the patient.

I try to sit down and explain to the patients when they first come for treatment what my responsibility is to them and to the corporation owner. It’s hard, you’ve got to gain their confidence too and they often see it as an us versus them situation.

I think that if they are new in the system, it pretty important to explain to them what goes on and what their responsibilities are and I find that some workplaces are very good at letting their patients know what they have to do and what their
responsibilities are and what the workplace’s responsibility to the patient is and others are absolutely awful. Others is almost a persecution aspect there and that’s what engenders this—the them and us type situation.

Many physiotherapists spent the first appointment discussing the patients condition and educating them about it. As one physiotherapist commented “patients often want a quick fix, so they should be educated about their need to participate in their own recovery, for example exercises are treatment”. Physiotherapists felt they spent more time with the patient than other health care providers and would take on more the role of explaining the patient’s injury, especially if the patient perceives conflicting advice.

In the first appointment, physiotherapists gathered information about:

- the critical and inherent demands of the job
- what was expected of the patient in their job pre-injury, to know what they have to get back to
- what they’re presently doing
- when and how the injury occurred and the impact of the injury — functionally and psychologically — on the patient.

One physiotherapist explained as follows:

An initial consultation is just talking to them, getting a good history from them and talking about their past (health care) management, the people involved with their care, the workplace situation and how stable that is and their fears and concerns about their problem and all that sort of thing. I suspect that that’s something that if you’re looking at how you can best manage someone, if you can get all that information early on and gain their confidence and outline your management strategies for them and explain to them what the limitations of your care ... It just sets the parameters for your care for that person.

It will all get back to the point of saying that if you can establish your treatment goals and even if it’s a slow process, you can be seen to be achieving those goals and justify what you’re doing, then you should be allowed to continue to treat that person.

Many concerns were still raised about the system of patients’ compensation and rehabilitation. Some patients were prepared to pay for their treatment so that a WorkCover claim is not submitted, the patients’ compensation system is avoided and future employment is not jeopardised by a previous WorkCover claim.
The lack of structures to reward quality physiotherapy financially may have hampered progress in this area. As one physiotherapist commented:

There’s no reward for putting better systems and processes into place that manage them better. In fact, they pay less than the mean, private fee. I gather that the way WorkCover’s statistics are put together, they don’t necessarily look at the total cost of time lost, wages, the whole picture and how that’s facilitated by perhaps more expensive treatment measures to cut down the other costs ... not necessarily having concern for the outcome on return to work.

From a practical point of view ... managing a WorkCover patient properly does take a lot more time. A lot of them have complications, physically complicated problems for some reason

Country patients and physiotherapists had different and additional service quality issues. The distance from resources created understandable problems such as:

The protocols developed are difficult to comply with because of the distances involved, for example if hydrotherapy is recommended and there are no pools for this treatment. Or if the patient is not able to sit, therefore (the patient) cannot travel to get to the gym.

Protocols are good but unfortunately have a metropolitan approach.

The doctor’s surgery is often short staffed in country areas which makes it hard for the patient to get in to see the doctor.

If they want to use the gym, they need to be tied in with special gyms, for example patients are sent to a gym in Renmark which is approved by WorkCover, even though Loxton has a gym.

Access to rehabilitation centres are limited and many are not referred on because of the distance involved. The hydrotherapy pool has limited opening times, especially for those involved in return to work situations.

The multidisciplinary team was not as well staffed in the country areas. Country physiotherapists felt that visiting services undermined the local services and did not fit in with what the local people were trying to do. The physiotherapist was put on the spot regarding what the patient was doing and, at the same time, was left out of the overall management of the case, not even attending case conferences. Alternatively, as a sole provider, the physiotherapist did all possible services including worksite assessments, then was accused of provided too many services for financial gain rather than patient benefit.
Other concerns were:

- Who does the follow up to a Functional Capacity Evaluation?
- Whose responsibility is it to access this equipment once recommendations have been made and to follow this through? This often gets delegated to the rural physiotherapist without proper information being given.

An example of a patient cited by one physiotherapist might best illustrate this dilemma.

A patient may return with a TENS machine, but has no contact person on how to manage the TENS ongoing. Also, there is a problem if the TENS stops working, with sending it back. The patient is then left without a machine. Therefore, the patient can get TENS from the physiotherapist, but the physio can’t charge for the TENS as the patient already has it. The problem is that patients don’t know how to use it.

*Patient confidentiality* was particularly important in the country, where the physiotherapists could know all stakeholders in a case and see them socially. Patients’ rights needed to be clear and made explicit to all involved. “Where does the physiotherapist stand in sharing information, especially in the country where privacy is very important?”

Some country physiotherapists who provide services near a state border had two state compensation systems to manage, each with different processes. Cross border issues increased the complexity of providing services.

The physiotherapists all recognised that it was necessary to place the injured patient in a safe situation when they returned to work. However, the lack of availability of light duties could limit this, for example:

"Explaining that resting their injury is important, but convincing them (the patient who is self employed) of this is difficult, for example a tractor driver who is seeding."

In city and country areas, the employer’s attitude could form a barrier to the patient returning to work. One physiotherapist commented:

"Often the symptoms are reported greater than what they actually are, purely due to the fact that they might be scared of the employer, or scared they’ll be pushed into duties they’re not capable of. Because that often happens, often the doctor will write, lifting less than 10 kg, after the patient might be backing lifting 15 kg four times a day or something like that because the employer expects it of them."
It seemed many employers were having difficulty in understanding and managing the return to work process. Employers also struggled with the WorkCover ‘system’.

The physiotherapists also discussed their frustrations with the involvement of a rehabilitation coordinator in the patient’s care.

Usually if they have got a rehab coordinator involved, and not everyone has, the patient will usually tell the rehab coordinator that I’m involved and if they’re any good, you’ll get a letter or you’ll get a phone call. I usually ask if there’s anyone involved in that side of things because I feel that my input towards the return to work process is valuable. Many of these people have no training in physical medicine at all and aren’t even medically qualified, don’t have any medical qualifications, they may be psychologist or something else and there’s nothing wrong with that but really I have a problem when those people embark on a return to work process and don’t ask for your advice. The physiotherapist is not included in the case conference.

The physiotherapists felt that they should have influence over management of the claim and should be proactive by, for example initiating return to work plans. The communication back to the doctor could then provide options for patient care, providing some direction to the case.

Physiotherapists needed to keep accurate records to assist in the management of the claims such as “determining if the injury is work related and still treating them as a patient and being there for them”.

The frustration with lack of case coordination led to concerns about the recourse available for the physiotherapist and the patient when needs are not being met, such as:

- Who is the back-up?
- Who is the contact claims agent?
- Who is the contact person at WorkCover?

The physiotherapist spends a lot of time chasing it all up and it is very time consuming, and unpaid. There is also a great deal of paperwork “stuffing around”. Example might be:

- ringing the employer
- ringing the patient to find out when their appointment with the doctor is, to ensure communication.
The problem is, "who do you tell that things are not working, where is the recourse?"

The relationships between physiotherapists and case managers or claims agents were considered in the research. Physiotherapists had to check with claims agents before instigating return to work visits or alternatives such as home visits. The main concern was the slow response to communication with claims agents and their attempt to make medical decisions with no health care background. There was concern about the introduction of another stakeholder and another level of communication which, if ignored, makes the case management 'fall down' or fail.

For example:

The claims agent might have a different plan from the occupational physician ... like the GP may have referred the patient to the occupational physician for ongoing management and the occupational physician says—Oh, yes, they’ve had a year of physio and they’ve seen thirty-three different people, so now we’ll just try and get a coordinated approach. And then you ring up the claims manager and they say, well hang on this person’s had a year of physio, we don’t want any more.

I guess the emphasis is very much on communication with the case managers and rehab providers for approval for ongoing treatment. And the prerequisites are that you communicate with them a lot earlier than we used to.

Physiotherapists consider home visiting care important for certain conditions and cases. This requires approval from the insurance agent. The introduction of the insurance agent leads the system to fail. The system then prevails on the good nature of the physiotherapist to provide free treatment, or, pursue the agent for recompense.

For example, of the time taken to get a response, was given of a spinal fusion patient who was unable to sit after surgery and therefore could not travel to the physiotherapist’s rooms for care. The impact was this:

The insurer asks to be sent a treatment plan before considering a request from the physiotherapist. The plan is usually faxed and a week later there is still no reply and no treatment can be provided.

They re-contact the insurer, and the response then is yes.

By this time three weeks have passed, so (it was then) seven weeks after surgery, the patient could sit and attend the physio rooms.

(The patient) would not have been doing an exercise in six weeks unless the physiotherapist intervened, and so poor outcomes are likely (from surgery)

(Physiotherapists) are always chasing accounts, slack paying. Resending accounts is very frustrating.
In this case, the physiotherapist undertook to provide the treatment free because of their concern about the patient’s management. If the physiotherapist had not intervened the opportunity for early management would have been lost as would any positive attitude of the patient about rehabilitation.

In summary, physiotherapists have a clear understanding of the principles of managing their patients with early intervention and involvement in their rehabilitation. The frustration came from the ad hoc nature of the service system and the increasing number of stakeholders that needed to be contacted to bring about effective treatment. Country areas require special consideration, particularly in the development of policies and procedures by WorkCover.

Physiotherapists’ quality indicators
The physiotherapist-reported quality indicators are presented in Table 4.6. As shown, these can be linked to the quality strategy of making the service more tangible, maximising participation of the patient and customising the service.

<table>
<thead>
<tr>
<th>Quality strategy indicator</th>
<th>Reported indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>tangibilise the service</td>
<td>provide statement of what patient rights and responsibilities are</td>
</tr>
<tr>
<td></td>
<td>establish treatment goals</td>
</tr>
<tr>
<td></td>
<td>provide written exercise programs</td>
</tr>
<tr>
<td>maximise patient participation</td>
<td>explain the role of the physiotherapist and role of insurers or WorkCover to gain confidence and trust</td>
</tr>
<tr>
<td></td>
<td>emphasise patient responsibilities in participating in their health care, “exercises are treatment”</td>
</tr>
<tr>
<td>customise the service</td>
<td>understand the workplace situation and all aspects of the claim</td>
</tr>
<tr>
<td></td>
<td>find out how long the patient is off work, and when returning to the doctor</td>
</tr>
<tr>
<td></td>
<td>assess what was expected in their job pre-injury and what the patient is returning to</td>
</tr>
<tr>
<td></td>
<td>assess the social and emotional impacts of the injury</td>
</tr>
<tr>
<td></td>
<td>recognise that a WorkCover patient takes a lot longer to manage and treat</td>
</tr>
</tbody>
</table>
The reported indicators in Table 4.6 are all considered necessary by the respondents. Physiotherapy respondents emphasised customising the service, particularly through our understanding the patient’s workplace situation. The quality strategy used by physiotherapists can also include making the service more tangible and maximising patient participation.

The quality indicators for all stakeholders will be further analysed in Section 4.6.

4.6 Overview of common issues

Stakeholders reported several common issues. The respondents own terminology differed between stakeholder groups but further analysis enabled aggregation of responses under common issues. Overall, the stakeholders reported a positive appreciation of physiotherapy in health care.

When attempting to canvas the opinions of respondents as to what is quality in physiotherapy, perceived problems with the formal health care organisation or ‘system’ dominated most opinions. Feelings of patient helplessness and frustration with the system seemed to affect the effectiveness of health care.

Some of this frustration was linked to the fragmented communication between stakeholders. The involvement of various stakeholders was almost ad hoc. Role definitions and boundaries as perceived by patients were confusing and overlapping.

The introduction of nine insurance agents gave rise to nine subsystems to the health care organisation. The subsystems are the insurance agents who underwrite the risk for health care costs. The insurance agents seek control to minimise their risk when insuring health care claims but are not perceived as using a systematic approach. For example, health care professionals had to interact with a multitude of systems and protocols. To conform and participate in these various systems, stakeholders had to learn their differences and commonalities. This investment in the system was not facilitated by any incentives, such as payments for communication between all stakeholders. In addition, some health care providers feared insurance agents might
try to make and direct treatment choices and this gave rise to resentment and distrust.

In the responses in the study, there was widespread understanding and acceptance of the principles of patient rehabilitation by all health care providers. Most agreed that service quality for the injured patients included:

- early return to work
- early intervention
- supportive workplace.

The health care service is provided for the patient. Overall quality in the health care service is improvement in the patients' health. This can be demonstrated by the patient returning to work, improved functional capacity or decreased pain levels.

4.7 Conceptualisation of patterns of data

The general opening question, What is quality? enabled different stakeholders to identify different quality indicators in the service encounter and in service management. The research question results are presented as methods of understanding the data. The quality drivers of the service are then summarised as a basis for quality strategies.

4.7.1 Service encounter quality

Service encounter quality is derived from the behaviour or acts needed in the service encounter to produce quality. General agreement on the desirability of quality was clear and the different emphasis of each stakeholder reflected their perspective. General principles of management and treatment of an injured patient were well known by the stakeholders and seemed to be widely implemented. Quality indicators reported by respondents are summarised in Table 4.7.
Table 4.7 Quality indicators for the management and treatment of injured patients

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Patients</th>
<th>Payer</th>
<th>Health care providers</th>
<th>Physiotherapist</th>
</tr>
</thead>
<tbody>
<tr>
<td>positive health care outcome and return to work</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>information about the injury and patient’s situation (received and provided)</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>early intervention</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>provide a treatment plan, goals and likely outcomes</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>provide an exercise plan and physical rehabilitation activities</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>explanation provided of each stakeholders role in the process to the patient</td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>communication between stakeholders</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>effective communication to the patient, involving them, including interpreters to be effective</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>good return to work attitude of all stakeholders</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What is quality in professional health services? Quality in professional health services as reported by respondents is presented in Table 4.7 and is further considered later in Table 4.11. Service quality was defined by respondents as the delivery of excellent or superior service. Professional health service quality required the professional to provide customised communication and technical quality or knowledge. Respondents were less tolerant of failures in technical outcome, yet recognise that some have difficulty in evaluating technical care. In contrast, they were more tolerant of the aesthetics and access to the local service environment, but not access to the service itself. Therefore, patients have a narrow zone of tolerance for technical care, communication and participation of the professional but a wider zone of tolerance for aesthetics and access to the local service environment. Respondents did not volunteer satisfying elements of the service but rather quality indicators.

The service encounter provides the opportunity to manage patient expectations. Professional health services are complex and present the patient with a high degree
of uncertainty. The concerns patients have about future employment and return to health, give rise to information needs and the opportunity to include information about potential outcomes of the service in the service encounter. Patient expectations of the possible outcomes of their health care may need to be negotiated according to the potential for recovery from injury. The complex nature of health care that confronts the patient and the increasing expectation that advances in health care can solve most health care problems, may lead to unrealistic expectations of the service. In addition, more than one standard of expectation may be used at any one time. The sources of patient's expectations of the health care service varied. Some expectations came from reports by fellow workers, previous experience with the service or advice by other professionals as to what the services could provide.

During the service, the optimal outcome of health care can keep changing as the diagnosis is revised and a clearer picture of the attainable service outcome emerges. Therefore, communication and expectations between stakeholders may be originally well conceived but left unadjusted to changing conditions during treatment. For example, a planned return to work may not prove possible for the patient who needs a further period of time off work because of their injury. As one physiotherapist commented, "we just sort of continued on and did not pause and reflect on what we were achieving", without agreement being reached among stakeholders as to the service priorities or goals.

Problem solving was reported by health care professionals whose adapted their services to the changing circumstances of the patient. For example, appropriate modification of stakeholder's expectations provides better outcomes for patients. The success of modifying expectations relies on trust between stakeholders. For example, it is not necessarily misleading or 'overservicing' if a diagnosis changes. Trust in the service relationship is an important basis of developing relationships between stakeholders. The relationships between stakeholders, in turn, are crucial to service quality in this research.

Patients reported feelings of fear and distrust of the insurers and some health professionals. The service encounter provides an opportunity to build trust, reduce
fear and encourage the participation of patients. Such participation would facilitate patients' active decision making in their injury management.

Participation in the service by patients is expected by health service providers, physiotherapists and payers. However, there was little articulation of how this participation would occur. It was, more broadly, referred to as meeting information needs or giving home exercises. The service was not described as seen through the 'eyes of the patient'. The potential for fear and distrust of the system to disrupt the service encounter was evident from patients' responses. The opportunity to script or provide information about the service encounter through the 'eyes of the patient' to facilitate participation was evident.

Although respondents reported that information about the injury was very important, little was made of complementary information of the patient's skill levels, such as literacy to understand written instructions for exercises or the ability to adhere to treatment regimes. In addition, health care providers and physiotherapists who considered it imperative that there be an understanding of the work situation and physical capacity required to complete tasks. A quality indicator of the professional is the ability to seek information, share this information and act upon it as appropriate having once evaluated the importance of the information.

What are the indicators for good or poor quality services? The indicators reported in the previous section, were for good quality. The indicators for poor quality were, in the main, the opposite of good quality. For example no communication between stakeholders was considered poor quality. However, consistently reported as poor quality was "overservicing". Overservicing was not clearly identified but could be described as continuing to provide health care services without benefit to the patient. The motive for this is assumed to be financial return to the health service provider.

The terms 'overservicing' and consequently 'continuing with services beyond patient benefit' are continually used. These terms are hard to distinguish when attempting to establish a quality strategy which avoids 'overservicing'. Physiotherapists reported that the "patient just wants to keep coming" and that it was difficult to stop service provision when the patient still had an unmet need such
as management of continuing pain. Re-attendance at the physiotherapist was reported as occurring after the patient had returned to work but was no longer consulting the doctor. It appears that goals of the service outcome had not been agreed or articulated. In the circumstances it was difficult to withdraw services.

Overservicing could be avoided by implementing the following quality indicators:

- negotiated service outcome facilitating concluding the service
- maximised participation by moving the production to the patient thereby reducing the amount of service provision requested
- management of patient expectations of the service and potential outcomes
- increased communication and explanation to payers about the management of patients requiring more services.

*What is the relative importance of various service quality indicators?* All stakeholders reported that the most desired quality indicator was the patient improving in health. This is the quality of the technical care provided. Patients and payers recognised that they were not trained to evaluate the technical service. Technical care is augmented and more effective when delivered in a service relationship of empathy and trust, such as the provision of information. This relationship enables the patient to manage the problem themselves. Consistently reported in order of importance, the quality indicators were:

- technical quality
- patient information for management of their problem
- patient information to facilitate interaction with the system.

*What actions of the professional service provider contribute to quality?* The professionals displayed certain characteristics which seemed to affect successful treatment and management. The characteristics are:

- self determination by the professional
- involvement and participation in the system of patients' compensation
- participation in an informal team structure
- effective and appropriate communication.
Some physiotherapists facilitated participation of patients in the service encounter by:

- encouraging the patient to actively choose between health care options
- providing a program of self management for their patients, with take home information
- referring the patient on to another stakeholder when issues arise that are outside the physiotherapy treatment
- developing information for patients explaining the role of each stakeholder in simple language.

These characteristics, used in rehabilitation coordination, can be exhibited by all health care professionals and provide each with the opportunity to supply rehabilitation coordination. The project management required is inherent in each of their treatment regimes.

What actions of the patient contribute to quality? The loss of the patient's self determination and ability to navigate around the system was reported widely by the respondents. This, combined with a negative attitude about return to work, could mean the failure of a patient to reach their full potential. For example:

Patients on WorkCover in particular, I've had them say to me once or twice, you know I thought I had to do this treatment because I'm on WorkCover. Which, of course, is far from the truth

The empowerment and involvement of the patient is perceived by respondents as an important predictor of successful return to work. The patient who actively continues the treatment regime outside of health care visits will dramatically increase the effectiveness of health care intervention.

Participation in service encounters means sharing the responsibilities in health care. This means the physiotherapist and the patient share responsibility for the patients health care. For example, the patient actively participates in the rehabilitation and the physiotherapist guides and advises them on the rehabilitation. The patient has a production as well as a consumption role. The professional acts as a coach and teacher, facilitating participation and keeping the patient positive about a return to work.
Professional ethics will guide the interaction with the patient, providing informed consent, declaring conflicts of interest and giving the expectation that the patient will be treated with courtesy and respect. This was previously reported above under Occupational physicians (Section 4.1.2). The patient is central to the service system and service encounter, therefore, quality strategies should be directed towards the patient.

4.7.2 Service management
The service system was widely discussed by respondents in the study. This raises the question, How effective is the service system in actively supporting employee efforts to render service dependably, accurately and consistently?

