

REHABILITATION IN PRACTICE

Patient centered goal-setting in a subacute rehabilitation setting

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Accepted May 2009

Abstract

Purpose. The purpose of this research is to describe current practices in goal-setting within a subacute rehabilitation setting from the perspective of therapists representing the disciplines of occupational therapy, speech pathology and physiotherapy.

Method. Qualitative semi-structured email interviews were conducted with therapists from the Geriatric Assessment and Rehabilitation Unit of an Australian hospital. Therapists were required to respond to questioning with reference to identified rehabilitation patients with stroke.

Results. Three approaches to goal-setting were identified: therapist controlled, therapist led and patient centred. Goals aimed at the ICF levels of impairment and activity limitations were predominant. Barriers to a patient centered goal-setting approach largely outweighed facilitators. Potential successful resolutions were offered to overcome these barriers.

Conclusions. The inability of patients to participate fully in the goal-setting process largely determines the approach taken by therapists. This influences the level of patient centeredness incorporated into the goal-setting process. Goals expressed at the level of impairment, by therapists, may be stepping stones to perceived patient goals at the levels of activity and participation. Barriers to a patient centered approach can be overcome through education of the patient and family regarding the nature of the injury and modification of communication between therapist and patient.

Keywords: Goal-setting, multidisciplinary rehabilitation, stroke

Introduction

The rehabilitation process involves the assessment of specific areas of impairment, setting of treatment goals and the implementation of appropriate rehabilitation techniques [1]. In particular, goal-setting is considered as a fundamental component of any sound rehabilitation process. Over the years, theoretical models of rehabilitation have been developed that provide a structured framework process of goal-setting and intervention in rehabilitation. Current practice in stroke rehabilitation comprises various formal and informal approaches, with little evidence for the application of theoretical frameworks to rehabilitation [2,3]. The way in which goal-setting occurs in clinical settings has not received significant debate and is often left to the style of individual

therapists. A closer examination of current practice is necessary to identify approaches currently being implemented, the theoretical backgrounds being used, if any, and the perceived effectiveness of such approaches.

Contemporary rehabilitation practice models indicate a shift away from medically-led approaches towards ones that incorporate the views of all health professionals [4], as well as the patient and their family [5]. Successful rehabilitation is seen as holistic, involving a team approach with an increasing focus on the patient and attainment of goals rather than resolution of problems [5]. These changes represent important paradigm shifts in the care of patients with greater emphasis on the patient role, patient preferences, family involvement and the functioning of multidisciplinary/interdisciplinary

teams [6]. At the core of this paradigm shift is the International Classification of Functioning, Disability and Health (ICF) [7,8] endorsed in 2001 by the World Health Organisation (WHO). The framework considers health in terms of impairments to body structure and function as well as levels of activity and participation [8]. The role of contextual factors including environmental and personal factors are also taken into account. The ICF framework provides a sound theoretical basis for rehabilitation whereby goals developed can be centered around the individual and his/her lifestyle [9]. Despite the development of the ICF and evidence suggesting that a multidisciplinary, holistic, patient centered approach yields effective results [3,10–12], current practice is believed to be largely predominated by therapist driven, impairment focussed management [12,13].

Setting treatment goals is quintessential to rehabilitation [4,14] and effective teamwork within a subacute rehabilitation setting [15]. There is evidence that goal-setting can achieve increased patient satisfaction, shorter inpatient stays and better goal attainment [13]. Furthermore, when a patient participates in goal formulation, planning and decision making, the potential for active participation in the rehabilitation process has been shown to increase [16]. Locke and Latham [17] offered an explanation for this phenomenon by arguing that goals have an energising function whereby participation in the goal-setting process increases performance, as well as persistence to achieve specific goals. Effective collaborative goal-setting between patients and health professionals can integrate motivation, emotion, and personal identity into the rehabilitation process [11]. As such, the identification and setting of appropriate collaborative goals should be one of the skills that characterises professionals involved in rehabilitation [18].

Patient centeredness has not only become an important underlying principle for the delivery of health and rehabilitation services [3,12], it has also become an important aspect of the goal-setting process [17]. Patient centered practice is defined as ‘an approach in providing therapy which embraces a philosophy of respect for, and partnership with, people receiving services’ (p. 238) [19], and assumes that patients and their families have ultimate responsibility for decisions related to rehabilitation [19]. Specifically, Whiteneck [20] stated that ‘an individual should be viewed as the primary focus of the rehabilitation and goal-setting process and subjective perceptions are needed to fill the gaps left by objective assessments’ (p. 1074). Involving the patient in goal determination has been linked to increased adherence to therapy tasks, greater goal attainment and satisfaction, facilitating a person’s

sense of control over their rehabilitation, and improved therapy outcomes [21].