The stakeholders involved in the study all presented different forms of frustration with the WorkCover system and the complexity of its processes. This frustration was exacerbated by changing and blurring role definitions. Does the health care professional or the claims agent manage the case? How many stakeholders does a physiotherapist need to communicate with, and in how many different forms? The communication needs to be appropriate to the audience for which it is intended and simply reproducing one report may not be sufficient.

The service vision of improving the patient’s health and returning them to employment is well known and accepted. However, the respondents in this research perceived that the service system did not have a ‘belief in others’ and so created a climate of distrust. Moreover, access to information about how to move around the system is not perceived uniformly. For example, some professionals interact with the doctor only, others with the claims agent also. There is no apparent ‘teaching of others in the business’.

Patients did not think they would be believed and did not feel the service system made any long term commitments to them. In fact, the inability of some to navigate the system hindered consistent relationships with patients, health care providers, employers and insurers.
It appears an opportunity for service leadership has been lost. WorkCover has grown into an ad hoc and fragmented health care system. The slow processing of procedural matters by stakeholders has exacerbated the problems, in turn giving rise to missed opportunities for early intervention. The culture or climate is not well suited to patient service. Pursuit of a common objective between the organisation and the health care professional is not evident or reported.

The patients, health care providers and physiotherapists reported the system as presenting a barrier to the performance of the service and to patient needs being met. An analysis of the service quality management indicators is presented in Table 4.8.

Table 4.8 Service quality management indicators

<table>
<thead>
<tr>
<th>Theoretical construct</th>
<th>Specific variables</th>
<th>Which stakeholders reported this as quality</th>
<th>Which stakeholders perceived it as present</th>
</tr>
</thead>
<tbody>
<tr>
<td>management commitment to service quality</td>
<td>resource commitment to quality</td>
<td>health care providers</td>
<td>none</td>
</tr>
<tr>
<td></td>
<td></td>
<td>physiotherapists</td>
<td></td>
</tr>
<tr>
<td></td>
<td>existence of internal quality programs</td>
<td>none</td>
<td>none</td>
</tr>
<tr>
<td>teamwork</td>
<td>stakeholders view other stakeholders as clients</td>
<td>patients</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>physiotherapists</td>
<td>physiotherapists</td>
</tr>
<tr>
<td></td>
<td>stakeholders feel management (WorkCover and insurers) genuinely care for them</td>
<td>patients</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>health care providers</td>
<td>none</td>
</tr>
<tr>
<td></td>
<td></td>
<td>physiotherapists</td>
<td></td>
</tr>
<tr>
<td></td>
<td>stakeholders feel they are cooperating (rather than competing) with others in the system</td>
<td>patients</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>payers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>health care providers</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>physiotherapists</td>
<td></td>
</tr>
<tr>
<td></td>
<td>stakeholders feel personally involved and committed</td>
<td>patient</td>
<td>varies in each relationship; present in patient to health care</td>
</tr>
<tr>
<td></td>
<td></td>
<td>health care providers</td>
<td></td>
</tr>
<tr>
<td>Perceived Control</td>
<td>health care providers perceive they are in control of their jobs</td>
<td>perceived control</td>
<td>health care providers perceive they are in control of their jobs</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------</td>
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<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>patient</td>
<td>patient</td>
<td>patient</td>
</tr>
<tr>
<td></td>
<td>health care providers</td>
<td>health care providers</td>
<td>health care providers</td>
</tr>
<tr>
<td></td>
<td>physiotherapists</td>
<td>physiotherapists</td>
<td>physiotherapists</td>
</tr>
<tr>
<td>Health care providers feel they have flexibility in their jobs</td>
<td>patient</td>
<td>patient</td>
<td>patient</td>
</tr>
<tr>
<td></td>
<td>health care providers</td>
<td>health care providers</td>
<td>health care providers</td>
</tr>
<tr>
<td></td>
<td>physiotherapists</td>
<td>physiotherapists</td>
<td>physiotherapists</td>
</tr>
</tbody>
</table>

Stakeholders also reported their frustrations with the system. These are summarised in Table 4.9 as barriers to quality service.
Table 4.9 Service management barriers to quality

<table>
<thead>
<tr>
<th>Theoretical construct</th>
<th>Specific variables</th>
<th>Which stakeholders perceived it as present</th>
<th>Perceived impact on quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>role conflict</td>
<td>perceived conflict between expectations of patients and expectations of the system such as: amount of paperwork needed to complete service transactions number of internal contacts that must be made to complete a service transaction or answer patient queries existence of management policy that conflicts with specifications</td>
<td>patients health care providers physiotherapists</td>
<td>inhibits healthcare providers physiotherapists</td>
</tr>
<tr>
<td>role ambiguity</td>
<td>perceived clarity of goals and expectations, demonstrated by: frequency and quality of downward communication extent of constructive feedback given to contact personnel perceived level of competence and confidence knowledge of health service providers of the system training in the service system provided to health service providers</td>
<td>none</td>
<td>facilitates</td>
</tr>
</tbody>
</table>

This analysis of the service management quality indicators and identified barriers to quality provide an opportunity to recommend a service quality improvement strategy. These quality indicators form the foundation for that strategy which is detailed in sections 5.3 and 5.4.

**How does service design affect service quality?** The service design for the health care service has the dimensions of:

- a high degree of contact and interaction
- high participation and labour intensity of the professional
- a high degree of service customisation.
A service design which lacks services customised to patient's needs and provides a very structured approach would require protocols. This would disallow services tailored to individual variation, or, insist on an system of approval prior to treatment commencing. This is likely to slow service response times. Successful physiotherapists initiate communication with the case manager of the insurance company on first contact with the patient, anticipating blocks in the service system later in the service sequence. This early communication aims to establish a relationship and facilitate further communication should 'blocks' occur. A block in the service system would be, for example, slow or nil response to requests to continue treatment or inadequate information about the service system's operations.

The highly customised and intangible nature of the service makes service quality difficult to assess and describe. Although service quality is seen differently by each stakeholder group, all respondents recognised this difficulty and related the unique character of health care as contributing to it. The patient presents the professional with an unknown ability and willingness to participate in the service. As well the patient presents as unknown potential to achieve improved health given their injury.

*What is the potential for service scripts to improve quality?* The respondents all spoke of the need for more information about the service and the service system. Patients spoke of needing information about the roles of professionals and how to manage the perceived barriers to seeking treatment. For example, there are perceived difficulties with claims approval enabling prompt treatment to commence. Payers requested information from physiotherapists to set expectations about the service duration and what potential outcomes.

A service script can be used to present information to patients and set expectations of their role in the service. The script would need to respond by presenting information in the 'eyes of the patient'. A service script could then be used to deliver the quality indicators of:

- information about the service system
- information about the patient's role in the service, such as participation in an exercise regime.
4.7.3 Management styles of the health professionals

The management styles that have developed and currently used by the health care providers and physiotherapists can be described as "quality waste"—a series of catch up activities and fall back positions. When the system does not deliver the requirements necessary for success, such as timely approval of treatment, a series of catch up activities are used.

Health professionals and physiotherapists have reacted to the complexity of the system by building their own networks. These networks with others have been developed around agreed practices which are understood and accepted, for example:

It's a little bit up to the individual practitioners as to their own knowledge of each other's disciplines which I think is probably lacking by and large. But doctors need to be more aware of what physios do and what they can do and all the different kinds of philosophies and approaches there are. I think that we have to find somebody that we trust and rely on.

Some health care professionals and patients have found the system's complexity and culture abhorrent and opted out. This is one reason why some patients don't report their work injuries and why some health professionals don't treat workers' compensation patients.

Those stakeholders who expressed success in the service experience had evolved practices and procedures to work within the loosely articulated or ambiguous service system. A successful experience for themselves, and consequently for their patients, was achieved by combining the limited structure with extensive communication. Despite the limited structure, they identified clear responsibilities and priorities in the working environment. Regular and extensive communication was used to manage patient service quality.

For example Case A achieved success as respondents reported it to be, by knowing the service system and the structure they are working within and maintaining a focus on the patient. "Personally, the patient, is the number one responsibility". Customised communication was the main thrust for Case A as illustrated by the following quote:

The whole thing is just communication, it is communication between us and the case manager and the doctor and to a lesser extent the specialist because I don't see them
as often but certainly, the GP — keeping them informed. But I think the thrust has to be that we inform the case managers, what's going on, what we plan to do, that both from a PR point of view and getting the person organised. We don't want to offend GPs so they stop referring, so I think there has to be some conscious effort to contact the GP. We make sure we have letters at each follow up visit to doctors especially the specialist. We try and ring them but if there is no answer, ... fax them, we do that and by far and away, a fax is more effective. I think we're coping alright with the workload of paperwork at the moment, but we have to find time to fax and write etc, but I think there is a payoff.

Case A also used communication with the patient to help the patient manage in the system. For example “so it's important to us to initially get a feel for what they were like before the injury and then we instruct them to make communication with case managers or rehab officers and they are extremely appreciative of (knowing) what is going on”. The expectations for the patient are also managed and participation in the service is encouraged. There is also an acceptance that communication is as important as the 'hands on' or technical care that is delivered, as illustrated in the following quote:

After six to seven treatments we then tell the patient: look your next treatment is going to be an extended consult where there'll be no hands on necessarily. We will have just a review of your case, and then at that stage they'll be determining what restrictions to work there are, whether they're physical, whether there's any other issues that are stopping them from going back to work ... we're encouraging people (the patient) by around ten treatments to have contacted the rehab people or case managers to let them know the state of things.

Case A had also developed relationships and networks with other health care providers. This proved particularly useful for informal advice on management of patients and their expectations.

In contrast, those with less successful service experiences lacked well defined responsibilities and priorities. Responsibility for decisions about the patient's return to work and scheduling of physiotherapy treatment were often unclear. No shared goals for the service were apparent. Although communication between the physiotherapist and doctor occurred (within the project), communication amongst all those involved in services for the one patient (across projects) were particularly low. The structure used was more 'regular or formal' with pure reporting from one to just one other. For example physiotherapist to doctor only. This style of communication relies on the other stakeholder, often the doctor, to project manage the service. This would include setting treatment goals, forming decisions about
when the patient returns to work and also decisions on the appropriateness of the services given, such as physiotherapy. This leaves the physiotherapist vulnerable in some ways as the appropriateness of their service is given by another stakeholder who may or may not be well informed. This style of management is very much a ‘doctor’ model where the patient or another stakeholder has the question, and the doctor has the answer as opposed to a style of management which asks questions and helps the patient to find their own solution.

In this situation, some health professionals opt out of the service system, leaving it more to the patient to be independent as a means of achieving success in the service experience. This includes leaving service decisions to the doctor and being passive in the service system.

Case B was less successful. The health professionals and patients were frustrated with the service system. The service system was seen as a series of disconnected steps without much communication between steps or flexibility in the system. There were less successful outcomes because the physiotherapist did not “take on the administration for the patient as that is the responsibility of the doctor and the employer. I only write to the doctor”.

Yet other physiotherapists had become watchers of the service system and treated no-one on workers’ compensation, they deliberately did not enter the service system at all.

Case C is emerging in their success as health professionals within the service system, moving from unsuccessful to successful management. For example, these health professionals contacted the case manager, not initially in the service relationship, but when the case manager’s assistance was needed. Therefore, a strong relationship had not been established between the two stakeholders. Responses to a request to provide more services – which required a prompt return communication – did not occur. The lack of trust or mutual understanding of service goals hindered a prompt continuation of services. However, Case C recognised that service success required their independence and went ahead and provided the service regardless, and without charge. Now Case C is emerging and increasing their future initial
communication to the case manager who decides on continuing treatment to emphasise relationship building. The investment of time to provide this communication is worthwhile for the professional to increase speed of payment and therefore business cash flow. The link of customised communication to service success has been made.

Case A, B and C demonstrate differing levels of success in their service experience depending on their participation in the service system. Those who were not successful in the service system had not initiated network development. Similarly, Case B had not been active in customised communication with stakeholders or encouraging participation of the patient. Although Case B had developed a relationship with the doctor as a source of referral of patients, effort had only been directed at maintaining this particular relationship. For their part, doctors expressed frustration that some of the communication received was not useful. Where there was no communication or it was poor, this was due to the lack of developed relationships and inability to understand each others needs.

In interpreting the differences between Case A, B and C, this research found when a limited or ambiguous structure is combined with extensive interaction among stakeholders it leads to success. Further success comes from understanding the service offering in the ‘eyes of the patient’ and actively orienting and encouraging participation by the patient in the service. Communication is a key variable to achieve service quality.

This research found the service system had a high level of complexity. The system inputs are only loosely articulated rather than strongly articulated as would be typical of a conventional distribution channel. This creates uncertainty and lack of predicability in service sequence but also allows use of flexibility to achieve successful outcomes. Evidence from this research suggests optimal effective management of the service lies somewhere between a very structured, mechanistic organisation in which procedures are tightly determined, and an unstructured organisation in which there are few procedures. There is partial order in the service system, as the system requirements are specified, yet the poor coordination and process design of the service system require both professional and patient to
communicate independently with other stakeholders. Simply following the structure is not enough to achieve service quality. A service system with too little structure is difficult to coordinate. Poor understanding of the roles and expectations of stakeholders can be the result. On the other hand, too much structure makes it hard to be responsive and achieve quality service outcomes. Communication between stakeholders was used to manage the varying structures the stakeholders confronted.

*Reactive change in response to failure* was a dominant theme in respondent’s reports. For example, when the patient returns to work for a trial period the failure or success may lead to further treatment. However, elements of *time paced evolution* were seen, where change is keyed to the passage of time, rather than occurrence of particular events. For example, some physiotherapists communicated with the insurer immediately following the first service contact with the patient and again when approximately ten service encounters had been completed (see Case A).

The limited or ambiguous structure seen in this research has the potential for too many degrees of freedom. Yet within these degrees of freedom, stakeholders can coordinate and mutually adjust. Together, people can adaptively accomplish tasks even as the context is changing. Successful service outcomes were associated with those stakeholders who know the organisation or framework they are working within. ‘Organisational socialisation’ will orientate stakeholders to the ‘system’, their roles and responsibilities. Physiotherapists achieved this by providing written or verbal information on their role in treating workers’ compensation patients and explicit policies on confidentiality of information. Service quality then came from using communication to set appropriate expectations of the health service and the patient’s role in it.

To avoid the difficulties of finding one’s way through a complicated system, some networks for advice and referral had developed. This offered knowledge of other services and resources the worker can be referred to. It did not mean becoming an advocate for the patient.
Network relations. The relationships identified which form a network in this health care case study are:

- physiotherapist to patients
- physiotherapist to payers
- physiotherapist to other health care providers.

The impacts of these relationships are presented in Table 4.10 by summarising the impact of physiotherapy networks in terms of three underlying dimensions of activity links, resource ties and actor (stakeholder) bonds.

Table 4.10 Impact of relationships in the case study health care network

<table>
<thead>
<tr>
<th>Relation</th>
<th>Activity links</th>
<th>Resource ties</th>
<th>Actor bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physiotherapist–patient</td>
<td>communication</td>
<td>knowledge sharing</td>
<td>sensitivity to patient needs</td>
</tr>
<tr>
<td></td>
<td>joint production</td>
<td>health care or health improvement</td>
<td>conflicting loyalties</td>
</tr>
<tr>
<td></td>
<td>transfer of technical care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physiotherapist–payers</td>
<td>funding</td>
<td>finance</td>
<td>dependence</td>
</tr>
<tr>
<td></td>
<td>provision of systems support</td>
<td>support for patients' return to health</td>
<td>personality or professional clashes</td>
</tr>
<tr>
<td></td>
<td>gatekeeper as to allow or not treatment</td>
<td>climate of service</td>
<td>learning system</td>
</tr>
<tr>
<td>Physiotherapist–health care providers</td>
<td>communication</td>
<td>extended contact network</td>
<td>personal bonds and trust</td>
</tr>
<tr>
<td></td>
<td>cooperative service performance</td>
<td></td>
<td>learning</td>
</tr>
<tr>
<td></td>
<td>reliance to perform own service</td>
<td></td>
<td>social bonds</td>
</tr>
<tr>
<td></td>
<td>joint quality standards</td>
<td></td>
<td>personal trust</td>
</tr>
<tr>
<td></td>
<td>knowledge of each others ability</td>
<td></td>
<td>perceived competitiveness</td>
</tr>
<tr>
<td>Physiotherapists, culture of the profession</td>
<td>shared beliefs</td>
<td>mutual support, sharing innovations</td>
<td>personal bonds and trust</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>perceived competitiveness</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>learning</td>
</tr>
</tbody>
</table>
The activity links are considered together with quality drivers in Section 5.4.3 and Figure 5.5. The resource ties (Table 4.10) and actor bonds are orientated to a service quality strategy. The physiotherapist and patient share and use resources to achieve positive health outcomes. Between the actors there is a dependence on each other (actor bonds) to achieve outcomes with mutual participation. Similarly, other stakeholders activity links have resource ties and actor bonds.

The network development was reportedly based upon existing knowledge of:

- personal reputations
- prior relations or interactions.

The aim was to reduce uncertainty, set expectations of the treatment the physiotherapists would deliver and what it could provide for the patient and enhance early cooperation. Trust between stakeholders was developed and more role congruence was achieved. Network development was not necessarily preplanned or based on noneconomic exchange but did share a common goal orientation.

The network between stakeholders requires one side to initiate the iterative process toward partnership, for example, the doctor initiating interaction with a physiotherapist with a referral of their patient to the physiotherapist. Each alliance moved incrementally through a trial phase where patients returned to the doctor and reported on their care with the physiotherapist. In addition to other communication from the physiotherapist to the doctor, this was used to assess the health care provided. A back and forth motion of reciprocity and risk taking emerged. For example, as a doctor tried a new provider with one patient with successful outcomes, then another may be referred and another risk taken. As developed in Section 4.5.3 and one Doctor commented:

I develop my favourite physios and there are quite a number of those, it’s not just one or two... the main things that I would dislike there would be people who just do something or rather, and I’d had no communication, so I just have to ask the patient what they’re doing. Basically the lack of communication, if it hasn’t got anywhere I’ve no real idea why that is. Or much more really, someone who just does something entirely different from what I expected them to do.
Fundamental to the exchanges between these stakeholders was trust. Trust developed between some stakeholders but not across the service system as a whole. The relationships, and therefore, networks are ad hoc and vigilance is required to create and sustain a network. Networks are ‘grown’ not assembled at a single point in time.

Health care professionals varied in their participation in forming networks. Professionals could be considered as active members, passive members or watchers in a network. Active members had intense connections with active contact with other members. Passive members were loosely coupled with other stakeholders and passive in their networking, giving rise to limited involvement in the network. Watchers did not participate or use networks to operate as professionals providing health care.

In summary, for successful service outcomes, service networks require:

- trust between stakeholders
- network development based on a shared common goal orientation
- one side to initiate the iterative process toward partnership
- active participation from stakeholders
- clear roles and role congruence amongst stakeholders
- customised and extensive communication amongst stakeholders
- time paced evolution and management of change.

4.7.4 Quality drivers overall
In considering the service quality drivers overall, this section will consider the quality indicators in the following groupings:

- service integration
- the service encounter.
Quality drivers for service integration and for the service encounter imply behaviour or actions of the:

- patient
- payer
- health care professional
- physiotherapist.