However, current research in the area of adult stroke rehabilitation suggests that collaborative goal-setting occurs incompletely [12,13], and a lack of consensus concerning best practice for goal-setting has seen various approaches emerge [22].

At one end of the spectrum, goal-setting can occur independently of the patient based on assessment results with goals set by the rehabilitation team, through to the goal-setting based on the completion of life goals questionnaires in which the patient directs their own rehabilitation [23]. Informal interviewing is one approach to goal-setting used in a physical dysfunction setting [24], however problems with informal interviews have been identified, and it has been conceded that resultant goals are often vague and lacking in meaningful origins [24,25]. Another more formal approach to goal-setting in stroke rehabilitation involves the use of activity level assessments, including the Barthel Index [26], and the Nottingham Extended Activities of Daily Living (EADL) [27]. Despite reports of these approaches to goal-setting, there has been little evaluation of the implementation or effectiveness of such methods. A criticism of current goal-setting practice is its subjectivity and accompanying this is the demand for a richer theoretical foundation [2]. Siegert and Taylor [2] argued that for rehabilitation to advance as a scientific discipline, it needs conceptual and theoretical advances and should not be solely based on empiricism. This study aimed to examine current clinical approaches to goal-setting through the multiple disciplines of occupational therapy, speech pathology and physiotherapy within one rehabilitation facility. Specifically, it aimed to identify the degree and quality of patient input into the goal-setting process from the perspective of the therapist and compare the therapists’ goals with those perceived to be the patient’s goals using the ICF framework.

Methodology

Design

The focus of the study was directed towards understanding the experiences of therapists in the goal-setting process used within the workings of a multidisciplinary team. To achieve this, a qualitative research approach was employed with semi-structured email interviews used to explore the experiences of clinicians in relation to goal-setting processes. The study was conducted with therapists from the Geriatric Assessment and Rehabilitation Unit (GARU) of a public metropolitan Australian

hospital. To obtain realistic and clinically relevant responses, therapists completed their responses with reference to a patient they were treating at the time. This incorporation of case examples avoided potential theoretical, research based and perceived correct answers to questioning and allowed for comparison of goal-setting approaches for the same patient across all disciplines. Ethical clearance was obtained from both the local hospital and University ethics committees before the commencement of the research project.

Participants

Active participants in the study included therapists working in a rehabilitation team from the disciplines of occupational therapy, speech pathology and physiotherapy. A key therapist was appointed to assist with purposive sampling of five patients to be used as case examples. To be suitable, these patients had to satisfy two criteria: (1) have been diagnosed with stroke via neuroimaging; and (2) be receiving therapy from each of the three disciplines (see Table I). Formal consent was not obtained from the patients as all identifying information had been removed prior to receipt of the interview transcripts by the research team.

Treating therapists for each patient from occupational therapy, speech pathology and physiotherapy were then recruited for the study. Prior to inclusion in the study, it was ensured that all treating therapists received comprehensive information concerning the objectives of the study and provided verbal consent

to participate. Implied consent was assumed by therapists returning the email interview.

Data collection method

Preliminary discussions with therapists brought to light time limitations for therapists to complete oral interviews due to busy clinical schedules. As a result, the research team proposed that email-facilitated reflective dialogue would form the basis of the in-depth semi-structured interview questioning. Research conducted by Mann and Stewart [28] and McAuliffe [29] supports the efficacy of this more recent approach to qualitative research. It was considered that email was the most adequate tool to capture the thoughts of an individual in relation to the topic. It allowed the therapists flexibility in completing the questionnaire, and it provided them with the opportunity to reflect on the information offered over a period of time, as opposed to immediate, spontaneous answers.

The interview email comprised seven semi-structured, open-ended questions (see Appendix 1). The questions provided the therapists with the opportunity and scope to discuss what they perceived as relevant to the goal-setting process with limited direction from the research team. Questions were worded broadly to allow for a holistic view of the patient, and were neutral in tone to prevent bias. Code names were used for patients in all email exchanges to ensure the confidentiality of those identified as case examples. The therapist was free to complete the questionnaire at their own pace,

Table I. Case examples identified for study.