The quality drivers shown in Table 4.11 are desired actions of the stakeholder and respond to the quality indicators reported by all stakeholders. Although the respondents own terminology differed between stakeholder groups, aggregation of response data under common issues was achieved.
Table 4.11 Quality drivers which each stakeholders performs

<table>
<thead>
<tr>
<th>Quality drivers</th>
<th>Patient</th>
<th>Payer</th>
<th>Health care providers</th>
<th>Physiotherapist</th>
</tr>
</thead>
<tbody>
<tr>
<td>service integration</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>access to services, improved</td>
<td>√</td>
<td></td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>processing of claims</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>script the service encounter in the</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>'eyes of the customer'</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>role of stakeholders articulated</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>and shared (role congruence)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>compliance and participation in</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>system requirements</td>
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<tr>
<td>clarity of goals and</td>
<td></td>
<td></td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>expectations, demonstrated by:</td>
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<td></td>
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<tr>
<td>• frequency and quality of</td>
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<tr>
<td>downward communication</td>
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<td></td>
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<td></td>
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<tr>
<td>• constructive feedback given to</td>
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</tr>
<tr>
<td>contact personnel</td>
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<tr>
<td>level of competence and</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>confidence:</td>
<td></td>
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<td></td>
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<tr>
<td>• knowledge of health service</td>
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<tr>
<td>providers of the system</td>
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<tr>
<td>• training in the service system</td>
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<tr>
<td>provided to health service</td>
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<tr>
<td>providers</td>
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<tr>
<td>superior technical care and</td>
<td>√</td>
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<td>√</td>
<td>√</td>
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<tr>
<td>return to work</td>
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<td></td>
</tr>
<tr>
<td>manage expectations using</td>
<td></td>
<td></td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>communication</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>customise the service offering</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
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<tr>
<td>orientate the patient to the</td>
<td></td>
<td></td>
<td>√</td>
<td>√</td>
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<tr>
<td>service to maximise</td>
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<tr>
<td>participation; tangibilise the</td>
<td></td>
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<td>√</td>
<td>√</td>
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<tr>
<td>service using communication</td>
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<tr>
<td>develop trust in the service</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
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<tr>
<td>experience (determinant and</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>antecedent of service quality)</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>plan closure or decoupling of</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
</tr>
<tr>
<td>service</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>active participation, information</td>
<td>√</td>
<td>√</td>
<td>√</td>
<td>√</td>
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<tr>
<td>seeking and sharing</td>
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</table>

These quality drivers provide a basis for recommendations for system integration and improvement. The overall quality drivers have elements or tasks which are implicit to the activities of the service. For example, during the service encounter,
orientating the patient to the service would include explaining to the patient how the principles of informed consent are adhered to, the practice policy on patient confidentiality and how information is released about patients.

4.8 Conclusion
The research design sought to establish four different groups of stakeholder opinions of *What is quality in professional health services?* Seventy-five interviews were completed out of 150 people or organisations contacted. Although the difficulties of workers' compensation systems dominated many interviews, commonly shared indicators of quality did emerge. Each stakeholders response and view of service quality has been considered in Section 4.5 prior to considering the commonly shared indicators.

Quality is:

- *outcome*: early return to work
- *speed of response*: early intervention
- *situational factor*: supportive workplace.

Physiotherapists contribute to this by maintaining these 'principles' or objectives in their treatment. In particular, they plan treatment goals, predict outcomes and provide exercise and advice for the patient to manage their condition.

Quality dimensions rely on the development of quality by many diverse stakeholders. As a consequence, there are many influences on quality. They include human expertise, the quality of communication among the various groups involved, and the fact that more than patient benefit is involved.

Physiotherapists recognise their special relationship with other stakeholders and adhere to their ethical principles of informed consent and patient confidentiality. In the main, physiotherapists are well regarded in providing a valued benefit to those on workers' compensation. This key benefit can be maximised with effective case coordination and communication by all involved.
5 Conclusions and implications

5.1 Introduction
The focus of this research was:
What is quality in professional health service? How should it be managed?

With those questions in mind, this chapter commences by drawing conclusions based upon the research findings and discusses their implications for theory. There is then discussion of the implications for policy and practice in the health care industry. Finally, limitations of the research are reviewed and areas for further research identified. In addition to making a contribution to theory, this research develops a quality strategy for the management of professional health care.

This research has identified:

- a quality indicator for the professional which is a fusion of technical care and customised communication
- a quality indicator of system knowledge and independence
- a model of service quality in the service encounter which responds to the quality indicators and allows for a variable degree of patient and professional participation
- a model of service quality in professional health service management which responds to the quality indicators and allows for management of patient expectations and professional flexibility
- that quality is in the eye of the patient and is enhanced when the professional service provider is active in the network of stakeholders in health care. This is incorporated in a model of network formation
- the importance and characteristics of network links. This is incorporated in a model of network links by using actors, activities and quality drivers in a health care network
- the importance and characteristics of strategic processes to facilitate patient participation. This is incorporated in a model of strategic process in the service system
- the potential of value adding the elements of strategic thinking such as core competencies to the health service literature.
5.2 Conclusions about research questions

Conclusions concerning the research questions draw upon the results presented in Chapter 4 and the literature reviewed in Chapter 2. The research focus is on two main aspects of service quality: first, service encounter quality and second, service management for quality. Service encounter quality is a continuous process therefore it includes quality in the single encounter and over several encounters. The continuous process of service encounter quality is implied in the discussion of service encounters which follows. Overall service quality requires quality in both the service encounter and service management.

5.2.1 Service encounter quality

What is quality in professional health service? Service quality was defined by the research and respondents, following data interpretation, as the delivery of excellent or superior service (see Zeithaml and Bitner (1996, p. 34). Service quality will differ depending on the perspective of the respondent but can be broadly aggregated as:

- technical quality
- communication
- flexibility and customisation

The health service characteristics, discussed below, impact upon the quality indicators. These quality indicators will be identified and an overview of service quality presented. Quality in professional health services, as reported by respondents, was previously presented in Section 4.7.1 and summarised in Table 4.7 and Table 4.11.

Delivering quality requires the professional to manage the unique characteristics of services, particularly intangibility. The difficulties of describing and defining quality come from services intangibility. Consistent with the existing literature, this research found professional health services, to be intangible, and produced and consumed simultaneously thereby making production and consumption inseparable (Berry 1980; Bowen and Schneider 1988).
The characteristics of professional health service in this research are consistent with the existing literature and can be described using the classification system of Lovelock (1983) as:

1. the nature of the service act has intangible actions and the recipients are people (Solomon et al. 1985; Congram 1991; Palmer and Maani 1995)

2. the service is delivered as several discrete transactions and a formal relationship exists between the physiotherapist and patient (Gummesson 1981)

3. the service is highly customised and physiotherapists exercise judgement in determining how to meet the patients’ needs in the service encounter (Maister 1982; Haywood-Farmer and Stuart 1988; Congram 1991; Silvestro et al. 1992; Haywood-Farmer and Nollet 1993)

4. the demand for services fluctuates but can be programmed or scheduled to avoid peak demand times (George and Gibson 1991)

5. the service delivery is provided in the physiotherapist’s organisation with the patient present plus occasional visits to the patient’s worksite (Congram 1991).

The determinants or indicators of service quality were discussed at length by the respondents, drawing upon services’ unique characteristics. Section 2.2.6 and Table 2.8 present the indicators of service quality given by many authors. These are compared with those reported by respondents in this research in Table 5.1.

The research results shown in Table 5.1 generally agree with the literature as to the relevant quality indicators. The strongest indicators of quality, in decreasing order of emphasis of response by respondents of this research, are:

- competence, knowledge (technical quality)
- communication with stakeholders
- handling of non-routine and emergency situations, flexibility and customisation
- planning of the service
- reliability of service
- responsiveness to patient’s needs
- security and provision for patient privacy.
<table>
<thead>
<tr>
<th>Literature quality indicator</th>
<th>Reported indicator in this research</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>access</td>
<td>system provides access to physiotherapy and to interpreters early in service encounter</td>
<td>literature description concentrates on access to the service location, not to the services provided by the service system</td>
</tr>
<tr>
<td>access</td>
<td>access to service location not mentioned</td>
<td>disagreement</td>
</tr>
<tr>
<td>aesthetics</td>
<td>none</td>
<td>not a quality indicator for respondents in this research</td>
</tr>
<tr>
<td>competence /knowledge</td>
<td>positive outcome of care</td>
<td>technical or outcome quality the most important agreement</td>
</tr>
<tr>
<td>communication</td>
<td>expectations negotiated, service outcomes negotiated and agreed provision of an explanation of the health care system patients know their rights as participants in the system communication between stakeholders</td>
<td>understanding the patient reported in the literature this research requires also communication to the patient about • their role and rights in the service delivery • expectations of service outcomes • negotiation and agreement of service outcomes and closure communication between other stakeholders expected agreement but extended</td>
</tr>
<tr>
<td>handling of non-routine and emergency situations flexibility customisation</td>
<td>understand the patients' condition and role in the service encounter, customised service participation maximised production moved to patient to facilitate participation</td>
<td>agreement on customised service, flexibility and participation maximised</td>
</tr>
<tr>
<td>planning the service (for present and future)</td>
<td>sustained service outcome eg sustained return to work information given to the patient to manage their condition</td>
<td>agreement</td>
</tr>
<tr>
<td>reliability of service responsiveness</td>
<td>credibility</td>
<td>agreement</td>
</tr>
<tr>
<td>security and provision for patient privacy</td>
<td>efficient systems speed of response of the system</td>
<td>agreement</td>
</tr>
<tr>
<td>security and provision for patient privacy</td>
<td>trust in service encounter</td>
<td>includes adherence to ethical principles of patient confidentiality and informed consent agreement</td>
</tr>
</tbody>
</table>
Two quality indicators not reported in this research were access and aesthetics. Access was described by respondents in terms of the service system and not the particular service location. Aesthetics was not mentioned at all which is a point of difference from the work of Berry, Zeithaml and Parasuraman (1985), Gronroos (1990c), Chase (1991) and Johnston (1995a). Both access and aesthetics could perhaps be considered implicit in the discussion of some respondents, although ranking much lower than both the technical outcomes of care and communication. It would seem likely that respondents would be interested in easy physical access and in a pleasing environment for health care even though these features were not mentioned.

Technical quality was equated by respondents with knowledge or competence. Technical quality is particularly important between professionals who are better placed than the patient to evaluate the knowledge or competence of another professional. Technical quality unfolds over time with several service encounters. Reliability, getting it right first time, has been identified as the single most important dimension of service quality in studies across four non-health industry segments (Parasuraman, Zeithaml and Berry 1985). Knowledge or competence usually means the possession of the required skills and knowledge by the service provider to perform the service. However, in this research, the required skills and knowledge are quality determinants of the service encounter and the service system. More than just providing quality service, knowledge of the service system is imperative for effective and efficient service delivery. This research shows that competence, knowledge and technical care are the most important quality indicators. The relative emphasis by respondents of the various service quality indicators are now considered.

The quality indicator communication was emphasised and expanded upon by many respondents. Professional health services require customised communication to a greater extent than many other services; they are highly intangible with only loose specification between patient and the professional. Therefore, customised communication was found to be necessary in order to manage these health care characteristics in a manner which resulted in quality in the mind of the patient.
Role congruence was variously reported by respondents as a quality indicator. This forms part of service integration and will be discussed separately in Section 5.2.8.

In health care, the experiences of the patient and the professional are inter-related (Chase and Bowen 1991). Health care also involves the health services organisation and other health care providers. There are at least four stakeholder views, each assessing quality. An appreciation of the number of stakeholders is vital to an understanding of what is quality in professional health services and makes a contribution to the body of knowledge. Patients reported, in Section 4.5.1, that quality came from their understanding of their health condition and role in the service encounter. Physiotherapists reported, in Section 4.5.4, that quality came from maximising patient participation and an opportunity to exercise judgement in customising the service for the patient. The health service organisation, in Section 4.5.1, reported quality came from the professional accurately predicting the length of service, technical outcome and negotiating service closure. Other health care providers, such as doctors, in Section 4.5.3, emphasised technical outcome and communication.

It follows that professional health service quality comes from participation of both professional and patient in the service encounter(s) and an ability to exercise options which affect the service delivery. In addition, professional health service quality requires the ability of all health professionals to communicate information about the service to the health service organisation in a manner which suits their information and organisational needs. This research concludes that service quality is achieved through the performance of the professional and the patient and it does not reside in the physical environment associated with the service offering. This agrees with the work of Solomon et al. (1985) and Shostack (1977). However, the ability of the professional to deliver quality relies on a supportive service system provided by the health service organisation.

Debate about the similarities and differences between patient satisfaction and service quality continues in the literature (see Section 2.2.3. and Appendix B). Satisfaction and service quality are difficult to distinguish, both conceptually and operationally, in health care settings (Taylor and Cronin 1994). In this research, respondents mainly discussed quality although there was also brief discussion of satisfaction with the
service encounter. Although the constructs of quality and satisfaction were not tested in this research, the results suggest respondents considered service quality and satisfaction as different but related concepts. This agrees with many authors (Bitner 1990; Bitner, Booms and Tetreault 1990; Zeithaml, Berry and Parasuraman 1993; Walker 1995). For the health service in this research, satisfaction impacts on quality judgements after the service has been consumed but only partially determines quality evaluations. These findings add to the debate about satisfaction and quality being related but different constructs. This could be the subject of future research into health care delivery.

The views expressed by respondents in this research reaffirmed that evaluations of service quality come from meeting or exceeding patient expectations (Parasuraman, Zeithaml and Berry 1985; Liljander and Strandvik 1993) and also the fundamental importance of managing patient expectations (Boulding et al. 1993). This requires an understanding of patient expectations and influences on those expectations (John 1992). Respondents used more than one standard of expectation simultaneously to form quality perceptions. This agrees with the work of Tse (1988) and Oliver (1993). Expectations were considered by respondents as zones, not as discrete points on a scale, in agreement with the existing literature (Kennedy and Thirkell 1988; Liljander and Strandvik 1993; Zeithaml, Berry and Parasuraman 1993; Johnston 1995b). Patients had a narrow zone of tolerance for technical care, communication and participation of the professional. However, during any service encounter there is an opportunity to manage and negotiate expectations, particularly within a zone of tolerance. Zone of tolerance is further discussed in Appendix B.

A successful service encounter, therefore, does more than provide technical quality. It considers patient expectations, modifying these expectations through negotiation to arrive at closure of the service. Those elements that are necessary to meet patient expectations become important for the service provider. Professional health service quality requires the active participation of both the professional and the patient in the service encounter. Professional health service quality requires a greater emphasis on customised communication than most other services. Initial patient expectations of quality as determined by this research are for an ‘ideal’ service particularly for the technical outcome of care.
What are the indicators of good or poor quality services? In this research, the quality indicators reported were for 'good' or ideal services and are presented in Table 5.1. The good quality determinants in this research are the opposite of poor quality, as found in the work of Berry (1985). For example, good technical care is good quality and poor technical care is poor quality. In contrast, Singh (1990) believes that the indicators or sources of evaluation for good and poor quality are different. The only evidence for Singh's (1990) view in this research was the 'frequency of the health service encounter' where the good and poor indicators were not the opposite of each other. Strategies to avoid poor quality services were suggested by respondents (see Section 4.5.1) and this information can be applied to assist in forming good quality service. This research did not test the indicators for good or poor quality. This is an area for further research.

What is the relative importance of various service quality indicators? As previously noted the quality indicators which respondents emphasised as most important in this research were technical quality of health care and customised communication. Technical quality was expressed as the knowledge and competence of the health care professional. This concurs with findings of many other researchers of studies in health care (Hall and Dornan 1988; Swartz and Brown 1989; Kingman-Brundage 1991; Longo, Connor and Barnhart 1993; Walbridge and Delene 1993; John 1994) and is also intuitively plausible. The unique feature of professional health services is the very high patient involvement.

What actions of the professional service provider contribute to quality? The actions of the professional service provider contribute to quality when the professional acts as a coach, team teacher or "team leader". The crucial nature of participation by the service provider, in contributing to service quality, has already been widely identified in literature (Schneider 1980; Berry 1981; Bowen and Schneider 1988; Larsson and Bowen 1989; Gronroos 1990c; Brown et al. 1991). This research complements earlier findings and expands on what this means. Health care professionals, particularly physiotherapists, need to act as coaches by providing opportunities for patients to find and contribute to their own solutions. This means moving away from an historical model of health care where the patient has the
question and the health professional provides all the answers. Health care professionals, like physiotherapists, are well placed to be team leaders in a patient’s health care, serving as coaches as well as teachers (Lengnick-Hall 1995). Such services usually cannot be defined at the initial patient meeting. The process of diagnosis to a degree involves both patient and professional, usually over a period of several meetings.

Real success comes when the professional actively encourages the patient to participate in the service encounter and the service system enabling them to realise their self efficacy. ‘Self efficacy’ is individual’s judgement of personal capability and the exercise of personal control (Bandura 1997). This emphasis in professional health services marketing is new to the subject literature.

Quality in professional health services requires regular reviews and reassessments of the service, particularly considering the patient’s experience with the service. As the service evolves, communication with the patient may be necessary to modify expectations. Further, timely communication of the progress of the service experience from one service provider to another is desirable. Methods and standards are required by each stakeholder in this research to review and evaluate the service experience they are providing. This research is consistent with the work of Brown and Eisenhardt (1997) who in their study of continuous change in the computing industry found ‘time paced evolution’ delivered service quality. For time paced evolution, change is keyed to the passage of time rather than the occurrence of particular events. Time paced evolution is powerful in fast changing settings because it creates explicit opportunities to reassess actions. This is desirable in uncertain settings because it counters excessive commitment to obsolete courses of action (Brown and Eisenhardt 1997). In contrast, event paced change, emphasises reactive change in response to failure. Time paced evolution and management of change provides a proactive, regular opportunity to reassess service provision. Time paced evolution has positive applicability to professional health services and more generally the services literature. Event paced change can lead to obsolete courses of action in fast changing and uncertain environments.
The findings of this research suggest potential benefit from introducing time paced evolution into the management of professional health services. This is a new element in health services thinking.

What actions of the patient contribute to quality? In health care services, the patient must participate in the service to achieve quality outcomes (Mills, Chase and Margulies 1983; Johnston 1989; Kelley, Donnelly and Skinner 1990; Zeithaml, Parasuraman and Berry 1990; Swan 1992; Lengnick-Hall 1995). The particular method of participation based on self effacement indicated by this research supports and expands the commonly held notion of participation as contributing to quality. More generally, the patient actively takes part in their health care, asking and seeking alternative solutions then choosing between alternatives. In this research, patient self efficacy, or personal control, was indeed an indicator of successful health care experiences.

Service quality in the professional health service encounter requires:

- performance by professionals, it does not reside in the physical environment
- an emphasis on customised communication greater than expected of most services
- the professional to determine and modify patient expectations, and negotiate closure of the service
- the professional to actively encourage the patient to participate in the service encounter and the service system enabling them to realise their self efficacy
- time paced evolution be used by professionals to manage and negotiate expectations whilst regularly reviewing service goals and outcomes
- the particular type of participation in health care services to be patient self effacement or personal control
- participation by both professional and patient in the service encounter and an ability to exercise options which affect the service delivery.

The model of service quality in the service encounter which arose out of this research is further discussed in Section 5.4.

Further questions arising from this research relate to satisfaction and self efficacy. These could usefully be explored to better understand service quality in the service encounter. Unresolved questions include:
• What are the 'satisfying' versus 'quality' determinants in the service encounter?
• What are the elements which are dissatisfying rather than satisfying in a service encounter?
• How is self efficacy of the patient in health services encounters achieved?

5.2.2 Service management for quality
This section will consider service management for quality by drawing conclusions from the research questions about the role of the service system, service design and service scripts to contribute to service quality.

Service management for quality is:

• fostering a partnership relationship between stakeholders
• understanding the role of each stakeholder
• implementing a service design for the multiple dimensions of professional service quality
• expanded use of service scripts
• setting expectations and stakeholders understanding their responsibilities using service scripts and organisational socialisation.

How effective is the service system in actively supporting service provider efforts to render service dependably, accurately and consistently? The health service organisation was the basis of the case study. It was found to be only loosely articulated and did not possess all the features required to consistently deliver service quality. The absent features were:

• process designs to help health care providers render their services dependably, accurately and consistently (Shostack 1984; Berry, Zeithaml and Parasuraman 1985; Gronroos 1990b; Kingman-Brundage 1991)
• plans and budgets which are consistent with the service goal and vision of improving the patient’s health and returning them to work (Baum 1990; Murphy and Ruffin 1993).

Despite the absence of these expected aspects of a service system, service quality was being achieved nonetheless in some instances. Service quality management indicators were presented in Section 4.7.2. Those service quality management indicators which were not uniformly perceived as present in the health service
organisation were highlighted in Table 4.8. Table 4.9 presented the barriers to service management quality of role conflict and role ambiguity.

*Roles of health professionals.* The professional culture of health care personnel gives rise to their norms of behaviour. Socialisation to the professions begins with education, observing role models which is then reinforced by a formal code of ethics (Davis 1994). The *perceived role* of the professional comes in part from their culture and the fact that all new entrants to the profession are socialised to this culture. The responsibilities and priorities of each professional group are negotiated between stakeholders from the basis of their professional position. The professional position forms the basis of their contribution to the service for the patient. To provide quality service, health care providers need to *move to a partnership model* inherent in a service quality approach between all stakeholders (Elsesser 1988; Young 1995). This moves away from historical or traditional service delivery where the physician or health care provider decides for the patient, and the patient’s presumed trust and confidence replace the need for consent (Hult and Lukas 1995).