Sex	Age	Premorbid occupational status	Marital and living status	Insult	Presenting symptoms
F	49	Full time employment	Married; dependent children	Right CVA	Left sided upper limb hemiplegia; dysphonia; mild high level cognitive problems; depression
F	50	Full time employment	Married; no children	Left CVA	Wheelchair dependent; right sided upper limb hemiplegia; mild-moderate receptive dysphasia; moderate expressive dysphasia; mild upper motor neuron dysarthria; very mild oral verbal dyspraxia
F	69	Part time employment	Divorced; lives alone; two supportive children	Left CVA	Right sided upper limb hemiplegia; right side neglect; moderate-severe receptive dysphasia
F	84	Retired	Widow; two adult children; lives independently in retirement complex	Left MCA CVA	Global dysphasia – severe receptive and expressive dysphasia; severe oral verbal dyspraxia; weakness in right upper limb; problems with cognition and memory
M	68	Full time employment	Married; three adult children and grandchildren; lives at home	Left MCA CVA	Wheelchair dependent; dense upper and low limb hemiparesis; global dysphasia – moderate-severe receptive and severe expressive dysphasia; oral and verbal dyspraxia

however it was requested they return their responses within 10 working days. On receipt of the initial questionnaire responses, the research team responded with further questioning to ensure accuracy of interpretation and to elicit further information on certain topics. This correspondence continued until all information was supplied and clarifications completed. In some cases, this involved multiple email exchanges.

Data analysis

The framework approach, as described by Ritchie et al. [31], formed the backbone of the data analysis. Analysis was initiated with familiarisation of the raw transcripts and identification of key ideas and recurrent themes. Key issues, concepts and themes subsequently formed a thematic framework which was developed through the analysis of the issues raised by the respondents and recurring views in the data within the context of the issues and questions derived from the aims and objectives of the study. Through construction of a thematic framework the data was able to be reorganised into manageable chunks for further analysis. Segments of the transcripts were then assigned numerical codes in line with the indexing stage of the framework method. These numerical codes were supported by short descriptive headings. Key subject areas were thus established which allowed further restructuring of the data in line with the charting stage of the framework method. The end product of this stage was several key subject areas with multiple views of different therapists. The final stage of the data analysis involved mapping and interpretation [30] of the key subject areas to define concepts, create typologies, and find associations between themes. This process was influenced by the objectives of the project in addition to the themes emerging from the data. *N-vivo* qualitative data analysis software was used to assist with organisation and synthesis of the data [31].

Strategies were employed throughout the data analysis process to enhance the rigor or trustworthiness of the findings. Triangulation, as described by Guion [32], was used for the charting, indexing and interpretation stages of the data analysis. Secondly, reflexivity of coding and theme interpretations was employed. This was achieved through constant collaboration amongst the members of the research team (including one occupational therapist, two speech pathologists and a physiotherapist) regarding thematic analysis in the context of potentially relevant theory, underlying assumptions, data and participant feedback.

Results

A total of eight therapists participated in the interview process. The structure of the rehabilitation team meant that three of the therapists were treating more than one of the patients identified as case examples for the study. As such, they completed more than one interview. Overall, the responses offered to questioning represented the viewpoints of two speech pathologists, three occupational therapists and three physiotherapists.

Themes

Following analysis of the data, three main areas of interest emerged. The first was centered around goal-setting approaches in a subacute setting and the degree to which they incorporated patient centredness. Three goal-setting categories emerged, supported by common themes that transpired within each approach. The second area of interest considered the types of goals reported by the treating therapists in accordance with the ICF [8] and whether they represented the perceived goals of patients. The third considered facilitators and barriers to the use of patient centered goal-setting within a subacute rehabilitation setting.

Models of patient centered service delivery

Analysis of the data allowed for the gross construction of three separate categories of goal-setting (see Figure 1). These were labelled; therapist controlled, therapist led and patient focussed. Of the 15 interviews completed, 10 approaches to the goal-setting process were found to be therapist led, four were therapist controlled and one response represented a patient focussed approach.