This research found that service system did not consistently assist service providers. There was found to be a lack of process designs, plans and budgets. Service quality was achieved through the independence of the patient and health care professional rather than conformance with the formal service system. A partnership model may not always be implemented to deliver service quality. This is *inconsistent* with the service quality literature.

*How does service design affect service quality?* The service design found in the research setting *conforms* with the dimensions found by many other authors in professional health care services (Haywood-Farmer 1987; Surprenant and Solomon 1987; Bateson 1991). Services characteristics include a high degree of contact and interaction, high participation and labour intensity of the professional and a high degree of service customisation. The service design was complex and highly varied, resulting in service quality being difficult to predict. Little opportunity existed to prescribe service specifications that would *consistently* deliver quality, such as, for example using treatment protocols. A personalised or customised service is more expensive and some control of the service is relinquished to the patient (Chase 1978).
What is the potential for 'service scripts' to improve quality? As noted already respondents spoke about communication and information needs. This research confirmed that service scripts can assist in improving service quality through managing expectations and perceptions (Parasuraman, Zeithaml and Berry 1985; John 1992; Boulding et al. 1993). However, this research also suggests expanded use of scripts to include patient education. This would offer a means of maximising patient participation and decreasing patient confusion about services. An expanded service script also has the potential to add to service quality by fostering trust in the service relationship. This could commence with specification of the responsibilities of professional and patient. Service scripts are considered further in Section 5.5. A contribution this research makes is to show the potential value of scripts in patient education.

In summary, the respondents reported difficulties with existing service management. Yet some patients had successful health care experiences even though others did not. Previous research suggests that an integrated service design, with a culture orientated towards quality, will promote service management for quality (Gronroos 1978; Berry 1981; 1985; George and Gronroos 1991).

It follows that any integrated service design would focus on the ultimate client, the patient, not the intermediary stakeholder (Shapiro 1988). Total delivered quality would then be determined by the quality inherent in the service system, the potential of the service providers and the character of service encounters (Solomon et al. 1985).

However, the health care system examined in this research was highly fragmented and loosely articulated. As a result, quality was found to come from one professional’s understanding of other stakeholder’s expectations and the use of customised communication to establish the priorities and goals of the service system as a whole. This complements and extends the body of knowledge in health care quality.
Quality in health service management requires:

- health care providers moving to a partnership model involving all stakeholders
- an understanding of each stakeholders’ role facilitated by external communication and socialising professionals and patients to the health service organisation
- service design incorporating the multiple dimensions of the professional health care service including
  - high degree of contact and interaction
  - high participation and labour intensity of the professional
  - high degree of service customisation
- expanding the use of scripts to include patient education to maximise patient participation and decrease patient confusion about the service
- using service scripts and organisational socialisation to set expectations and specify responsibilities of both professional and patient.

This research raises further questions which could be explored to better understand service management for quality. These include:

- Can service design incorporate professional latitude and customisation of service without relinquishing organisational control?
- How can expectations of many stakeholders be determined and managed simultaneously without a service encounter with each?

5.3 Conclusions about the research problem

This research highlights the:

- inadequacy of the application of existing service quality models to professional health services
- nature of service quality in professional health services.

The existing models of service delivery for quality, describing static situations, are inadequate to apply to professional health services. Professional health service has decentralised production with a complex and loosely articulated service delivery system. The service is further complicated by the payer being external to the service encounter. There is more than one ‘patient’ of the service. Further, the complexity of the service delivery yields sub-optimal quality outcomes and a greater outcome variance than desired. What has evolved in practice is a focus on the intermediate
clients (the professionals and payers), rather than a focus on the ultimate client (the patient).

Service quality in professional health services is multi-dimensional. It is focused upon a core element, the service encounter, which has to be managed with detailed knowledge of the total service system and also with great sensitivity towards the patient. The service encounter itself must deliver quality (see Section 4.7.4). Yet lying behind this, is management to promote quality in the service delivery system as a whole, while service delivery management requires the professional and the patient to successfully interact within a loosely articulated service system. This system involves more than one professional service provider.

5.3.1 Service quality in professional health services
This research found service quality requires the delivery of the quality indicators together with system management and design for service quality. These were discussed in detail in Section 5.2.1 and 4.7.4.

Service quality in professional health services requires:

- implementation and delivery of quality indicators, particularly a fusion of technical quality and customised communication
- active orientation and facilitation of patients to find their own solutions and to participate in the service delivery process
- professionals to have an ability to adapt rapidly and change priorities as necessary
- management and negotiation of stakeholder expectations
- implementation of a method of regular review of service goals and outcomes.

These service quality ‘attributes’ must be present across the stakeholders—the patient, professional service provider and payer—and requires communication between each. These ‘attributes’ must apply to the health service system as a whole.

5.3.2 Management for service quality
This research found management for service quality requires participation of all stakeholders. For the professional and the patient to achieve service quality they
must successfully interact within the loosely articulated service system. However, technical quality remains an important feature for quality in all business to business relationships among professionals.

This research highlights the need for service quality to be considered from the viewpoint of all stakeholders. Indeed, the research makes a unique contribution by incorporating the service quality needs of all stakeholders, some of which are external to the professional-patient relationship. This is unlike a distribution channel, where the relationships are linear and based on economic exchange.

In conclusion, from the analysis of the research questions detailed in Section 5.2 and 4.7, insights have emerged that link professional health service quality with a set of characteristics of each stakeholder, and also with organisational structures and processes that have to cope with diversity and change.

5.3.3 Contributions to the body of knowledge
This research makes several contributions arising from analysis of the research questions which can be justified as contributions, these are presented in Table 5.2.
<table>
<thead>
<tr>
<th>Contribution</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>patients reported that quality came from <em>their understanding</em> of their health condition and role in the service encounter (Section 4.5.1)</td>
<td>different emphasis as a quality indicator (service delivery) compared to the literature, reliability (service outcome) reported as most important in literature</td>
</tr>
<tr>
<td>physiotherapists reported that quality came from maximising patient participation and an opportunity to exercise judgement in customising the service for the patient (Section 4.5.4)</td>
<td>emphasises variation and customisation rather than predictability for management</td>
</tr>
<tr>
<td>the health service organisation, reported quality came from the professional accurately predicting the length of service, technical outcome and negotiating service closure (Section 4.5.2)</td>
<td>expanded definition of reliability and technical care quality</td>
</tr>
<tr>
<td>other health care providers, such as doctors, emphasised technical outcome and communication (Section 4.5.3).</td>
<td>business to business relationships among professionals, emphasise technical care as a quality indicator, health care adds customised communication</td>
</tr>
<tr>
<td>professional health service quality requires a greater emphasis on customised communication than most other services (Section 4.5.3 and 4.7.1)</td>
<td>expands the existing quality indicators to include customised communication as a high priority in health care</td>
</tr>
<tr>
<td>the unique feature of professional health services is the very high patient involvement (Section 4.5.3 and 4.7.1)</td>
<td>adds to the definitions of professional health services</td>
</tr>
<tr>
<td>marketing professional health services can facilitate patient ‘self efficacy’ (Section 4.7.3)</td>
<td>the emphasis of ‘self efficacy’ is new to professional health services marketing</td>
</tr>
<tr>
<td>time paced evolution into the management of professional health services facilitates service quality (Section 4.7.3)</td>
<td>application of time paced evolution is new to the theory of health services rather event paced change is evident</td>
</tr>
<tr>
<td>the particular type of patient participation in health care is self effacement and contributes to quality (Section 4.5.1)</td>
<td>patient participation can be conceptualised as self effacement in health care which is more than moving production to the patient as reported in the literature</td>
</tr>
<tr>
<td>service quality was achieved through the independence of the patient and health care professional rather than conformance with the formal service system (Section 4.7.3)</td>
<td>health service systems cannot be described using blueprinting as reported in the literature given the variability of patient and professional responses</td>
</tr>
<tr>
<td>service scripts can be expanded to include patient education and methods of maximising patient participation (Section 4.7.2)</td>
<td>potential of service scripts for patient education has not been full explored in the literature</td>
</tr>
<tr>
<td>quality comes from one professional’s understanding of other stakeholder’s expectations and the use of customised communication to establish the priorities and goals of the service system as a whole (Section 4.7.2 and 4.7.3)</td>
<td>complements and extends the body of knowledge in health care quality by reaffirming the importance of expectations but adds the method of delivery as important to quality</td>
</tr>
</tbody>
</table>
This research is further considered in the context of the contributions to theory in Section 5.4. Therefore, this research makes additional contributions to those presented in Table 5.2 and these are considered in Section 5.4.

5.3.4 Theory of service quality in professional health services
A major result of this research was theoretical insight concerning the organisational structures and processes that characterise successful professional health care services and, more broadly, pure services in general. First, rather than just communicating in a system prescribed way, the research showed how successful professionals combine a limited or ambiguous system structure with extensive informal interaction with other stakeholders. It is in this way that they achieve superior service quality for their patients. Second, it demonstrated how successful professionals understand the service offering through the 'eyes of the patient' and actively orientate and encourage participation by the patient in the service. Third, the research showed how successful professionals offer a combination of technical quality and customised service and develop this core competence at the heart of their professional culture. Fourth, an ability to adapt rapidly using associated communication to change priorities results in effective customisation of the service and, hence, acceptable quality of service as perceived by the patient. This is clear, for example, when health service goals require modification which this has to be negotiated and understood among several stakeholders. Taken together, these four features of quality management in health service highlight the need for service marketers and service marketing theory to take the complexity and sophistication of professional services into account more fully. Linear blueprinting and controlled service delivery systems are not universally applicable to service quality management.

The theory of service quality in professional health services can be conceptualised as a:

- model of service quality in the service encounter (Section 5.4.1, Figure 5.2)
- model of professional health service management (Section 5.4.1, Figure 5.3)
- process model of the formation of networks in professional health care (Section 5.4.3, Figure 5.4)
- model of network links in the professional health care (Section 5.4.3, Figure 5.5)
- model for strategic processes in the service system (Section 5.4.4, Table 5.3).
Several propositions arise from the theory generated and these require further research to test their causality. These propositions are:

- service quality indicators are technical care, customised communication, maximal professional and patient participation
- service quality indicators are professional's system knowledge and independence
- service quality is achieved with service management indicators of setting expectations and professional latitude to customise the service
- the process model of network development leads to stable relationships and achieves service quality for the patient
- the network links in health care deliver quality by implementing quality drivers and activity links between actors
- service quality is achieved with service integration by implementing quality drivers (see Figure 5.5)
- strategic processes in the service system increase stakeholder participation and service quality for the patient.

5.4 Implications for theory

This chapter has discussed the main results of this research in the context of the research questions and the findings with respect to the research problem. In this Section the implications for our theoretical understanding are discussed from four perspectives:

- services marketing (Section 5.4.1)
- professional services (Section 5.4.2)
- marketing relationships (Section 5.4.3)
- service quality strategy (Section 5.4.4).

This research has found both agreement and disagreement with the existing literature, developed four new adaptations of models and prompted a number of directions for further research. The findings and models are discussed under each of the four (Section 5.4.1 to 5.4.4) perspectives identified above. Findings specific to the industry and legislators are discussed in Section 5.5 and areas for new research are identified in Section 5.6.
5.4.1 Contributions to services marketing theory
This research contributes to services marketing theory by:

- supplementing the previous lack of research and theory in business to business relationships in professional services
- understanding the phenomena under research by interpreting what is success in the service experience
- identifying and classifying interrelationships between categories under scrutiny
- presenting a new adaptation of the model of service quality in the service encounter
- presenting a new adaptation of the model of service quality in professional health service management.

A primary contribution of this research is to outline an emerging service paradigm. This paradigm combines field insights into service marketing and service quality theory to describe services in which independence of the professional and client (patient) is necessary to achieve service quality. This perspective contrasts with systems thinking in which the organisation is considered static and service quality is achieved by ‘prescribing’. Blueprinting is one method of ‘prescribing’ a service. Blueprinting is a means of describing a service as an interdependent, interactive and sequential system rather than as disconnected pieces and parts (Zeithaml, Berry and Parasuraman 1988). Therefore, it concisely or prescriptively documents the service process so as to promote consistency and efficiency in execution, and ultimately a consistent service quality (Shostack 1981; 1984; 1987; 1992). It is the consistency in execution that contrasts with this research.

It follows that the findings of this research contrast with the proposition that services can achieve high levels of quality through blueprinting. Blueprinting is not appropriate in the context of health services because a customised and flexible approach rather than a sequential approach is necessary. The services are not necessarily delivered in a linear sequence; rather the services can be iterative in nature. Overall, this research extends service quality research beyond evaluation of the service encounter and service delivery system to embrace associated organisational practices (see below). This research also offers insight into the benefits obtained from thinking strategically about core competencies and about network interactions (see Section 5.4.3).
This research contributes to service marketing theory by supplementing the previous lack of research and theory in business to business relationships in professional services which has been identified by others (Haywood-Farmer and Nollet 1993; Palmer and Maani 1995) (see Section 3.3).

These findings add to services marketing theory by contributing a deeper understanding of the phenomena of this research. The primary objective was to understand the phenomena under scrutiny and interpret respondents' experiences and beliefs in their own terms (Parkhe 1993). Section 4.5 presented the respondents' views and Section 4.7.3 analysed these views in terms of what is success in the service phenomenon. This success was achieved by supplementing the limited formal structure with extensive informal communication and actively orientating and encouraging participation of the patient in the service. This understanding adds to existing theory by emphasising the role of the client (patient) in determining the meaning of service quality and success. The patient contributes to their own service quality by actively participating and choosing between alternatives; actioning their 'self efficacy'. At the same time, the professional may better contribute to service quality by acting as a coach and teacher rather than merely providing an 'expert' solution.

A contribution to service marketing theory is the identification and classification of interrelationships between the categories under scrutiny in this research. In pure services, such as professional services, it is hard to separate and categorise elements of service quality. However, inter-relationships between the categories of technical care, communication and participation were identified. Causal relationships cannot be drawn with the methodology used in this research which did not test the classification of interrelationships (see Section 5.7). Acknowledging this limitation, the quality indicators were applied in network links (see Figure 5.5).

This research makes a contribution to the literature in service marketing by considering and synthesising four stakeholder group views of quality. Each stakeholder group negotiates for its own satisfaction and delivery of quality. This research adds to the body of knowledge by providing four views of a health service and provides a method of incorporating all these four views in the service encounter (see
Sections 4.6 and 4.7, particularly Table 4.11, and Figure 5.5). Practical implications for the professional and service system are considered in Section 5.5.

An appropriate model of service quality would explicitly include what patients see as service quality. The service quality models in the literature which do consider clients’ views developed by Berry, Zeithaml and Parasuraman (1985), Gummesson (1993) and Gronroos (1984b) do not specifically consider quality in health service. An appropriate model of service quality is required. This research contributes to services marketing theory by presenting adaptations of existing models to health service quality.

Models of service quality in the service encounter. Given the tendency of some existing service quality models to focus on static or single service encounters, those models are inadequate to describe complex health services. Previously, Section 2.2.5 (Figure 2.3.) presented service quality models found in the literature. Figure 5.1 summarises these.

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>What is provided</td>
<td>= physical quality</td>
<td>= technical quality</td>
<td>= outcome quality</td>
</tr>
<tr>
<td>How it is provided</td>
<td>= interactive quality</td>
<td>= functional quality</td>
<td>= process quality</td>
</tr>
</tbody>
</table>

Figure 5.1 Summary of the major theoretical perspectives on perceived service quality (Walbridge and Delene 1993, p. 8), adapted from Swartz (1989)

The dimensions of what is provided and how it is provided presented in Figure 5.1 can be applied in this research. The model of service quality in the service encounter for this case study extends the work presented in Figure 5.1 in the manner presented in Figure 5.2 and Figure 5.3. The highest ranking quality indicators found in this research are included in the new model but all quality indicators form part of perceived service quality as listed in Section 5.2 and presented in Table 5.1. This
research probes and extends these concepts and applies the dimensions of quality to service management.

<table>
<thead>
<tr>
<th>Dimensions of quality</th>
<th>Quality indicators (ranked highest in this research)</th>
<th>Expectations</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is provided</td>
<td>technical care</td>
<td>ideal or desired service</td>
</tr>
<tr>
<td></td>
<td>customised communication</td>
<td></td>
</tr>
<tr>
<td>How it is provided</td>
<td>participation by patient and provider</td>
<td>satisfying encounter</td>
</tr>
</tbody>
</table>

Perceived service quality

Figure 5.2 Model of service quality in the service encounter

In Figure 5.2 dimensions of quality, quality indicators and expectations are considered part of the adapted model of service quality in the service encounter. The model will now be considered in more detail.

What is provided. Technical care in this research can be equated with Gronroos’ (1984b) terminology of technical quality and the terminology used by Berry, Zeithaml and Parasuraman (1985) of outcome quality. However this research finds that the indicator, technical care, does not stand on its own. Instead, it is ‘fused’ with customised communication. For this research, technical and outcome quality have functional quality elements. Service quality is a fusion of technical care and customised communication. The fusion comes from communication forming the expectations of technical care. For example, a patient’s condition may be explained as never to be pain free given its nature. Therefore a technical improvement in function of 50 per cent could be considered a good technical outcome, rather than being pain free.

How it is provided. Using the terminology of Gronroos (1984b), participation by patient and provider is functional quality (see Figure 5.1). However participation does not equate with Berry, Zeithaml and Parasuraman’s (1985) terminology of ‘process quality’. Instead, the how it is provided agrees with the work of Lehtinen and Lehtinen (1991) on interactive quality, as the finding of this research is that interactive quality is achieved by participation of the patient with the professional
health service provider. For this research, interactive quality is the joint participation of patient and provider.

Expectations. The model presented in Figure 5.2 emphasises the role of expectations as integral to patient quality perceptions. The management of patient expectations is not well developed nor generally, even applied in the health care environment. This research concludes that management of patient expectations is important both because of the high involvement by the patient and because of the desirability of patient participation in professional health services. Further, patient expectations impact directly on the cost of services provided. For example, patient expectations may exert pressure for supplementary treatment which may only be of minimal technical benefit. Good quality communication is imperative to achieve a congruency of expectations as well as being important in the overall evaluation of quality. A satisfying service encounter will be achieved by meeting or exceeding the patient's expectations. This means management of service quality requires attention both to what is provided and how it is provided. This is supported by the extended model below.

Model of professional health service management. The management of expectations by the professional is an important part of the service encounter. Equally, the management of expectations by the service system in a broader context is also important. Figure 5.3 extends Figure 5.2 to present a more complete model of service quality management by adding external communication and professional latitude so that the health care professional may respond to patients flexibly.

The model of service quality in Figure 5.2 has quality in the service encounter as its focus (columns 1, 2 and 3), acknowledging that a management approach which supports and facilitates service quality is needed. This management approach includes communicating expectations of the service to both intermediate and end users and allows latitude for professionals to customise the service (right hand column in Figure 5.3). This finding is consistent with the insight of Carlzon (1987) who emphasises the need of service providers to respond flexibly to their customers needs.
<table>
<thead>
<tr>
<th>Dimensions of quality</th>
<th>Quality indicators (ranked highest in this research)</th>
<th>Expectations</th>
<th>Professional health service management</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is provided</td>
<td>technical care</td>
<td>ideal or desired service</td>
<td>external communication to set expectations</td>
</tr>
<tr>
<td></td>
<td>customised communication</td>
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<tr>
<td>How it is provided</td>
<td>participation by patient and provider</td>
<td>satisfying encounter</td>
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</table>

**Perceived service quality**

Figure 5.3 Model of service quality management

The adapted models of service quality developed by this research complement and extend the current debate about adaptive management style (Heifetz and Laurie 1997). The emphasis is on helping stakeholders resolve problems, rather than centralising decision making in a service system (James 1997). The adaptive style of management seems *more appropriate* to health services.

Contributions to service marketing theory this research makes is:

- service quality is not static and cannot be blueprinted in health care services
- success in the service experience is achieved by supplementing the limited formal structure with extensive informal communication
- the role of the patient is important in determining the meaning of service quality and success.

These adapted models developed by this research have implications for service marketing and management generally. This research *contributes* to service quality theory by presenting two adaptations of models of service quality. The adapted service quality models are multi-faceted and incorporate new elements. They embrace what is provided, how it is provided, the management of expectations and professional latitude available to customise the service.
5.4.2 Contributions to professional services theory

This Section presents the contributions this research makes to professional services theory by:

- describing service quality when the payer is outside the service encounter of professional to patient
- presenting a new quality indicator of system knowledge and network development, for the professional health service provider.

The existing models of quality found in the literature are inadequate to fully explain service quality in professional health services. In this research, there are independent operators with varying levels of system knowledge and different service indicators. The context of previous research has, for the most part, been very different.

In health services, the delivery sequence is interrupted. Typically, the patient receives a linked series of service encounters rather than just one. This gives rise to greater complexity and uncertainty than in the accepted models. This complexity and uncertainty is an unavoidable part of the service encounter and service relationship. If there is poor communication between the stakeholders, the success of the service encounter, is to some extent, left to chance. This, in turn, implies managerial complexity to provide service quality. Added to this complexity is the fact that the payer may be outside or removed from the service encounter and service delivery altogether. In this research, the payer lay outside the service delivery, in the insurance industry (WorkCover).

The potential result of such service complexity on the client (patient) is suboptimal care and, therefore, high perceived risk and uncertainty. This research acknowledges the impact of the payer when the payer is outside the service encounter between professional and patient. It is hard to achieve congruence of objectives amongst stakeholders and, in particular, achieve congruence in patients needs. For example, quality to an insurer could be reduced costs and, therefore, less service provision; which may not be in the best interests of the patient.

In addition, a new quality indicator was identified; namely that of system knowledge and participation in network development. In the health care system under study,
networks influence outcomes and perceptions of quality (see Sections 5.4.3 and 5.4.4). The patient experiences the production process, in part, on the basis of their own participation. Therefore patients, like other stakeholders, contribute to service quality when they demand it or create it by participating in the service system and the service encounter. All stakeholders' behaviour is important in creating service quality as was mentioned previously in Section 5.2.

The definitions of professional services found in the literature have been reaffirmed. However, in the professional health care service, the customisation of the service requires universally wide latitude for the service provider to respond to patients' needs. This was also discussed in Section 5.2.1. Most quality indicators found in this research correspond with the literature but with an emphasis on a fusion of technical care and customised communication (see Section 5.2).

Contribution to professional services this research makes is:

- that professional services have a high involvement focus which emphasises the need for communication to manage expectations
- an understanding and explanation of quality indicators which are a fusion of technical and non-technical elements, incorporating service encounter and service management quality indicators
- how service quality in professional service delivery is achieved when the service system is poorly articulated with many independent stakeholders
- that communication in professional services is required across and within projects to share and achieve service goals and outcomes
- service quality may be achieved by incorporating the needs of all stakeholders when the payer is external to the professional-patient relationship.

In summary, the contribution to professional service quality theory is that professional relationships should not be prescriptive. The perspective of the patient has to be fully appreciated. Identification and classification of the interrelationships contribute to our understanding. Successful professionals have a fusion of technical quality and customised service as their core competence and this is at the heart of their professional culture. These findings may well be applicable to many other professional services.
5.4.3 Contributions to relationship marketing theory
This Section presents the contributions this research makes to relationship marketing theory by:

- identifying neo-relationship marketing and networks in health care
- presenting a model of the process development of networks
- presenting a model of network links in professional health care.

The management styles of health professionals to achieve service quality have been described in Section 5.2.3. This Section considers the additional actions of stakeholders in marketing relationships which deliver service quality.

In Section 2.3.4, marketing relationships were considered and definitions provided for relationship marketing, neo-relationship marketing and networks. In this research, the unit of analysis is still dyadic from a business’ perspective but is influenced by parties outside the buyer and seller relationship. Further, more than one dyad can be involved in any one situation. This fits the definition of neo-relationship marketing (Bowring-Greer et al. 1997). In addition, this research found networks amongst stakeholders (Saul 1989; Charan 1991; Bowring-Greer et al. 1997). Network theory is concerned with examining more complex structures, when the unit of analysis can be a single actor, a group of actors or a whole organisation.

The contribution this research makes is to identify neo-relationship marketing and networks in health care. Networks operate amongst the stakeholders in this research and are used by them to bring about a greater awareness of the roles and contributions of associated professional to the care of the patient.

A network’s strength is its ability to combine resources effectively to bring about human change, in this context, health care quality for the patient. This research has shown that access and ability to form and participate in networks may not be available to all stakeholders. Moreover, network development was hit or miss when stakeholders tried new providers or different treatment techniques. Networks were reported as continually changing and evolving but the common goal was the improved health of the patient and their return to work.
A process model of the development of networks can be seen in Figure 5.4, which extends the work of Larson (1992) by modifying the existing literature in industrial networks and applying it to health care. The model seen in Figure 5.4 differs from the original work of Larson (1992) by ignoring the mutual economic advantage expected to be also seen in Phase 2 in Figure 5.4. In addition, the model seen in Figure 5.4 does not include the original Phase 3 of integration and control which incorporates operational integration, strategic integration and social control. These characteristics were not apparent for success in the service experience and, therefore, omitted from the modified model developed for this research.

Phase 1: Preconditions for exchange
- personal reputations
- prior relations
- professional reputations
  - reduced uncertainty
  - expectations and obligations
  - enhanced early cooperation

Phase 2: Conditions to build
- trial period
- one stakeholder is initiator
  - engagement rules and procedures
  - clear expectations
  - reciprocity
  - trust

Figure 5.4 A process model of the formation of networks in professional health care, modified from Larson (1992)

This research found widely differing levels of network development and implementation amongst respondents. In comparison to those with fully developed networks, some stakeholders (passive and watcher) had only developed loose networks which had not moved towards the building phase (Phase 2 in Figure 5.4) but had made attempts at exchange (Phase 1 in Figure 5.4).

Some stakeholders had not networked at all. They can be considered passive members, whilst those stakeholders who have opted out of the service system can be considered watchers (Welch et al. 1996a; Welch et al. 1996b). Passive and watcher
respondents limited their participation as stakeholders by not engaging in marketing relationship activities or participation in networks. As a result, they had foregone a means or mechanism of raising service quality for the patient. On the other hand, active participants sought other stakeholders as network partners, with their selection based upon reputation, trust, reciprocity and mutual interdependence. These participants then build the relationship (Phase 2 in Figure 5.4) and enhance communication and role congruence.

The more successful (active) service providers in this research had developed relationships with other stakeholders including mutually agreed methods of communication and understanding (Phases 1 and 2 in Figure 5.4), leading to role congruence. That role congruence adds to service quality is consistent with the work of Solomon et al (1985) and Zeithaml, Berry and Parasuraman (1988).

The contribution this research makes is in adapting a process model for the formation of networks in health care (Figure 5.4). This process occurs in two phases: development of preconditions for exchange; and development of conditions upon which networks are built.

Each stakeholder interacts with others in the service system and within their own professional network. The physiotherapist interacts with the patient and with other health care providers and also with the payers. Each activity link has separate quality drivers. The level of integration of the service system impacts upon each element of the network and all stakeholders.

This research contributes to our understanding of the actors, activities and quality drivers in a health care network. This is presented graphically in the overview of the relationships in the network arising from this research in Figure 5.5. This is a model for network links in professional health care, building on the information presented in Table 4.10 of quality drivers for this research.
The network diagram above draws upon the terminology used in Section 4.7.3. on the management styles of the health professionals. The network is dynamic, exhibiting interdependencies and connectedness. Each actor in this network is a stakeholder. The actors have a certain knowledge and expectation of other actors.
The activity links change, or exchange, resources (for example technical ability) through the use of other resources (for example communication used in reports paid for by the health service organisation). The resources are both human and physical and mutually dependent in the health care network.

This research contributes to our understanding by network and relationship marketing thinking directly to service quality. The interaction between stakeholders within networks is focused on delivering service quality as part of an overall service quality strategy.

The contribution this research makes to relationship marketing theory is:

- extending the application of relationship marketing and networks to achieving service quality
- identifying that neo-relationship marketing and networks operate in a professional health care setting
- finding that active participants sought other stakeholders with whom to network, based upon reputation, trust and mutual interdependence
- providing a model of actors, activities and quality drivers in a health care network
- demonstrating that high levels of collaboration and cooperation occur in stable relationships and evaluating that these relationships contribute to service quality
- linking service quality, rather than competitive advantage alone, to networks and relationship marketing.

5.4.4 Contributions to the theory of service quality strategy

This Section presents the contributions this research makes to the theory of service quality strategy by:

- identifying the potential of value adding the elements of strategic thinking such as core competencies to the health care literature
- presenting a model for strategic process to maximise patient participation.

Strategy in health services is the art of creating value for patients. In this research, professional health service quality requires a strategy focused on developing core competencies, actively developing networks and increasing stakeholder participation.
Core competencies are unique features which form the heart or core of a network (Gummesson 1994). This research found that the core competence in health care, which disproportionately contributes to service quality, is a fusion of technical care and customised communication.

In the business strategy literature, most core competencies impact on the client. In this research, core competencies involve the client (patient) directly and even require active patient participation in the service delivery process. In the strategy literature, core competencies are defined in human and technical terms (Prahalad and Hamel 1990). In this research, a precise parallel can be drawn with the service marketing literature which describes service quality as having both functional and technical elements (Gronroos 1984b). In this regard, the two literatures run parallel.

This research enhances our understanding of service quality by employing service quality indicators which are a fusion of functional and technical, similar to the fusion of human and technical terms seen in the core competencies of other business sectors. These service quality indicators can be seen as core competencies and, therefore, part of a business’s strategic intent, at the heart of the network (Hamel and Prahalad 1989). The service and strategy literatures reflect one another and can perhaps learn from each other in matters of service quality and strategic advantage. The core competence provides a focus for professional improvement and, simultaneously, a focus for system improvement as well.

This research extends the application of strategy theory by recognising core competencies in the voluntary participation of professionals in service relationships and networks. Specifically, this research identifies the unique core competency of the professional health care worker as a fusion or integration of technical competence and an ability to adapt, modify and meet the service goals through customised communication among a group of other professional stakeholders, as well as with the patient.

Following the work of Prahalad and Hamel (1990) and Stalk, Evans and Shulman (1992), core competencies may be used strategically to achieve a competitive advantage. The technical abilities of a business are comparatively easy to replicate
but the fusion of technical care and customised communication is harder to replicate and takes a longer time to achieve. This fusion of technical care and customised communication with an array of stakeholders can be applied to gain service quality advantage and, thereby, competitive advantage. Rather than using technical quality alone, which can provide a first mover advantage in a similar fashion to a new product or new treatment, the core competency can be used to competitively position the health service provider over an extended period of time. The ‘fusion’ can be communicated to external users, forming part of the strategic direction of the business or professional practice.

This research suggests that the core competency concept can be applied as usefully in the creation of service quality literature as in broader business strategy.

Active network development was considered in Section 5.4.3 and may form part of a service quality strategy. Strategic intent is a desired leadership position. The leadership position and strategic intent for the professional health service provider in this research can be developed from a core competency which includes a network, with services provided, through maximal participation and coordination of all stakeholders.

Increasing stakeholder participation. Strategic processes in the service system can be designed to increase participation by stakeholders and thereby enhance service quality. Table 5.3 provides a model of this strategic process, adapting the work of Mattsson (1994a), and applying it to professional services. The adapted model has applied the framework provided by the column headings of the original model (defining customer, attracting customer, involving customer and satisfying customer) to the context of this research.
Table 5.3 A model for strategic processes in the service system modified; from Mattsson (1994a)

<table>
<thead>
<tr>
<th>Defining the patient</th>
<th>External communication</th>
<th>Increasing stakeholder participation</th>
<th>Satisfying the patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>identifying patient needs</td>
<td>expectations managed to possible service outcomes</td>
<td>motivating and rewarding health care providers and patients</td>
<td>evaluate patients’ experience with the service</td>
</tr>
<tr>
<td>context specific quality indicators</td>
<td>expectations communicated which respond to quality indicators</td>
<td>maximising participation of patient with opportunities to continue health care after the service</td>
<td>evaluate patient reactions and perceived evidence of quality</td>
</tr>
<tr>
<td>core and additional services</td>
<td>services communicated to all stakeholders in appropriate language</td>
<td>facilitating participation through information systems</td>
<td>salvage critical incidents</td>
</tr>
<tr>
<td>service process design</td>
<td>service design tailored to expectations and quality indicators</td>
<td>re-engineering of processes</td>
<td>focus on learning</td>
</tr>
</tbody>
</table>

A strategy for raising quality adopting the model in Table 5.3 would require increasing participation from the stakeholders. The quality is increased as one moves down the table and, then, moving from left to right. The stakeholder who is participating maximally in the strategy would apply all elements of the strategy shown in Table 5.3. This would require defining the patient, using external communication to manage expectations, implementing methods to facilitate participation, then evaluating patient satisfaction with the service to provide feedback on the strategy.

The model aims to increase participation in health care services of all stakeholders. As such, it is an adaptation of the existing model of strategic process in the service system (Table 5.3).

The elements of strategy in Table 5.3 provide the context and indicators of service quality. In addition, the quality diagram presented in Figure 5.5 provides the activity links that need to exist between stakeholders to achieve service quality.
A discussion of active, passive and watchers as stakeholders has already been considered in Section 5.4.3. However, these three groups of stakeholders should not be seen as distinct groups, rather exhibiting a continuous range of participation. A given stakeholder might adopt any one role in varying degrees and this would likely vary with the situation. Therefore, a more passive stakeholder may only define the patient and not focus on external communication, participation or satisfaction of the patient or any other stakeholder. A very active stakeholder, in contrast, might define the patient, provide external communication and maximise patient participation and satisfaction.

This research confirms that stakeholder participation is integral to service quality. Further, this research contributes to theory about stakeholder participation by showing it as a continuous range of participation. Participation at any one time may be described as active, passive or watcher.

The contribution this research makes to the theory of service quality strategy is:

- the application of the core competence concept to the analysis of professional services quality
- identifying as a core competency involving the patient in health care services
- utilising core competencies to participate in service relationships and networks
- describing a unique core competency of the professional health care worker which fuses or integrates technical competence and an ability to adapt, modify and meet service goals through customised communication
- understanding that core competency can be applied in service quality in health services
- presenting a new adaptation of the model of strategic process in the service system
- confirming stakeholder participation is integral to service quality
- conceptualising stakeholder participation as a continuous range.

5.5 Implications for policy and practice
In Section 5.2 and 5.3 service quality was discussed in professional health services. Service quality relies on the professional to:

- develop a core competency which is a fusion of technical care and customised communication
• determine and modify patient expectations and negotiate closure of the service, including the use of time-paced evolution
• actively encourage the patient to participate in the service encounter and the service system enabling them to realise their self-efficacy
• combine a limited or ambiguous structure with extensive interaction with other stakeholders
• adapt rapidly and be able to change priorities
• develop system knowledge, relationship marketing and networks.

Service quality is facilitated when the professional and the health service organisation:
• use service scripts and organisational socialisation to set expectations and maximise participation, providing opportunities for stakeholder self-efficacy
• communicate across and within projects.

Service quality requires the patient to:
• actively participate in the service encounter, realising their self-efficacy
• actively participate in the service system.

The existing service system caused frustrations to all stakeholders approached in this research. Effective service quality strategies require marketing within the system to promote the indicators of quality and ideal service. The implications for policy and practice are that there is a need:
• to promote and understand ideal quality together with a climate of trust in the service system so that networks can flourish among members of different stakeholder groups
• for agreed methods of service quality evaluation which provide feedback on performance to each stakeholder group of every professional service profession.

The implications of these features for policy and practice are for all stakeholders to:
• set expectations and communicate them
• modify patient expectations
• give opportunities to maximise patient participation.

Networks contribute to delivering service quality. As networks are formed in a haphazard manner based on the reputations of the other stakeholders, networks can be promoted but not specified in any service system. The service delivery system is
neither prescribable nor linear; it is customised, iterative and complex. The many sided nature of true core competence within professional groups has been identified. It is not just technical care. Core competencies need to be built and in the future used for competitive advantage (Hamel and Prahalad 1994). Alliances need to be formed and networks developed. Relationship marketing activity is useful in the management of expectations of both the patient and the payer. There are multiple dyadic relationships within the network. Networks can be used to achieve good service quality and effective system integration.

5.5.1 Implications for health care professionals
The health care professionals must consider the totality of what is required to deliver ideal quality. They need to recognise this embraces much more than just technical knowledge, patient knowledge and detail in the service encounter. The conscious development of core competence which fuses the technical and functional elements, and incorporates system navigation and knowledge is required.

Management of the service encounter with the patient requires attention to quality indicators. In the first appointment, this could include:

- ascertaining the patient’s present situation and the reasons that brought them to the professional service provider
- orientating and setting the context for the patient
- explaining to the patient the professional-patient relationship and function of the multi-disciplinary health care team.

During the service encounter, the professional offers technical skills plus customised information to set the patient’s expectations and provide the opportunity for the patient to maximise their own participation in the process.

The professional’s knowledge and practice must obviously fit the setting in which they are working. This includes knowledge of relevant legislation and formal reporting and confidentiality requirements. They need to build trust with the patient. These approaches form part of an organisational socialisation for the patient.
Developing core competence of the professional for strategic advantage further requires identification of alliances that need to be formed. Relationship building comes, in part, from timely communication with other stakeholders.

The health care professional will need to communicate with each stakeholder involved in patient care. As part of a multi-disciplinary health care team, physiotherapists and other team members should find out about others who form part of the service experience for the patient, commencing and maintaining communication with them. Techniques such as time paced evolution (change and review keyed to the passage of time) will facilitate setting and modifying expectations.

The development of networks and their maintenance need to be actively pursued by the professional to achieve strategic advantage and service quality. Personal reputation plays an important role in the initiation of these relationships, whereas maintenance rests on the development of trust and reciprocity.

Identifying patient’s needs, using external communication, facilitating patient participation and satisfying the patient are all part of service delivery processes for the professional service provider and health service organisation. The quality indicators reported in this research were used by this author to develop industry standards of best practice guidelines for providers of physiotherapy for WorkCover, South Australia (see Appendix A).

5.5.2 Implications for the professional and health service organisation
The health service organisation requires a vision with patient focus. Some process design is required as a basis for professional service quality. This process design can include role definitions for stakeholders, methods to increase participation of all stakeholders and communication in a manner which is understandable to all stakeholders. Communication can also offer feedback to stakeholders on their performance within the service system. The service vision may provide leadership as to what is important to the health service organisation and, therefore, what is service quality for all stakeholders.
The development of a *positioning* statement of the role of physiotherapists in the overall health care organisation would enhance communication amongst stakeholders. A wider information system would assist all professional stakeholders and also patients in understanding how their various roles contribute to patient well being.

**Implication 1**

*Professional groups, in collaboration with the health service organisation, should consider developing positioning statements of the intended role of each category of health care provider and communicate this role widely so as to assist understanding by other stakeholders, including the patients themselves.*

*Participation.* Effective management of the service encounter encompasses the initial consultation and the provision of a program of self management. Candid educational communications among providers, involving the patient more in their own case or treatment, enhances the outcome (Brown et al. 1991). Development of patient-focused information is required using plain language. A patient information sheet could explain the role of each stakeholder. This research indicates that patients need take home educational information to understand what is going on. This might be provided in languages other than English, as required.

**Implication 2**

*Professionals and the health service organisation would benefit from the development of information on the role of the health professionals and the service system for ready distribution to patients.*

**Implication 3**

*Professional health service providers, particularly physiotherapists, should include in all treatments a program of patient self-management and a guide to the service system.*

**Implication 4**

*Health care professionals should adhere to ethical principles of confidentiality and of ensuring informed consent to facilitate building trust with the patient.*
Relationship of the health professional to the health service organisation. At present, there are many organisations in the system and conflicting opinions about optimal communication channels. This requires codification and, more probably, process redesign. There is a need to facilitate trust and cooperation between all professional stakeholder groups and the health service organisation. This requires circulation of an agreed definition of the role of each stakeholder.

Communication from physiotherapists to payers can be enhanced if information requirements can be anticipated. Health care professionals should be able to answer the following questions for each patient:

- What is going to be treated and how (treatment regime)?
- Why is it going to be treated that way (treatment rationale)?
- How long will it take (time frame)?
- What is the treatment goal (outcome)?
- What will you, the health professional, do if it doesn’t work?

Answers to the questions listed above are a simple and effective means by which the health professional and health service organisation can communicate and agree on service quality. The communication between the health professional and the insurer would be facilitated with the development of examples of appropriate communication to be circulated amongst all professional stakeholders (service scripts). These will need to be written in non-technical language for the claims agents, who lack medical knowledge.