Therapist controlled

The first category of goal-setting that emerged from the interviews appeared to be largely controlled by the treating therapist. A common theme was the pivotal role played by impairment based assessment. As such, the initial assessment formed the foundation of the therapist controlled approach from which impairments were identified and subsequent goals were set. Little or no consideration was given to ascertaining pre-morbid functioning. Limited collaboration with family members was reported by therapists working within this framework. One

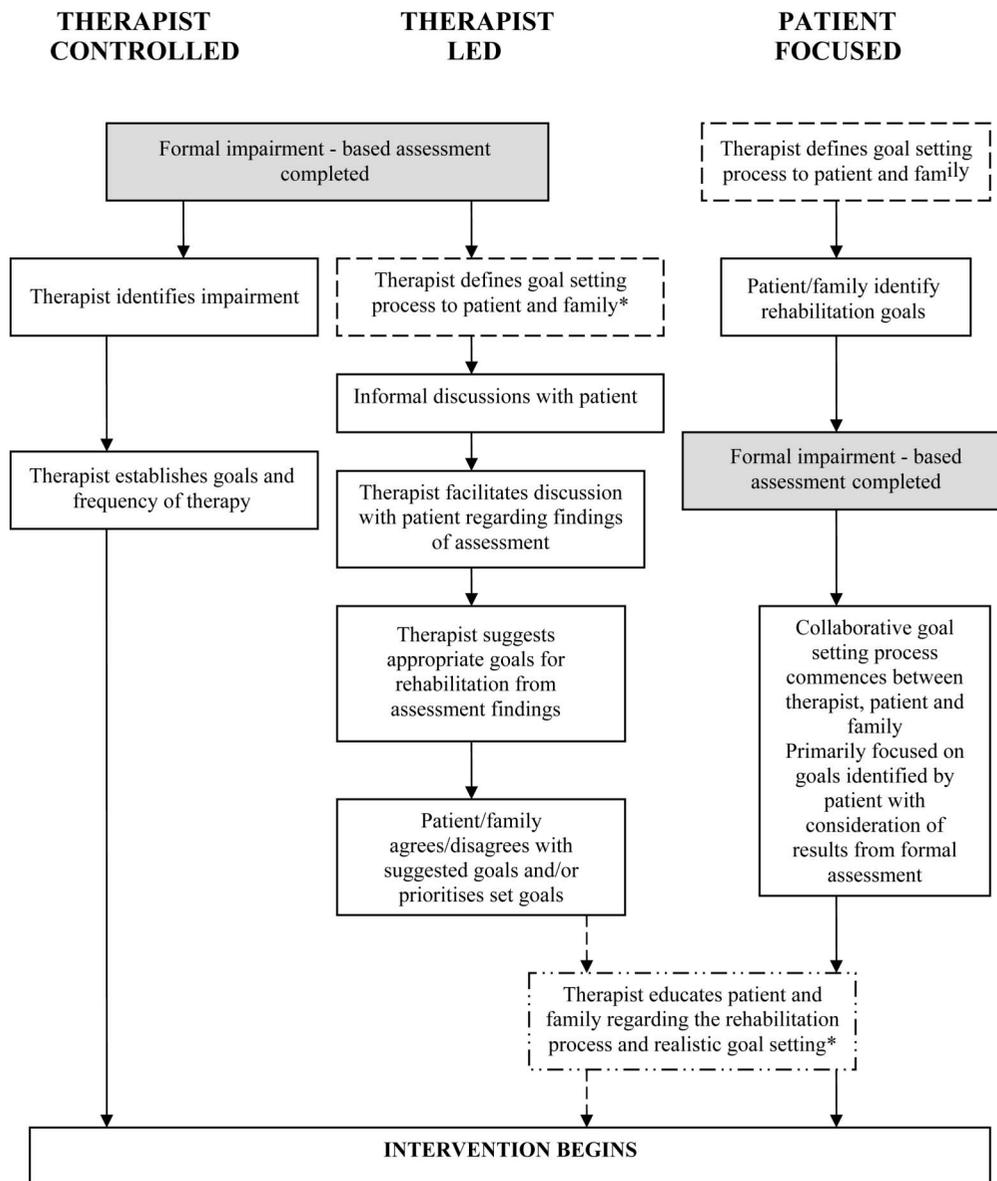


Figure 1. Goal-setting approaches as described by therapists in the current study. *This component was not incorporated by all therapists during the goal-setting process.

therapist, who followed such an approach, summarised the goal-setting process as below:

'The goal setting process was controlled by myself. After assessment of the patient, I determined what impairments she had and then decided to treat those.' P1.