Implication 5

*Health services organisations and professionals should develop examples of best practice care, communication, content and style.*

Pro formas were discussed by respondents as one means of communication but are currently rarely used. Data systems giving feedback to providers on performance — especially those that link data and performance related to the patient’s condition — are desirable. This would offer more information about the worker’s recovery and a deeper understanding of rehabilitation.
Implication 6
Health care organisations should encourage compliance with the service system requirements by prompt payment of fees following timely completion of forms and provision of information.

Implication 7
Health care organisations should use data systems as part of quality assurance and provider feedback.

To raise the quality of service of the health care organisation and realise the potential for effective and efficient rehabilitation of the injured patient there needs to be an overall system approach and integrated management strategy.

This research sought to discover What is quality in professional health service? How is it managed? In this case study, service quality comes from the professional and the patient jointly participating in the service, together with communication with the payer and other health professionals as required. To achieve high quality outcomes, both the professional and patient need to have open communication and an ability to manage the many different ways in which healing can occur.

5.6 Limitations of the research
The new adapted models arising out of this research possibly have general applicability to many professional services, but this is not tested or proven. The development of theory in professional health care services may well prove valid for other high involvement professional services. The method used for developing theory in this case was effective in aiding an understanding of professional health care services. This embedded case study method could well be used to explore other comparable professional services. However the method does not allow analytic generalisation.

The single embedded case study here did not allow for replication. This would have enabled theory testing rather than just development. The conclusions would have been strengthened with a multiple case study design appropriate to theory testing. The present results should only be generalised to other services with great care.
Sampling in this research was not statistically representational. The quality of the data took priority over quantity.

The single case study was of workers' compensation. Secondary benefits that arise for any stakeholder in this system — which are believed to have acted as a deterrent to participation by some — were not investigated. For example, fees for service provision may for some act as a disincentive to conclude the service.

Many respondents spoke of their frustrations and fears about the current service system. The responses given may, therefore, have been influenced by these fears and limited respondents willingness to give honest answers.

### 5.7 Implications for further research

Further research areas were presented in Section 5.3.4 and the end of Sections 5.2.1 and 5.2.2. However, this research provides ideas for further research in several other areas. This includes application of the research in different settings.

The research can be applied in different industries, countries and levels of management. Further research could be undertaken into the nature of expectation variables, what patients feel they should expect and will expect, the role of word of mouth, and the influence of personal needs and experiences. The role of marketing communication in forming expectations provides another area for further research.

The role of the patient in the service could be further explored. This could be examined to determine the ability of the patient to increase the service quality through information, education and training.

The development of mutual understanding among stakeholder groups could be researched, to include:

- exploration of the role of one stakeholder in greater depth to confirm initial findings of this research
- trialing methods of setting expectations of the service from the perspective of different stakeholders
- deeper understanding of satisfaction or quality assessments of the service
• research of network dyads and relationships in health care
• research of network roles in delivering technical quality

Testing of the theory in service settings would be a logical extension of this research. The theory developed in the model of network links (Figure 5.5) could be tested. Propositions arising from the model which are testable could be:

• Clients with a high level of participation in the service encounter achieve greater assessments of service quality than those clients with a low level of participation, when measured by client assessment of service quality and technical outcome of health care assessed by the professional health care provider
• Service quality in professional health services is directly and positively related to the management of client expectations when measured by client assessment of service quality
• The assessment of service quality by stakeholders is directly and positively related to the presence of developed networks between stakeholders
• Service integration is directly and positively related to service quality assessments between stakeholders when service integration is measured by stakeholder’s perceived congruency of their role in the service system.

This research in the area of professional health services raises questions as well as answers. It accordingly provides an opportunity for further research.

5.8 Summary
This research has studied a previously under researched corner of services quality assessment. The many findings identified have implications for theory and practice alike in the specialised and economically important sector of health care. Whilst more research is required to fully understand service quality in health care, the application of the research findings here might lead to improvements in practice.


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262


Appendix A

Publications

Lorraine Sheppard

best practice

management

guidelines

for providers of

physiotherapy

1998

A project supported by the University of South Australia and the Research and Education Grants Committee, WorkCover Corporation
Best practice

The best practice management guidelines for providers of physiotherapy presented below are based on the research presented in this report. The guidelines should be read in conjunction with the overall report and reference should be made to other resources such as those produced by WorkCover Corporation and the Australian Physiotherapy Association when considering these guidelines.

Best practice management guidelines for providers of physiotherapy can be considered in the following four sections:

- understanding the unique situation of workers' compensation
- physiotherapist management of the service encounter with the worker
- physiotherapist knowledge and practice
- communication from the physiotherapist to each stakeholder.

Understanding the unique situation of workers' compensation
Management of workers' compensation relies on:

- a concept of prevention
- a philosophy of rehabilitation
- education of the worker in self management
- education of employers and supervisors
- education of all health care workers and service providers involved
- injured workers knowing and understanding their rights and responsibilities.
The philosophy of rehabilitation used in this approach:

- early intervention
- increased activity
- improved function
- early return to work in a supportive work environment.

**Physiotherapist management of the service encounter with the worker**

The relationship and function of a multi-disciplinary health care approach should be explained to the patient from the physiotherapist’s perspective. This includes physiotherapists:

- introducing themselves and their position in the process of care
- explaining with respect and courtesy what they are going to treat
- following the principles of informed consent, letting the worker know they can see anyone else they choose
- having a practice policy on patient confidentiality and how information is released about workers, making these policies overt to the workers
- explaining any conflict of interest.

In the first appointment, physiotherapists should ascertain:

- the critical and inherent demands of the job
- what was expected of the worker in their job pre-injury, to know what the worker is to get back to
- what the worker is presently doing
- when and how the injury occurred and the impact of the injury functionally and psychosocially on the worker.

Physiotherapists should provide the worker with:

- information about their injury
- early intervention strategies where possible following early referral
- treatment plans, goals and likely outcomes
- appropriate negotiated and planned closure to treatment
- an exercise plan where appropriate
- a physical rehabilitation focus and goals
- information about their rights and roles in the process
- an explanation of each stakeholder’s role in the process
• effective communication with the use of interpreters when appropriate
• an environment and approach of a ‘return to work’.

Physiotherapists can facilitate participation of workers by:
• encouraging the worker to engage in cooperative decision making regarding their health care
• providing a program of self management for workers, with take-home information
• knowing who to refer the worker to when issues arise that are outside the physiotherapy treatment
• developing information for workers which uses appropriate language and explains the role of each stakeholder.

**Physiotherapist knowledge and practice**
Required knowledge and practice for a physiotherapist is:
• the *Workers Rehabilitation and Compensation Act* 1986 (as amended)
• the WorkCover Guide for Physiotherapists which outlines WorkCover policies and procedures
• Australian Physiotherapy Association education programs on management of the injured worker
• a communication structure to other stakeholders
• referral networks, for example for extra assistance in managing the return to work or perhaps to another physiotherapist
• confidentiality requirements when distributing reports
• the ‘stigma’ placed upon workers on workers’ compensation.

**Communication from the physiotherapist to each stakeholder**
As part of a multi-disciplinary health care team, physiotherapists and other team members should:
• find out who else is involved
• let the others involved know when they become involved as a physiotherapist
• communicate with them what’s happening with the worker’s care and what your involvement will be.
Care plans can be considered the umbrella term for the written and communicated treatment records and plans for an injured worker.

Care plans include the essential documents of:

- a clinical record produced by the health worker for each worker
- information about the diagnosis or clinical impression, health care objectives and relevant information on the worker’s health care status
- a treatment plan which includes details of problem identification, supporting rationale, treatment goals and objectives, progress notes, outcomes and a time frame summary and which takes into account the worker's needs and limitations
- a recorded discharge plan and plan for follow up
- evidence that the assessment and proposed treatment plan have been explained to the worker
- evidence of regular written or verbal communication between the physiotherapist, the physician and the case manager and evidence of cooperative planning in the management of the worker
- the physiotherapist's initial assessment (a copy of which should be sent to the treating doctor with appropriate authorisation), including a treatment plan which stipulates a projected time frame of treatment, rationale for treatment, expected outcome of treatment and an alternative approach if initial treatment is unsuccessful
- the physical demands of the injured worker’s job, based on a description of the job provided by the worker
- assessment of the injured worker's functional level in relation to their ability to perform the critical demands of the job.

The communication would be facilitated with the development of examples of what are:

- functional goals
- health care outcomes
- vocational rehabilitation goals
- total lifestyle and quality of life goals
- report writing structures expected.

Communication by the physiotherapist requires unique considerations for each group of stakeholders.
Physiotherapist to claims agent
Physiotherapists should be able to answer the following questions for each worker:
- What is going to be treated and how (treatment regime)?
- Why is it going to be treated that way (treatment rationale)?
- How long will it take (time frame)?
- What is the treatment goal (outcome)?
- What will you do if it doesn’t work?

Physiotherapist to doctor
The clinical activity needs from physiotherapists are to:
- provide a diagnosis and summary of their findings, and communicate it to the doctor
- devise a treatment or management plan, and communicate it to the doctor and the worker
- plan and provide a graded exercise plan where appropriate
- educate workers about their injury and give them a self management plan
- reconsider and manage an alternative plan if progress is not as expected.

Physiotherapist to rehabilitation coordinator
The physiotherapist, if requested, should:
- provide an opinion of what is being seen during treatment in an objective way, for example strength or range of movement of the worker
- outline the treatment planned and relate this to job demands, for example for a job jumping in and out of a truck include exercises which will facilitate the worker resuming this job
- predict possible outcomes of treatment
- give an opinion as to possible light duties the worker could undertake where relevant information is available.

In summary, physiotherapists will provide services for reasonable costs which are reasonably incurred (s32, Workers Rehabilitation and Compensation Act).
Appendix B

Satisfaction

Difference between service quality and client satisfaction

Expectations
Satisfaction, quality and expectations

Satisfaction and quality are often discussed in the same literature. As the focus of this research on quality, satisfaction was considered as a related discipline. The review of the literature on satisfaction, the difference between satisfaction and quality, and expectations is presented in this appendix.

Satisfaction
Early research indicated a widespread agreement that satisfaction is a reaction to a comparison between perceived product performance and some preconceived standard of comparison. However, but there is less agreement on which standard should be used (Liechty and Churchill 1979; Bloemer and Poiesz 1989). The clients’ perceptions of the service are either confirmed or disconfirmed having used the service. This is commonly referred to as the confirmation-disconfirmation paradigm (Oliver 1980; Oliver and Beardon 1983; Swan 1988; Spreng, MacKenzie and Olshavsky 1996). Confirmation results when the perceived performance matches the standards of comparison, whereas disconfirmation results from a mismatch. Confirmation and disconfirmation are expected to determine consumer satisfaction and dissatisfaction (Liechty and Churchill 1979; Churchill and Surprenant 1982; Oliver and DeSarbo 1988; Swan 1988; Yi 1990).

Many studies accept this paradigm although they hold different views as to comparison standards and interrelationships among the key variables (Oliver 1980; Cadotte, Woodruff and Jenkins 1983; Swan 1988). However, it is presumably the magnitude of the disconfirmation effect that generates either satisfaction and dissatisfaction (Churchill and Surprenant 1982; Oliver and DeSarbo 1988; Liljander 1994). Definitions of client satisfaction also differ in their level of specificity. Commonly employed levels include satisfaction with a product (Liechty and Churchill 1979; Churchill and Surprenant 1982; Swan 1988; Poiesz and Bloemer 1991), with a consumption experience (Woodruff, Cadotte and Jenkins 1983), with a purchase decision experience, with a salesperson, with a store, with an attribute of the service and with a prepurchase experience. The disconfirmation paradigm is not
being applied universally (Poiesz and Bloemer 1991). However, assessing client satisfaction is difficult. The three most important issues identified are sampling bias, appropriateness of measurement scales used and appropriate assessment of the drivers of satisfaction (Larsen et al. 1979; Danaher and Mattsson 1994; Lin and Kelly 1995).

Client satisfaction has been defined as "the consumer's response to the evaluation of the perceived discrepancy between prior expectations (or some other norm of performance) and the actual performance of the product as perceived after its consumption" (Tse and Wilton 1988, p. 204). This definition suggests that an evaluative process is an important element in client satisfaction (Yi 1990). The process approach spans the entire consumption experience and has been adopted by several researchers (Oliver 1980).

There are many theories of how satisfaction is achieved. Satisfaction with a service encounter is seen as a function of the congruence between perceived behaviour and the behaviour expected by role players (Solomon et al. 1985). Other authors suggest that satisfaction is an attitude which is determined by the disconfirmation or confirmation of client expectations (Oliver and Beardon 1983; John 1992). Moreover, satisfaction is not a static dependent variable but a cognitive model which is part of a dynamic purchase process which influences repurchase decisions (Oliver 1980; LaBarbera and Mazursky 1983).

Existing evidence tends to suggest that client satisfaction is different from, though similar or related to, other concepts such as attitudes, product performance and emotions (Yi 1990). Oliver's (1980) empirical work found that satisfaction was found to precede and influence postpurchase attitude. Others found satisfaction and attitude to be separate (Tse and Wilton 1988).

Definitions emphasise client satisfaction as either an outcome or a process. For some, it is an affective outcome associated with a cognitive comparison of the present situation relative to any one or a combination of several reference points. These points may be inherent in the past, future, other persons, or in some personal or external norm (Bloemer and Poiesz 1989). Client satisfaction is has a strong emotional component also. Alternatively, Danaher and Mattsson (1994) described
how satisfaction judgements evolve during the process. To maintain overall satisfaction, each encounter maintains its own satisfaction levels. Processes managed around the core encounters impact significantly on overall satisfaction (Danaher and Mattsson 1994).

A range of outcomes may be considered normal by a client (Woodruff, Cadotte and Jenkins 1983; Liljander 1994). Outcomes such as personal service have a direct influence on satisfaction and indirect influence through disconfirmation (Oliver 1993). The relative effects of each of these concepts vary somewhat from study context to context (Churchill and Surprenant 1982; Cadotte, Woodruff and Jenkins 1983; Oliver and DeSarbo 1988; Tse and Wilton 1988). However, more favourable outcomes result in high satisfaction ratings.

The nature of expectations and impact on disconfirmation varies when judgements are subjective. The actual product performance can be more important with durable products than with nondurable or convenience goods (Churchill and Surprenant 1982). Therefore, performance levels per se have a direct impact on satisfaction judgements in addition to their impact on disconfirmation (Churchill and Surprenant 1982).

Some authors believe that disconfirmation should be measured apart from expectation, as it has an independent, additive effect on satisfaction (Oliver 1977). It is difficult to manipulate disconfirmation independently of expectation and performance as it is defined as the difference between two variables. That is, disconfirmation is determined jointly by the combination of the expectation and performance manipulations (Churchill and Surprenant 1982). Disconfirmation is, however, an intervening variable in the satisfaction process (Oliver 1980).

Satisfaction has been operationalised differently by researchers. Churchill and Suprenant (1982) consider the full disconfirmation paradigm encompasses four constructs: expectations, performance, disconfirmation and satisfaction. Oliver (1980) proposes three constructs: expectation, performance and confirmation-disconfirmation. A number of studies have shown evidence for the model proposed by Oliver (Churchill and Surprenant 1982; LaBarbera and Mazursky 1983).
In summary, key variables that have been found to affect client satisfaction include expectation, disconfirmation, perceived performance and prior attitudes (Oliver 1980; Churchill and Surprenant 1982; Oliver and Bearden 1983; Oliver and DeSarbo 1988; Swan 1988; Yi 1990). The primary importance of performance in the satisfaction literature has been as a standard of comparison by which to assess disconfirmation (Churchill and Surprenant 1982). Clients update their expectations and perceptions during the service performance (Boulding et al. 1993). Satisfaction includes the elements of desire, expectation and performance perception (Singh, Verbeke and Rhoads 1996). However, information is a key mediator in comparison to standards but authors using various approaches do not agree on the basis of comparison (Poiesz and Bloemer 1991).

Many researchers do not distinguish between transaction (or encounter) satisfaction and more global measures of satisfaction. Cronin and Taylor (1992) for example, define and measure service satisfaction as a one item scale that captures the clients’ overall feelings toward the organisation. This ignores the multidimensional aspects of satisfaction, and does not include measures of encounter satisfaction. Other researchers recognise service satisfaction with the contact person, with core services experienced by the client and with the institution overall (Solomon et al. 1985; Oliver 1993). Others have suggested that overall service satisfaction is a “latent construct with multiple indicators at the attribute level” (Oliva, Oliver and MacMillan 1992, p. 86). The attribute indicators referred to reflect satisfaction with different encounters (with personnel, quotations, ordering, delivery and postorder services) within the same firm. Therefore, overall satisfaction is viewed a function of satisfaction with multiple experiences or encounters with the organisation (Bolton and Drew 1991; Bitner and Hubbert 1994).

Service encounter satisfaction has been defined as “the consumer’s dis/satisfaction with a discrete service encounter” (Bitner and Hubbert 1994, p. 76). This encounter reflects feelings about a discrete interaction and will result from the evaluation of the events and behaviours that occur during that definable period of time (Bitner 1990; Bitner, Booms and Tetreault 1990). It is believed that clients will distinguish their satisfaction with a particular encounter from their overall satisfaction with the organisation’s services (Bitner and Hubbert 1994). Overall service satisfaction is, therefore, based upon all encounters and experiences with that particular
organisation (Bitner and Hubbert 1994). Overall satisfaction includes multiple encounters and includes several interactions with one person as well as experiences with multiple contact persons (Oliva, Oliver and MacMillan 1992).

Dissatisfaction is not the reverse of satisfaction as operational events that satisfy are different to those that dissatisfy. Recent research has sought to identify some of the determinants of satisfaction or dissatisfaction (Johnston 1995a) and show that the causes of satisfaction and of dissatisfaction may be different (Singh 1990b; Johnston 1995a). In contrast, some authors contend that the determinants that tend to satisfy are the reverse of those that dissatisfy (Berry, Zeithaml and Parasuraman 1985). Kennedy and Thirkell (1988) found that the interrelationships between expectations, disconfirmation and satisfaction are different for satisfied and dissatisfied clients. Also, they found it to be different again between satisfied clients who reported negative disconfirmation and satisfied clients who reported positive disconfirmation.

Rust and Zahorik (1993) suggest different actions are required to move a client from dissatisfaction to satisfaction as opposed to moving from satisfaction to delight. Therefore, removal of problems early in the relationship, emphasising client satisfaction, is more likely to satisfy than trying to delight clients by differentiating the services offered (Johnston 1995a; Palmer and Maani 1995).

The way the client perceives the cause of a mistake seems to influence the degree of dissatisfaction expressed. If the cause is seen to lie outside the control of the firm the mistake is not expected to be repeated and less dissatisfaction is voiced. The degree of dissatisfaction is also affected by the explanation of a contact employee and their willingness to compensate (Bitner, Booms and Tetreault 1990).

Another influence on satisfaction evaluations is involvement. Loyalty is one outcome of client satisfaction. These are now considered followed by a review of satisfaction applied to health care.

Involvement. Satisfaction is also considered to be operationalised with different levels of involvement. Purchase involvement, also known as decision, response or instrumental involvement, represents the cost, effort or investment in a purchase
Involvement and satisfaction are believed to be linked. High involvement decreases sensitivity to preusage phenomena while low involvement causes the general tone of reusage (attitude) to influence postusage evaluations (Oliver and Bearden 1983). For Oliver (1980), low involvement enhances adaptation level effects while high involvement tends to negate these effects. High involvement increases sensitivity to service outcomes irrespective of an awareness of inputs. Low involvement, in contrast, is more likely to give rise to a halo of satisfaction across the buying process. Low involvement clients are less motivated to participate in service processes distinct from their prior evaluations (Oliver and Bearden 1983). High involvement may increase sensitivity to the actual performance experience itself (Bolfing and Woodruff 1988). Low involvement causes a client to elicit past experience and expectations to help formulate postusage evaluation (Bolfing and Woodruff 1988).

Satisfaction may be positively related to predictability for low involvement services and positively related to flexibility or personalisation in the case of high involvement services. Therefore, greater personalisation of services does not necessarily result in a more positive experience. Instead, the subjective outcome depends on the unique demands of the situation (Solomon et al. 1985). Several researchers have shown performance to be more important than disconfirmation in explaining satisfaction with goods and services (Tse and Wilton 1988; Bolton and Drew 1991).