Therapist led

The second category of goal-setting that emerged from the interview responses represented a combination of therapist direction and patient centeredness (see Figure 1). The underlying theme to this approach was valued therapist-patient collaborations in the goal-setting process. Therapists who used this approach felt that the patients required a degree of

guidance and direction for realistic and achievable goals to be developed. The process was commonly initiated by completion of formal assessments and informal interactions driven by the therapist. One therapist facilitated this process, as indicated below:

'I was asking her what was important to her and what she wanted to achieve from therapy, as an informal approach.' OT1.

The actual goal-setting process itself appeared to follow a structure whereby therapists would allow the patient and family the opportunity to offer spontaneous goals for therapy. If the therapists felt that the patient was unable to complete such an activity, they would then suggest goals for therapy. Therapists

would encourage the patient to agree or disagree with the goals offered and prioritise them accordingly. Therapists reported that their suggested goals were based on results from formal assessment and informal interactions with the patient concerning their hopes for the future. As one therapist reported:

'Initial sessions involved formal assessments. I then offered treatment options and proposed frequency of therapy able to be offered. Patient identified priority goals and joint therapy goals were subsequently set.' SP1.

The impression gauged from therapists in the therapist led approach was that they valued the input of the individual and their family. Therapists felt that it was necessary to consider the patients' thoughts and feelings about what they hoped to achieve during the rehabilitation process. Other components supporting an increased focus on the patient in this approach included; increased family input, patient and family education, and discussion concerning pre-morbid level of functioning. Therapists who used this approach stressed the importance of collaboration with family members in establishing a pre-morbid level of functioning and obtaining relevant goals for the individual patient. One therapist's discussion with the family included the following:

'In discussions with them (the family), I asked what their main areas of concern were and what they would like her to be able to achieve on discharge, discussing realistic and achievable goals, but also expected outcomes. This was also done pre and post education of the family regarding the effects of stroke.' OT2.

Another therapist commented on the importance of family input for patients with compromised cognition and communication post injury:

'I am unable to discuss with the patient about his personal goals due to his severe expressive and receptive aphasia. As such, I have spoken with the patient's wife and son to get an idea about his previous level of function, activities at home and interests. This helps me to maintain his motivation.' P2.

Patient and family education was considered a vital component to the goal-setting process by the majority of therapists who employed the therapist led approach. The treating therapists felt that education further increased the chance of setting realistic goals commensurate with the hopes and expectations of the patient and family. For example, one therapist indicated the success associated with educated goal-setting:

'After education of family and a recent visit from other family down south who were also given education, their expectations

were changed given all the information, history and stroke recovery outcomes.' SP1.

Patient focussed

The final goal-setting category identified in the current study, employed by only one therapist, was largely focussed on the patient and their family. It drew the strongest parallels to a truly patient centered approach. In the initial stages of the process, the therapist reported introducing herself and her role and explained the process of goal-setting to the patient. The treating therapist indicated:

'Within the first two weeks of rehab, I encouraged X to identify goals that were most important to her. My definition for a goal was communicated to her as "something she wanted to achieve."' OT3.

The therapist then implemented a formal tool used for patient centered goal-setting, the Canadian Occupational Performance Measure (COPM) [19]. According to the therapist, this allowed for identification of patient focussed goals:

'Using the Canadian Occupational Performance Measure (COPM) as a goal setting tool helped the patient identify goals in the areas of self-care, productivity and leisure. It helps guide the patient to identify goals important and meaningful to them, which I feel is important.' OT3.

The goals established from completion of the above measure were then considered in conjunction with goals negotiated between the therapist and patient following formal assessment. This process formed the basis of the approach, thus making it largely patient centred.

Goals identified by therapists versus perceived patient goals

To categorise the types of goals identified for each patient, the data were deconstructed. Goals were categorised according to the ICF [8], as to whether they represented the levels of impairment, activity limitation or participation restriction. These goals were considered against perceived patient goals as indicated by the treating therapist.

Impairment and activity limitation based goals were dominant in the goals provided by therapists. All disciplines expressed goals at the level of impairment. Therapists reported that goals of this nature were ascertained following formal impairment based assessment, which was incorporated into all goal-setting approaches. In particular, the discipline of physiotherapy offered goals that were largely

impairment focussed. These goals were ultimately concerned with increasing mobility. Strength and range of movement were commonly identified as target goals. Such goals included:

'Improved lower limb strength, Good static and dynamic balance, Elicitation of muscle activity in the peroneal and wrist extensor muscles, Maintain full ROM, Increased exercise tolerance, Chest physiotherapy –percussion and vibes/postural drainage, exercise bike followed by flutter, Lower limb strengthening exercises – standing and in bed: gluts, quads, calves, hamstrings.' PT1.