**Loyalty.** Satisfaction is thought to be an immediate antecedent to quality judgements and then to loyalty (LaBarbera and Mazursky 1983; Bitner 1990). Yet others believe service quality is antecedent to satisfaction and then to loyalty. The literature remains inconclusive. Client loyalty has been found to be directly related to firm profitability (Hart, Heskett and Sasser 1990; Schlesinger and Heskett 1991; Rust, Zahorik and Keiningham 1995; Zeithaml, Berry and Parasuraman 1996). Less is known about the relationship of satisfaction and repeat buying to measures of loyalty (Oliva, Oliver and MacMillan 1992). However, satisfaction has been shown to be related to stated intention to repurchase (Oliver 1980; Bitner 1990) but an intention is only a tentative measure of behavioural loyalty, especially because follow-up studies are rarely performed (Oliva, Oliver and MacMillan 1992).
Health care. The many studies of satisfaction with a particular health service are usually as part of an evaluation of the service. Two main themes of research have been pursued:

1. sources and consequences of patient satisfaction and dissatisfaction
2. conceptualisation and structure (for example dimensions) of the patient satisfaction construct (Singh 1990a).

The drivers of satisfaction are often service specific. Patient satisfaction with health care is also related to several important factors based upon expectations. For example:

- quality of information sources
- health providers professional and technical competence
- health providers interpersonal relations and skills
- medical problem and the overall length of the service
- demographic background of patients
- satisfaction with the health service or insurance provider


Other satisfaction studies found interesting differences when applied to health care. Inpatients are more satisfied with the care rendered by physicians and nurses, as well as their overall hospital stay, than their family members and friends (Strasser et al. 1995). For outpatients, satisfaction with the service is significantly related to willingness to recommend the provider. Satisfaction came from information, convenience and interpersonal warmth (Peyrot, Cooper and Schnapf 1993). These factors are more important to patients than cost (Yucelt 1994). However, in assessing patient satisfaction surveys, Nelson (1990) found that insufficient attention is directed to patient satisfaction with technical competence, outcomes, service continuity or patient expectations. Nonsystematic approaches and weak methodologies similarly limit the value of many patient surveys (Hall and Dornan 1988; Nelson 1990). Most studies in health care do not operationalise service quality and refer to satisfaction ‘globally’.

A high frequency of dissatisfaction could also be associated with those professional services where the client-provider relationship is often one of dependency. However, Quelch and Ash (1981) found the dependency relationship does not
necessarily register the greatest frequency of dissatisfied purchasers. The most frequently cited source of dissatisfaction in their study was that “the service was provided in a careless, impersonal manner” (Quelch and Ash 1981, p. 83).

Studies in health care found that performance perceptions influence service quality perceptions. They also influence disconfirmation and satisfaction judgements (Taylor and Cronin 1994). One explanation for the mixed results is that clients of health services may use different decision models depending on their knowledge of medical practices. Health care is often characterised by the condition wherein clients lack the capacity to adequately evaluate the performance of the providers. Indeed, access to the provision of health care is increasingly becoming dependent on:

1. medical professionals as surrogate purchasers
2. third party reimbursement constraints (Taylor and Cronin 1994, p. 40).

In health care, patient expectations and standards of performance are negotiated as health care providers attempt to change unrealistic patient expectations of performance standards. As a result, satisfaction is a joint product of work done by both providers and patients. Satisfaction is a social process (Swan 1992).

Satisfaction in health care is not only concerned with global satisfaction but with particular facets of the system such as the hospital or health insurance provider. For instance, some patients may be very satisfied with their physician but very dissatisfied with their insurance provider (Singh 1990a).

Health care satisfaction studies have used elements of the confirmation-disconfirmation paradigm and evaluated expectations and service performance. Health care satisfaction studies have unique features. More studies in this area are considered below.

**The difference between service quality and client satisfaction**
Service quality and client satisfaction are considered by authors as either distinctly different, similar or components of each other (Parasuraman, Zeithaml and Berry 1988; Bitner 1990; Bitner, Booms and Tetreault 1990; Crosby, Evans and Cowles 1990; Bolton and Drew 1991; Cronin and Taylor 1992; Oliva, Oliver and MacMillan 1992; Oliver 1993). This debate forms a central discussion in the satisfaction literature
Churchill and Surprenant 1982) and is not a debate that has been conclusively resolved.

A widely held view is that a service quality definition can rest upon a client’s perception of their service quality. This might be determined by a comparison between service expectations and service perceptions (Andersson 1992). Yet, an accepted satisfaction theory arises from the disconfirmation theory. The disconfirmation theory holds that satisfaction is related to the size of the disconfirmation experience, where disconfirmation is related to the person’s initial expectations (Churchill and Surprenant 1982; Woodruff, Cadotte and Jenkins 1983; Oliver and DeSarbo 1988; Tse and Wilton 1988; Bolton and Drew 1991; Swan 1992). Therefore, service quality and satisfaction seem related and authors believe that expectations do play a key role in the development of patient satisfaction (John 1992).

Table B.1 summarises the main points from the following discussion on the difference between service quality and client satisfaction.

Satisfaction is thought to result from the comparison between *predicted* service and perceived service. Service quality refers to the comparison between *desired* service and perceived service (Zeithaml, Berry and Parasuraman 1993). These authors believe quality and satisfaction are distinctly different, particularly as client satisfaction appears to mediate service quality judgements and purchase intentions consistently (Taylor 1994a; Taylor and Cronin 1994). Taylor and Cronin (1994a) believe this should be particularly the case in health care, as the long term versus short term effects of marketing strategies cannot be ascertained. However, affective states and perceived performance have been shown to be strong and direct determinants of both client satisfaction and service quality of the service encounter (Boulding et al. 1993). LeBlanc and Nguyen (1988) reported a strong correlation between satisfaction and perceived service quality, and consequently drew the conclusion that the two concepts measure the same underlying construct. Therefore, the concepts are separate but related client judgements (Oliver 1993).
Table B.1 Overview of satisfaction versus quality debate

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Service quality</th>
<th>Quality and satisfaction</th>
<th>Author</th>
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<tr>
<td>comparison between predicted service and</td>
<td>comparison between desired service and perceived</td>
<td>distinctly different;</td>
<td>Zeithaml, Berry and Parasuraman (1993)</td>
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<tr>
<td>perceived service</td>
<td>service</td>
<td>satisfaction mediates</td>
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<td>short term, transaction specific measure</td>
<td>long term paradigm</td>
<td>different</td>
<td>Taylor and Cronin (1994a) Cronin and Taylor (1992)</td>
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<tr>
<td>superordinate concept includes quality influences, is situation specific and involves dimensions and antecedents unique to satisfaction judgements</td>
<td>enduring construct with specific quality referents</td>
<td>different</td>
<td>Oliver (1993)</td>
</tr>
<tr>
<td>satisfaction superordinate to quality, quality is a service dimension factored into a satisfaction judgement</td>
<td>quality is a service dimension, satisfaction may reinforce quality perceptions</td>
<td>integrated; relationship between the two is tentative</td>
<td>Oliver (1993) Cronin and Taylor (1992)</td>
</tr>
</tbody>
</table>

Some authors believe quality and client satisfaction are treated as synonymous terms (Brown and Swartz 1989; Lytle and Mokwa 1992). While service satisfaction and service quality are clearly related, researchers do not share common definitions of the terms, nor is there a clear understanding expressed in the literature of how the two relate (Fisk, Brown and Bitner 1993). Exploration and discussion of these issues certainly will continue (Rust and Oliver 1994).

A theme that is emerging is that satisfaction refers to the outcome of an individual service transaction and the overall service encounter. Service quality is the client's overall impression of the relative inferiority or superiority of the organisation and its
services and resembles the attitude concept (Parasuraman, Zeithaml and Berry 1988; Zeithaml 1988; Bolton and Drew 1991; Bitner and Hubbert 1994; Danaher and Mattsson 1994; Taylor and Cronin 1994). It is, therefore, possible to perceive service quality as good even though one specific transaction may have been unsatisfactory (Liljander and Strandvik 1993). Service quality can be considered an attitude toward the firm (and its services) and satisfaction as transaction specific which decays into an attitude (service quality) (Patterson and Johnson 1993). Therefore service quality is considered a long term paradigm (Cronin and Taylor 1992) whereas satisfaction is a short term, transaction specific measure (Taylor and Cronin 1994). Oliver (1993) believes quality is viewed as a more enduring construct having quality specific referents whereas satisfaction is a superordinate concept which includes quality influences, is situation specific and experience specific, and involves dimensions and antecedents unique to satisfaction judgements. However, allowance is needed for the subsequent reinforcing effects of satisfying service encounters in quality perceptions (Oliver 1993).

There is an interrelation and in many instances a correlation between: client satisfaction in each individual service encounter, the client's overall satisfaction with a particular service provider and perceptions of service quality (Bitner and Hubbert 1994). The causal ordering of these three factors is not clear from the literature (Bitner 1990; Bolton and Drew 1991; Cronin and Taylor 1992). There is also a lack of consensus on the definitions of these terms (Bitner and Hubbert 1994). However, Bitner and Hubbert (1994) found clients perceived service encounter satisfaction, overall service satisfaction and service quality as three distinct constructs in a study of airline services. The three constructs were also highly correlated. Service encounter satisfaction appears to be quite distinct from overall satisfaction and perceived quality. It seems that they should be viewed as three separate entities.

There is limited empirical research related to clients' evaluations of discrete service encounters and the relationship of these evaluations to more global constructs (Bitner 1990; Bitner, Booms and Tetreault 1990). Bitner (1990) showed in a controlled experiment that service encounter evaluation is highly correlated with a more global measure termed 'service quality'. This was operationalised as a form of overall attitude toward the service provider. Encounter satisfaction can also be considered as satisfaction with a specific transaction and can be distinguished from overall
service satisfaction, attitude, and quality based upon this narrower, more focused definition (Bitner and Hubbert 1994).

By placing primary importance on clients' perceptions in the evaluation of a service, one theory of client satisfaction treats service quality as a perceptual phenomenon identified through the eyes of the client (Chase and Bowen 1991). Understanding how clients are satisfied means understanding how perceptions of service quality are formed. Satisfaction can consequently be considered to influence the client's evaluation of service quality, purchase intentions and behaviour (LaBarbera and Mazursky 1983).

Other authors believe that satisfaction is also considered superordinate to quality, and quality is one of the service dimensions which are factored into a client's satisfaction judgement. Therefore, satisfaction may reinforce quality perceptions but only indirectly. The relationship between the two is tentative (Cronin and Taylor 1992; Oliver 1993). Satisfaction with low quality can exist whenever a person's expectations in a given situation are low and performance is adequate to the task. Emergency situations fit this scenario. Other scenarios fall into 'satisfaction as relief' with negative reinforcement, whereby a client is relieved of an aversive state. Health care fits this description (Oliver 1993).

One distinction between service quality and satisfaction is derived from Oliver's (1983) distinction between attitude and satisfaction. Swan (1988), believes satisfaction and attitude to be different. He argued that satisfaction is linked to a specific transaction while a client can form an attitude towards a product which has not been purchased or consumed. Perceived service quality is, by definition, always measured on services which the client has actually consumed.

Bolton and Drew (1991) suggested that service quality (attitude) is a function of a client's residual perception of quality of a service provider from a prior period, plus the client's level of satisfaction with the current level of service performance. Service quality is, therefore, strongly affected by current performance and the impact of disconfirmation is relatively weak and transitory. Bolton and Drew (1991) extended Bitner's (1990) ideas to include service quality as analogous to Oliver's (1980) attitude construct.
Zeithaml, Berry and Parasuraman (1993) proposed another important distinction between service quality and satisfaction as the operationalisation of the expectations component. When the client compares their predictive expectations with the performance of a specific transaction, the result is a satisfaction judgement. The attitude type quality perceptions, however, result from comparing 'should' expectations with service performance.

Satisfaction can be viewed as the antecedent to service quality. A client’s satisfaction with individual transactions, or service encounters, affects their dissatisfaction or satisfaction with the overall service experience (Bolton and Drew 1991; Bitner and Hubbert 1994; Parasuraman, Zeithaml and Berry 1994b). Satisfaction is, therefore, a result of a developmental process over several service encounters (Oliver and DeSarbo 1988; Tse and Wilton 1988; Swan 1992). However, authors have presented evidence that the causal order is in fact reversed (Cronin and Taylor 1992). Therefore, process may play a greater role than outcome in determining overall satisfaction (Brown and Swartz 1989; Danaher and Mattsson 1994).

As overall satisfaction, or service quality, is the result of satisfaction with a series of transactions occurring during the service process, providers have the opportunity to influence not only the client’s satisfaction with each part of the process but also the client’s threshold of tolerance for subsequent parts of the process. It is important for organisations to recognise their ability to manage clients’ tolerance and therefore satisfaction and dissatisfaction, through transactions (Johnston 1995b). Some researchers now believe that there is strong empirical evidence that service quality should be measured using performance based measures (Cronin and Taylor 1992).

The debate about quality and satisfaction has been based upon determinates of attitude, expectations and service performance given they may be the same or different. The confirmation-disconfirmation was originally used to explain satisfaction, it was then extended to explain service quality and is now used for both satisfaction and quality (Oliver 1993; McAlexander, Kaldenberg and Koenig 1994; Taylor and Cronin 1994). It is therefore understandable that the two constructs would share common elements.
Churchill and Surprenant (1982) argue that four constructs are of greatest import to the client satisfaction literature. These are:

1. expectations
2. performance or experience
3. disconfirmation
4. satisfaction.

The four constructs are listed in the order the authors thought they occurred in the client evaluation process.

Iacobucci, Grayson and Ostrom (1994) described several ways to understand satisfaction and quality. They concluded that the constructs should be displayed in a 'scrabble' form to show the interrelationships and complexities.

Oliver (1993) summarised the major distinctions between service quality and service satisfaction (given in Table B.2).

<table>
<thead>
<tr>
<th>Comparison dimension</th>
<th>Services quality</th>
<th>Service satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>attributes or dimensions</td>
<td>specific to quality judgements</td>
<td>potentially all salient dimensions</td>
</tr>
<tr>
<td>expectation referent</td>
<td>ideals, 'excellence'</td>
<td>predictive, norms, needs, etc required</td>
</tr>
<tr>
<td>experience dependency</td>
<td>not required can be externally mediated</td>
<td></td>
</tr>
<tr>
<td>other conceptual antecedents</td>
<td>communication</td>
<td>equity, attribution, emotions etc</td>
</tr>
</tbody>
</table>

Different conceptualisations and operationalisations of expectations (desired, ideal, predicted, experience-based norms, deserved, adequate) will be reviewed in the following sections.

Health care. In health care settings, satisfaction and service quality are currently difficult to distinguish, both conceptually and operationally (Taylor and Cronin 1994). Providing higher levels of service quality is a key strategy in satisfying patients (John 1992). Singh (1990a) suggested that patient satisfaction after a hospital visit is more appropriately conceptualised as a combination of several different and
distinct evaluations. He noted an apparent consensus in the literature that patient satisfaction is best represented as a multidimensional construct with evaluations influenced by three primary sources: physicians, the health service provider and insurance providers. The quality of administrative technical management is another factor that influences patient satisfaction (Nelson 1990).

Expectations may not have a significant influence on clients short term judgements in the purchase of health services (Taylor and Cronin 1994). However, results have been presented that clients' expectations play a direct role in the development of longer term service quality attitudes (Boulding et al. 1993).

**Expectations**

Expectations have been considered widely in the literature as part of service quality and satisfaction. Expectations reflect anticipated performance, and clients may use different types of expectations when forming opinions about a services anticipated performance (Churchill and Surprenant 1982). In fact, there is considerable variance in clients interpretation of ‘expectations’ leading to different results depending on the interpretations of the question being asked rather than the different attitudes or perceptions (Teas 1993a). However, much of the research has been of expectations of physical goods (Smith and Houston 1983).

Studies show that some standards of comparison are better than others at explaining satisfaction (Cadotte, Woodruff and Jenkins 1983; Bolfing and Woodruff 1988). The relationship between disconfirmation, performance and satisfaction also changes depending on the standard used (Bolfing and Woodruff 1988). The client may also use several standards simultaneously (Tse and Wilton 1988).

Recent views have held that consumer satisfaction is a post-choice process involving complex, simultaneous interactions that may involve more than one comparison standard (Cadotte, Woodruff and Jenkins 1983; Tse and Wilton 1988). Researchers have found support for the influence of both predicted and ideal expectations (Tse and Wilton 1988). Their results suggest that more than one comparison standard may be involved in the client satisfaction formation and “expectations and ideal appear to represent different constructs contributing separately to the client satisfaction.”
satisfaction-dissatisfaction formation process. The single standard model fails to represent the underlying processes adequately in comparison with a multiple standard paradigm” (Tse and Wilton 1988, p. 210).

Beyond the specification of experience as influencing expectations, research in marketing on the antecedents of expectations has been limited. Oliver (1980) ascribed expectations to three factors, the product itself, the context and individual characteristics.

Expectations fail to demonstrate a consistent direct relationship with either patient satisfaction or disconfirmation (Taylor and Cronin 1994), but may have an indirect role in the development of perceptions. Furthermore, the moderating role of involvement and inherent level of perceived risk should not be ignored (Bolfing and Woodruff 1988; Taylor and Cronin 1994).

A number of different operationalisations of expectations have been proposed. Miller (1977) identified four types of expectations—ideal, expected, minimum tolerable and desirable—as reflecting the clients’ subjective evaluation of their own product investment. He stressed the importance of knowing against which type of expectation the client compares the performance of the product. Norms as a comparison standard have been variously labelled as ideal and deserved expectations, normative expectations and desired expectations (Cadotte, Woodruff and Jenkins 1983; Woodruff, Cadotte and Jenkins 1983). These standards refer to what ‘should be’, whereas the predictive expectations in the confirmation paradigm mean what ‘will be’ (Yi 1990; Boulding et al. 1993).

Expectations have been considered either as a (deterministic) point or as a zone (Miller 1977; Zeithaml, Berry and Parasuraman 1993). The highest level of expectation is termed the ‘desired service’ (Zeithaml, Berry and Parasuraman 1993), and the lowest level has been conceptualised as a ‘minimum tolerable’ level (Miller 1977) or ‘adequate’ level (Zeithaml, Berry and Parasuraman 1993). The difference between the desired and adequate level is defined as the zone of tolerance (Zeithaml, Berry and Parasuraman 1993). The zone of tolerance is considered later in this section. In the following paragraphs, a number of other conceptualisations of
expectation which fall between the desired and adequate level will be discussed. These are desired and ideal service, predicted service, norms based upon experience and deserved service.

Desired and ideal service. Desired service is operationalised as what the service should be, that is, the types of expectations which are measured by models such as SERVQUAL (Zeithaml, Berry and Parasuraman 1993). Desired service is a blend of what the client believes can and should be (Zeithaml, Berry and Parasuraman 1993). Desired service is similar to what Liechty and Churchill (1979) view as the level of service the client ought to receive, or deserves given a perceived set of costs. It is a normative expectation of future events (Boulding et al. 1993).

Desired service is thus defined as similar to the ideal and to the deserved standard. However, as ideal and deserved are conceptually different, it is difficult to see how they can be blended into one. It is possible in some instances, as for any of the standards, that these expectations would be equal (Liljander and Strandvik 1993). Liechty and Churchill (1979) also differentiated between ideal and deserved. These authors compared Miller’s (1977) four conceptualisations of expectations to their applicability to services. Further these authors argued that the minimum tolerable and deserved expectations are best suited for services, while the ideal expectations are only weakly appropriate for services because services are not easily quantified or averaged.

Boulding et al. (1993) also treat ‘should’ and ‘deserve’ as synonymous. They contend that clients form “expectations about what should happen in their next encounter, that is, the service that clients feel they appropriately deserve” (Boulding et al. 1993, p. 5). However, Boulding et al. (1993, p. 5) states that these “should-expectations are different from the ideal standard used in service quality studies”. The ‘should expectations’ resemble the equity standard and are not as stable as ideal expectations.

The client may use an ideal product as a standard (Miller 1977; Tse and Wilton 1988), although Tse and Wilton (1988) found that ideal expectations had only an indirect negative effect through performance on satisfaction.
Predicted service. Most of the studies within the disconfirmation paradigm have defined expectations as a prediction of future product performance (Oliver 1980; Swan 1988; Swan 1992; Boulding et al. 1993). Predictive expectations have been found to have a direct positive effect on satisfaction (Churchill and Surprenant 1982; Belfing and Woodruff 1988; Tse and Wilton 1988). Significant effects of expectations on perceived performance have also been found in several experiments (Oliver 1980; Churchill and Surprenant 1982). Churchill and Surprenant (1982) found that expectations, in addition to other variables, had a direct impact on perceived performance and satisfaction for an indoor plant but not for a video player. Oliver and Bearden (1983) found no relationship between expectations and satisfaction in their study.