Impairment based goals, aimed at the areas of language, motor speech and voice, predominated in the speech pathology goals. Examples of impairment based goals and activities, as offered by one speech pathologist, included:

'Improved auditory and reading comprehension on semantic-based therapy tasks (initially on high frequency/high image-ability items); Improved reading comprehension at a single word and phrase level for concrete and abstract items.' SP1.

Although occupational therapists identified goals aimed at the level of impairment, they indicated that these goals were stepping stones to achieving ultimate goals of increased independence and maximum participation. One therapist indicated:

'I would like X to get to a point where he is able to live at home with the support of his wife. I am aiming to achieve this by working on - Splinting regime; Passive ranging of his affected upper limb to maintain joint and soft tissue integrity; Oedema management; Strengthening R UL through active and active assisted exercises'.

'In the future we would like to focus on: Managing ADLs independently; Use of one-handed equipment to assist with ADLs and other domestic tasks; Home visit and prescription of equipment and modifications'. OT2.

Largely, goals targeted at the level of impairment were not commensurate with perceived goals of the patient, as discussed by the therapists. Impairment based goals, targeted by therapists, appeared to be more specific and discrete than those on which they perceived their patients to be focussed. One therapist indicated perceived goals of the patient as being:

'The patient is very keen to walk unaided and 'get her arm back.' PT1.

The therapists' goals, however, were more specific as outlined below:

'Improved lower limb strength; Good static and dynamic balance; Elicit muscle activity in the peroneal and wrist extensor muscles; Maintain full ROM.' PT1.

Therapists reported that goals aimed at the level of impairment, such as those listed above, are able to be objectively measured and reported effectively. One therapist reported:

'Impairment goals are easy to measure and allow me to report back to the family with gains that have been made during therapy.' PT2.

Activity limitation goals were also a focus of all disciplines. Ultimately, they were representative of valued return of function. Examples of such goals included the following:

1. *Reaching for a cup and drinking and manipulating objects including balls, beads and towels.* OT2
2. *To write name, address and phone number; To improve speaking voice quality; to improve ability to recall, comprehend and make inferences about paragraph length information when presented in auditory and written forms; to improve word-finding in English including use of strategies (e.g. gestural, drawing etc.); to improve spelling and sentence construction in English.* SP1.
3. *Maximise independence in activities – such as showering, dressing, feeding and meal preparation, through the use of adaptive aids, compensatory strategies and practise; Left handed writing practice; Cooking practice – using modified equipment.* OT3.

Largely, goals identified at the level of activity limitations were consistent with patient goals as perceived by therapists. Therapists indicated that patients frequently referred to improvement in specific functions when asked what they hoped to achieve in therapy. These were characteristically representative of activity limitation goals.

Goals representative of the participation level of the ICF [8] constituted only a limited proportion of the goals set by any discipline. This was in contrast to the perceived goals of the patients. According to the therapists' reports, a theme common to patients was their interest in returning to valued social and occupational roles. Therapists in the current study did not directly target such goals in their rehabilitation plan. One therapist reported perceived goals of the patient to be:

'Return to work, being able to drive to work and being able to cook and clean for dinner parties with family and friends.' PT2.

Such goals were not made explicit by the treating therapist.

Facilitators and barriers

The responses provided by therapists offered facilitators and barriers to a patient centered goal-setting approach within a subacute rehabilitation setting (see Table II). It was generally agreed that adopting a patient centered framework during goal-setting was advantageous. At the core of this perceived success was the potential for increased patient motivation. Six of the eight therapists commented that involving the patient, and in many cases, the family, led to increased motivation for therapy. One therapist went on to say that a patient centered goal-setting approach was also time efficient:

'I like the process of involving the patient and family in establishing a therapy plan as it improves motivation for therapy and maximises the effectiveness of my time. SP1'.

A further advantage suggested by one therapist related to the broad spectrum of ensuing goals when the patient was involved:

'Taking not only an impairment based approach (as I encouraged), but also a functional approach (as supported by the goals offered by the patient) a more holistic management plan was achieved.' SP2.

Table II. Facilitators of and barriers to patient centred goal-setting.

Facilitator/ barrier	Therapist comments
Facilitators	<p>Increased patient motivation for therapy</p> <p>Maximises effectiveness of therapist time</p> <p>Allows for a holistic management plan to be achieved</p> <p>The structure of a formal patient centred tool allows for consideration of all factors influencing rehabilitation</p>
Barriers	<p>Potential for disagreement on goals between therapist, patient and family</p> <p>Inability of patients with aphasia to contribute</p> <p>Tendency of patients to focus only on external impairments</p> <p>Increased demands on therapist time</p> <p>Difficulty scheduling between disciplines</p> <p>Patients lack of understanding regarding the rehabilitation continuum and their place on this continuum</p> <p>Patient and family's lack of understanding regarding the consequences of stroke and realistic outcomes</p> <p>Patient's lack of insight into their condition and realistic outcomes</p> <p>Psychosocial consideration of patient</p> <p>Cultural differences between patient and therapist</p> <p>Patients suffering from depression</p> <p>Inability to treat goals identified by the patient that required context in a hospital setting</p>

A number of barriers were identified to the implementation of an effective patient centered goal-setting approach (see Table II). These barriers were largely dependent on the nature of the presenting deficit, previous knowledge of stroke and likely outcomes, the mindset of patients concerning the most important goals, and the psychosocial demographics of the patient. One major barrier was problems experienced when patients presented with severely compromised speech and language, particularly aphasia. Therapists reported:

1. *Patient centered rehab goals were unable to be established due to X's expressive dysphasia.*
2. *She herself could not communicate her wants, as a result of dysphasia from the stroke*
3. *I am unable to discuss with X about his personal goals due to his severe expressive and receptive dysphasia*

Despite this barrier, however, four therapists attempted to facilitate the patients' understanding of the goal-setting process and their involvement in it (even if limited). A number of different approaches were taken by therapists of different disciplines to do this. A speech pathologist reported the following:

'I outlined in simple verbal, written words and pictures things that we could work on and she was able to identify (point to), after this, what things she wanted to focus on i.e. listening, reading, talking (i.e. functional words for her).'

A treating physiotherapist indicated:

'I was able to determine patient goals by phrasing questions with yes/no responses. I started with large goals e.g. do you want to be able to walk? And then narrowed these down e.g. do you want to be able to walk without help?'

An occupational therapist offered:

'... she has been able to communicate whether she is happy or not to participate in the decisions that we (family and therapist) have made by nodding or shaking her head.'

Two therapists outside of speech pathology indicated that they liaised with the treating speech pathologist at least once concerning ways in which to modify their communication to facilitate patient involvement in the goal-setting process.

Another commonly identified barrier was the potential differences between what the patient hoped to achieve and the actual goals set by the treating therapists. Six of the eight therapists commented that the expectations of patients and their families following stroke were distortions of realistic goals.

Two therapists further commented that a patient's lack understanding of the rehabilitation progression had a negative impact on the setting of appropriate goals. As one therapist said:

'Some goals (of the patient) are not appropriate at this stage of rehabilitation and we are not able to work on them. Patients have difficulty understanding the rehab progression and what activities would be appropriate for their current level of functioning.' OT3.

Another therapist indicated that the nature of the deficit could impact on realistic goal-setting:

'Sometimes, when a patient is admitted to rehab, they demonstrate a poor understanding and/or insight into their diagnosis, therefore goals may be unrealistic.' SP1.

Although therapists identified this as a problem, many insisted that education of the patient and their family regarding stroke, the goal-setting process and realistic outcomes, was successful in the setting of more realistic goals. As one therapist reported:

'The patient has had no previous experience with disability following stroke and no concept of the impact the stroke has had on her ability to function in future. This therefore impacts on her goals. I hope to facilitate her's and her husband's understanding of stroke and its impact on function and potential for recovery by providing them with my experiences of working with stroke patients and current research evidence.' OT2.

A lack of therapist time was acknowledged as a major barrier to achieving a patient centered framework. Therapists felt that, in order to achieve a truly patient centered approach, they needed to collaborate with the family and develop an intimate knowledge of the patient. They commented that busy work schedules prevented this and stood in the way of a patient centered approach. One therapist indicated:

'Ideally I would have liked to talk with the family about identifying some other goals that may be important to X, however due to time restraints, I didn't get the chance.'