According to Zeithaml, Berry and Parasuraman (1993) the measurement of this type of expectation is what distinguishes satisfaction from service quality. Client satisfaction results from a comparison of predicted service with perceived service. Predicted service is not the comparison standard clients use in service quality assessments. Instead, service quality assessments are a function of two other comparisons. Consistent with the services marketing literature, service quality assessments involve comparisons with that which is desired and adequate, rather than predicted (Parasuraman, Zeithaml and Berry 1985).

Norms based on experience. Liljander (1994) found previous experience with the service affects the evaluation of satisfaction with a transaction. Expectation can be constrained by being based upon the performance clients believe is possible. This performance is based upon past experience and is known as experience based norms because they captured both the ideal and realistic aspects of expectations (Woodruff, Cadotte and Jenkins 1983).

The sources of client expectations are less well documented in the literature. Cadotte, Woodruff and Jenkins (1983) discussed experience as a source of the expectation norm and pointed out the focal brand expectations may be but one of several norms that operate. They suggest that the norm may also be derived from the typical performance of a particular brand (the favourite brand or the last purchased or the
most popular brand). A second possibility is that the norm might be an average performance believed typical of a group of similar brands (a product type norm). They found these norms, which they called product norm and best brand norm, were consistently better at explaining variation in satisfaction than prediction of focal brand performance. The client may have experience with brands other than the focal brand, and this may affect the perception of the performance of the focal brand.

Three types of norm have been suggested; best brand, a product type norm and a brand norm (Cadotte, Woodruff and Jenkins 1983; Woodruff, Cadotte and Jenkins 1983). The best brand norm is the expected performance of the brand which the client believes is the best (it may be the same as the focal brand), the product type norm is the typical performance expected from competing brands of the same product types within a product class, and the brand norm is the typical performance expected from the same or previously used brand based on prior use. The brand norm is therefore similar to predictive expectations but does not have to be the same (Liljander and Strandvik 1993). Cadotte, Woodruff and Jenkins (1983) found these norms to be valid and useful concepts. Bolfing and Woodruff (1988) found that a focal brand model, favourite brand model, and product norm model differed in explaining satisfaction during high and low situational involvement. No big differences were noted for the high involvement situation but for low involvement the focal brand and favourite brand were better at predicting satisfaction.

The research on norms has largely been for products and it is uncertain how the previous literature would translate to professional health services.

**Deserved service.** The deserved level is a type of equity which involves an evaluation of the client’s inputs and outputs without any comparison. According to Miller (1977), the deserved level “... reflects what the individual, in the light of his ‘investments’, feels performance ‘ought to be’ or ‘should be’”. It may be the same as, or lower or higher than, predictive expectations. Although the deserved level has been equated with the equity theory (Tse and Wilton 1988), Liljander and Strandvik (1993) considered them conceptually slightly different. Tse and Wilton (1988, p. 206) operationalised ‘equity’ as “performance that should be reasonably expected if you invested $50 of your own money in purchasing the product”. Therefore, the input or outcome was not compared with another person’s input or outcome. Liljander and
Strandvik (1993) determined this as expectations and perceptions of a deserved level. Tse and Wilton (1988) did not find any relation between this standard and three dependent variables, and drew the conclusion that 'equity' is not a good operationalisation of a comparison standard. Also Liljander and Strandvik correlated overall product level ratings and average attribute ratings for 'equity', predictive and ideal expectations, and found only a very small significant correlation (0.26) between the overall ideal rating and the average attribute 'equity' rating. Liljander and Strandvik (1993) replaced their use of equity with deserved and contended that ideal and deserved as standards are conceptually different constructs.

Equity theory has been proposed as a possible standard of comparison (Tse and Wilton 1988). The client compares their investments and outcomes with a relevant other, such as a friend or dealer. If the client feels that the investment and outcome are not in balance (the deal is not fair), they will feel distressed. This feeling of distress has been compared to a feeling of dissatisfaction (Swan 1988; Liljander and Strandvik 1993). Equity and disconfirmation are therefore two independent variables (Swan 1988).

Desired and deserved service. A positive relationship exists between the level of personal needs and the level of desired service. A clients' personal philosophies about service provision and their expectations of most service providers elevates the level of desired service (Zeithaml, Berry and Parasuraman 1993). Boulding et al. (1993) proposed improved assessments of service quality can result when clients' expectations of what a firm should deliver are managed downward. Liljander (1994) found in a field study of restaurants that deserved service is the best predictor of overall satisfaction with a transaction and intention to behave.

Minimal tolerable or adequate service. One author argued that this is the least acceptable level, "... it is better than nothing" (Miller 1977, p. 76). This level reflects the minimum level that the respondent feels that performance must be. The client will not be satisfied just because the performance is above the minimum tolerable. If performance is above the minimum tolerable level but below the predicted level, the client will feel dissatisfied. Zeithaml, Berry and Parasuraman (1993) have also
introduced the idea of minimum acceptable level into their service quality model. They believe:

Although clients hope to realize their service desires, they recognise that this is not always (or even usually) possible. We define this lower expectations as adequate service, the level of service which the client will accept. This level of expectation is comparable to Miller’s (1977) minimum tolerable expectation, the bottom level of performance acceptable to the client, as well as Woodruff and colleagues’ concept of experienced based norms” (Zeithaml, Berry and Parasuraman 1993, p. 11).

It is unclear which type or types of experience-based norm the authors compare to the adequate service level. Miller’s (1977) minimum tolerable level is not similar to any of the experienced based norms proposed by Cadotte, Woodruff and Jenkins (1983; 1983). The best brand norm is perhaps nearest to the desired level. In a measurement of three brand and norms expectations for three different types of restaurants (Cadotte, Woodruff and Jenkins 1983), the best brand norm had consistently the highest rating and was different from other concepts. Brand expectations had a consistently higher mean than the product norm and brand norm, but these differences were only partly significant. The positions of the brand norm and product norm varied.

Zeithaml, Berry and Parasuraman (1993) also asked if the predicted service level can ever exceed the adequate service level. This statement is in opposition to Miller’s (1977) discussion of the minimum tolerable level. According to Miller (1977), the minimum tolerable standard should never exceed predictive expectations. This is logical as the client is not likely to choose a product which is below that which is minimumly tolerable, unless there is no alternative, or if some situational variables affect the choice. The minimum tolerable level does not even have to satisfy the client (Miller 1977).

According to Zeithaml, Berry and Parasuraman (1993, p. 22) “the influence of predicted service on service quality assessment is only indirect through its positive correlation with adequate service”. The authors offer no explanation for this proposition. Questions remain as to how predictions of the performance of a particular restaurant will affect the minimum tolerable level of restaurants in general.
Summary of standards of comparison. Liljander and Strandvik (1993) believe that it is better to use the concept ‘standard of comparison’ or ‘reference point’ for all of the concepts discussed. Many of the standards discussed cannot easily be called ‘expectations’. If expectation is used for these standards of comparison, then how these expectations are defined should be stated, especially how expectations are operationalised. It is common for the concepts discussed to have in common satisfaction or service quality as the result of a comparison between two or more constructs, even though the constructs themselves vary (Liljander and Strandvik 1993).

Liljander and Strandvik (1993) presented the different comparison standards and their possible positions on a scale diagrammatically (shown in Figure B.1).

![Diagram](image)

**Figure B.1 Different levels of comparison standards (Liljander and Strandvik 1993, p. 13)**

In Figure B.1 the standards to the left of the scale, of predicted service, deserved service and equity can be positioned anywhere on the scale. The predicted service in an expensive and exclusive private health facility, would be excellent and deserved excellent service for the high price paid. Equity may be positioned anywhere on the scale, as a deal may be considered fair on any service level. The standards to the right of the scale are likely to be positioned in the presented order from minimum tolerable at the bottom, to ideal at the top. Desired, excellent and ideal service may
be equal or different from each other. They are likely to be very near, or at, the top of
the scale. Liljander and Strandvik (1993, p. 13) also discussed the concept of brands:

The best brand about which the client knows may equal desired, excellent or ideal
service but it is more likely that desired service will be a 'dream service' which
exceeds the performance of the best brand. The best brand may also be nearer to the
product norm or brand norm than to the desired brand, depending on the client's
experiences with different brands. The product norm is likely to be found between
desired and minimum tolerable, but can vary between different services and different
client groups. Minimum tolerable and adequate service may also vary depending on
the service and client's preferences. For some clients, an adequate level may be the
same as the level of product norm, or even best brand, while other clients may accept
levels far below a typical service.

Zone of tolerance. Expectations and evaluations have more recently been considered
as zones, not as discrete points on a scale. A distribution of outcomes is possible
(Oliver 1980; Woodruff, Cadotte and Jenkins 1983; Kennedy and Thirkell 1988; Swan
1992; Zeithaml, Berry and Parasuraman 1993). This zone of indifference or latitude of
acceptance is applied to the outcome or satisfaction and not to each component in
the comparison between expectations and performance (Kennedy and Thirkell 1988;
Liljander and Strandvik 1993).

The extent to which clients recognise and are willing to accept heterogeneity is called
the zone of tolerance. The zone represents the difference between desired service
and the level of service considered adequate, can expand or contract (Berry and
Parasuraman 1991; Zeithaml, Berry and Parasuraman 1993)

The zone of tolerance has been applied in the literature as a description of any of the
following:

1 an outcome state
2 a description of a range of preperformance expectations
3 the satisfactory range of in-process service performances (Oliver 1980; Woodruff,
    Cadotte and Jenkins 1983; Kennedy and Thirkell 1988; Berry and Parasuraman

The zone of tolerance is also applied to preperformance expectations or comparison
standards. Comparison standards may range from minimum tolerable (Miller 1977),
to ideal (Miller 1977; Mattsson 1992) with deserved (Miller 1977; Woodruff, Cadotte
and Jenkins 1983), desirable (Spreng, Harrell and Mackoy 1995) and adequate
(Zeithaml, Berry and Parasuraman 1993) or somewhere in between.
This process of evaluation may be complex because it comprises many simultaneous interactions that involve more than one comparison standard, a process of multiple comparisons which might occur either simultaneously or sequentially (Tse and Wilton 1988).

Poiesz and Bloemer (1991) suggested the need for an in-process evaluation zone that links expectation zones and outcome zones and believes there is overlap between the performance expectations zone and performance evaluation zone. Johnston (1995b) proposes that the zone of tolerance can be used as the unifying construct between expectations, performance and outcome (shown in Figure B).

<table>
<thead>
<tr>
<th>Preperformance expectations</th>
<th>Service processes</th>
<th>Delight</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than acceptable</td>
<td>More than adequate performance</td>
<td>Delight</td>
</tr>
<tr>
<td>Acceptable</td>
<td>Adequate performance</td>
<td>Satisfaction</td>
</tr>
<tr>
<td>Unacceptable</td>
<td>Less than adequate performance</td>
<td>Dissatisfaction</td>
</tr>
</tbody>
</table>

Figure B.2 Three zones of tolerance (Johnston 1995b, p. 48)

Adequate performance is defined as being within the performance zone of tolerance (Johnston 1995b). These evaluations of performance lead to an assessment of satisfaction, dissatisfaction or delight. This outcome will, in turn, affect behaviour and future purchase decisions as well as clients’ overall perceptions of the superiority or inferiority of the organisation and its services, in other words, its service quality (Bitner and Hubbert 1994). An outcome which is neither dissatisfying nor delighting is defined as being within the client’s outcome zone of tolerance (Johnston 1995b).

Researchers have found considerable variation in clients’ tolerance zones (Zeithaml, Berry and Parasuraman 1993). The zone of tolerance varies depending upon a number of factors, including company controlled factors such as price. It also may
vary for different attributes. Some clients are less tolerant about unreliable service than other service breakdowns. These fluctuations seem more related to changes in the adequate service level rather than a function of changes in desired service levels. Desired service is relatively idiosyncratic and unstable (Zeithaml, Berry and Parasuraman 1993). These researchers suggested that the concept of zone of tolerance represent the difference between an adequate level of service and desired level of service. Perceived service adequacy is the difference between adequate service and perceived service, while perceived service superiority is the difference between desired service and perceived service. Satisfaction is defined as the difference between predicted service and perceived service.

Intending to deepen the understanding of the nature and determinants of client service expectations, Parasuraman, Zeithaml and Berry (1994a) produced an expanded expectations model. The conceptual core of this model is that clients have a range of expectations, labelled the zone of tolerance, bounded by desired and adequate service levels.

The precise nature of expectations which determine satisfaction with services has not been specified in the extant literature. Much of the research has been about physical goods and product related expectations in the literature are inappropriate for this research. Expectations for professional health services is an area requiring further research.

In conclusion, satisfaction and quality together with expectations form a central discussion in the services marketing literature. The considerable debate about these constructs will continue to develop. For this research, client satisfaction is considered transaction specific which decays into an attitude of service quality. Service quality in turn leads to intentions or loyalty to the service provider.
Appendix C

Consent form
Information sheets
Letter to participants
Interview consent form (Sample only)

**PROJECT NAME:** Investigation of quality in private practice physiotherapy.

**INVESTIGATORS:** Lorraine Sheppard

**SCHOOL:** School of Physiotherapy, University of South Australia Physiotherapy

1. I have read the information sheet and the nature and purpose of the research project has been explained to me. I understand it and agree to take part in the interview.

2. I understand that I may not directly benefit from taking part in this discussion group.

3. I understand that, while information gained during the study may be published, I will not be identified and my personal comments will remain confidential.

4. I understand that I can withdraw from the study at any stage.

5. I give my consent for the interview to be audiotaped on the understanding that these tapes will be erased as described in the Information Sheet.

6. I have had the opportunity to discuss taking part in this interview with a family member or friend.

7. I confirm that I am over 18 years of age.

Name of Subject:........................................................................................................

Signed:......................................................................................................................

Date............................................................................................................................

I certify that I have explained the study to the volunteer and consider that s/he understands what is involved.

Signed......................................................................................................................

(Lorraine Sheppard)

Date............................................................................................................................

C2
Information sheet for in-depth interviews (Sample only)

PROJECT NAME:  Investigation of quality in private practice physiotherapy.

The purpose of this study is to identify what constitutes quality in physiotherapy private practice. Therefore options for assessing quality in physiotherapy private practice can be analysed.

The researchers would like know what you feel are important aspects of quality in physiotherapy private practice.

You are invited to take part in an interview to discuss quality issues in physiotherapy.

The interview will be for approximately one hour duration. To assist in the data collection, the interview will be audiotaped with your permission.

Your comments will remain anonymous and will only be used to help construct the research, after which time the tapes will be erased.

If you have any queries please do not hesitate to contact us on the telephone numbers below. The telephone number of the Chair of the Human Research Ethics Committee is also included should you wish to discuss general aspects of the study.

Lorraine Sheppard
Senior Lecturer
School of Physiotherapy
University of South Australia
Telephone 08 302 2424
Fax 08 302 2766

Mr John Hepworth
Chairman, Human Research Ethics Committee
Centre for Arts, Community Development and International Studies
Levels Campus
University of South Australia
Telephone 08 302 3965
Facsimile 08 302 3737
Facsimile 08 302 3737
Letter to participants (Sample only)

{Name}
{Address}

Dear < >

We are seeking your help with a survey being conducted by the School of Physiotherapy, University of South Australia to ask your views of quality in physiotherapy private practice.

The purpose of this study is to identify what constitutes quality in physiotherapy private practice from your perspective. We are interested in your honest opinions, whether they are positive or negative.

Your participation is entirely voluntary and will in no way affect your relationship with any patients or providers of physiotherapy.

Responses in the interview are anonymous and the system of coding used does not allow identification of respondents. The research report will discuss the findings but will not identify any individuals. If you would like to know the results of the research please let the interviewer know. The interview should take about no more than 1 hour to complete.

If you have any queries please do not hesitate to contact us on the telephone numbers below. The telephone number of the Chairman of the Human Research Ethics Committee is also included should you wish to discuss general aspects of the study. Thank you very much - we appreciate your help and look forward to receiving your reply.

Yours sincerely

Lorraine Sheppard
Senior Lecturer
School of Physiotherapy
University of South Australia
Telephone 08 302 2424
Fax 08 302 2766

Mr John Hepworth
Chairman, Human Research Ethics Committee
Levels Campus
University of South Australia
Telephone 08 302 3965
Facsimile 08 302 3737
Appendix D

Key informants: Terms of reference

Key informants panel
Key informants: Terms of reference (Sample only)

To facilitate the aims of the research.

To provide feedback regarding the research.

To be responsive to feedback regarding the research and its activities.

To provide advice and support regarding the needs of employees, employers, physiotherapists, WorkCover, exempt employers and other insurers.

To provide advice and support on the special needs of women, Non English speaking background people, workers with multiple difficulties who are injured and those with a low level of literacy.
Key informants panel

Ms Emma John, Program Manager, Workcover Corporation

Mr Jorge Navvas, Secretary, Health Services Union

Ms Robyn Rankin, physiotherapist and president, Australian Physiotherapy Association (SA Branch)

Ms Colleen Ross, Industrial Liaison Officer, Working Women's Centre, South Australia
Appendix E

Recruitment advertisements
Quality in physiotherapy private practice

Research which aims to develop Quality Guidelines for Providers of Physiotherapy is being conducted. The research aims to facilitate effective and efficient rehabilitation of the injured worker and advance their return to work. This project is supported by a WorkCover Research and Education Grant.

Help with the development of the guidelines is sought by asking members of employer associations' views of quality in physiotherapy for injured workers. The opinions of people who are involved with injured workers management are important, whether they are positive or negative.

Participation will be in the form of an interview lasting no more than 1 hour and responses will be anonymous.

If you are interested in participating please contact:

Lorraine Sheppard
Senior Lecturer
School of Physiotherapy
University of South Australia
Telephone 08 302 2424
Fax 08 302 2766
Quality in physiotherapy private practice

Research which aims to develop Quality Guidelines for Providers of Physiotherapy is being conducted. The research aims to facilitate effective and efficient rehabilitation of the injured worker and advance their return to work. This project is supported by a WorkCover Research and Education Grant.

Help with the development of the guidelines is sought by asking physiotherapists views of quality in physiotherapy for injured workers. The opinions of physiotherapists who are involved with injured workers management are important, whether they are positive or negative.

Participation will be in the form of an interview lasting no more than 1 hour and responses will be anonymous.

If you are interested in participating please contact:

Lorraine Sheppard
Senior Lecturer
School of Physiotherapy
University of South Australia
Telephone 08 302 2424
Fax 08 302 2766
Appendix F

Pilot case study: Semi-structured questions
Interviews with health insurance providers (Sample only)

Date: 

Code [ ]

Organisation: 

Interviewee: 

Position: 

Interviewer: 

Taped: yes/no 

• Starting time: 

• Closing time: 

Consent form signed: yes/no 

• Send a copy of transcript ........................................... 

• Would you like to check it first .................................... 

1 What is your strategy for ensuring quality physiotherapy for your members? 

2 What is your expectation of physiotherapy treatment for your clients? 

3 What do you see as indicators of good or poor quality services? 

4 Which indicators of good quality are the most important? 

5 Which indicators of poor quality are the most significant? 

6 What techniques does your company use to monitor physiotherapy services? 

7 Why are these techniques used? 

8 How often do you think you need to use these techniques? 

9 Who decides when to intervene? 

10 How do they decide to intervene? 

11 How are these techniques communicated to other staff members? 

12 How does your company liaise with physiotherapists regarding: 

* their management of individual clients 

* their overall treatment patterns?
13 Do you see any difference in physiotherapy management between acute and chronic conditions?

14 Do you see a role for the Health Insurers in the future to have more say in the type of physiotherapy treatment delivered?

15 Do you see a role for the Health Insurers in the future to have more say in the outcome gained from physiotherapy care?

16 Do you provide any information, such as brochures, adverts etc about physiotherapy to your members?

17 What data do you collect on physiotherapy services?

18 Are the costs of physiotherapy services recorded?

19 If so, are they compared to other health providers costs?

20 Any other comments (with regard to the quality of physiotherapy services).
Appendix G

Data coding

The data coding is presented on computer disk in Word6 format as:
1. Pilot study codes (pilot.doc)
2. Main study codes (main.doc)

The disk is presented in a pocket on the inside of the back cover.