A further barrier identified by therapists in the current study was the difficulty associated with setting goals aimed at the level of participation restriction within a subacute setting. One therapist commented that she felt these goals needed to be targeted within the appropriate context and felt that this could not be achieved within the confines of the therapy room at the hospital. She commented:

'Therapy/rehab plan needs to be more impairment focussed in the rehab setting with activity/participation goals difficult to establish as these goals need to be artificially contrived in an inpatient setting.' SP1.

The tendency for patients to focus their goals towards obvious physical impairments was identified as another disadvantage of allowing patient involvement in the goal-setting process. As indicated by one therapist:

'When a patient has a persistent severe oral and verbal dyspraxia, their goals are often focussed on speech production and language is not considered to be as much of a priority.' SP2.

Issues concerning a patient's psychosocial status were also identified as a barrier to a patient centered goal-setting process. Cultural and linguistic diversity (CALD) increased the complexity of goal-setting. One therapist commented:

'I feel that due to her cultural background she seems quite passive and is not assertive with what she wants to achieve from her therapy sessions.' SP1'.

Post stroke depression was also reported as a factor that held implications for the rehabilitation process. As one therapist indicated:

'Addressing/acknowledging issues such as depression and grief has been an important and inevitable part of the patient's management.' SP1'.

Discussion

Agreement exists amongst authors that patient centered goal-setting should be the focus of rehabilitation [2,11,13,22]. Despite this, there is little consensus as to how goal-setting should take place. Not surprisingly, although a variety of disciplines in different settings use goal-setting, their approaches vary. Qualitative data from therapists in the current study revealed three main approaches to goal-setting; *therapist controlled*, *therapist led* and *patient focussed*. The level of patient centeredness incorporated into the goal-setting approaches had a significant influence on whether the goals were representative of the impairment, activity limitation or participation restriction levels of the ICF [8]. Facilitators of, and barriers to a patient centered goal-setting approach were reported by therapists with barriers predominating.

Therapist to patient goal-setting continuum

Individual components distinguishing the three approaches appeared to center around four main themes: (1) involvement of the patient and family members in the goal-setting process; (2) the primary foundations upon which goals were set (e.g. results from formal assessment versus discussions with patient and family); (3) initial discussion with the

patient concerning goal-setting and what it meant, and, (4) the inclusion of education for patient and family members post stroke.

First, the degree of involvement of patients and their families in the goal-setting process was a key discriminator between the three approaches to goal-setting identified in this study. The *therapist controlled* goal-setting approach represented minimal patient and family input while the *therapist led* and *patient focussed* approaches incorporated varying degrees of patient and family involvement. Primarily, a patient centered approach allows the patient to identify and prioritise their goals for therapy and lead the process of goal-setting [10]. However other considerations within a patient centered approach include involvement of family members in the goal-setting process, educating the patient and family on the goal-setting process, life post-injury and realistic goals and negotiating relevant goals for therapy [33]. In this study, therapists who adopted a *therapist led* approach employed many components that would indeed be considered to be patient centred. Overall, the process adopted by these therapists was sensitive to the patient and considered the patient and their family in the goal-setting process. However, it defied a truly patient centered approach in that it was predominantly directed by the therapist. Therapists who used this approach felt that their input was a necessary factor when patients presented with a reduced capacity to be fully involved in goal-setting, in particular where communication impairment was evident. In a study by Playford et al. [22] therapists, nurses and doctors expressed that they felt goal-setting was a particularly difficult task for patients in the first few months following stroke emphasising the importance of clinician direction [22]. Although therapists in the current study using the *therapist led* approach highlighted communication impairments as reducing patient involvement, the health professionals in Playford's [22] study indicated that patients were often ashamed of their disability or modest in their attempts to offer spontaneous goals. Given these considerations they felt the only way around the situation was for therapists to play a more focal role [22].

A second aspect which differed between the three approaches to goal-setting in the current study was the extent to which formal assessment formed the foundation of the goal-setting process. Formal assessment was incorporated into both the *therapist controlled* and *therapist led* approaches. In the therapist, controlled approach, goals were set directly from the assessment results (and largely focussed towards improving physical function) whereas in the *therapist led* approach the results were used as a starting point to center goal-setting discussions with patients and families.

A *patient focussed* approach was identified in the current study, but only adopted by one therapist. In this approach, a formal instrument for patient centered goal-setting, the Canadian Occupational Performance Measure (COPM) [19], was used. The COPM draws parallels with other currently used tools for goal-setting, including the Nottingham Extended Activities of Daily Living Scale (EADL) [27] and life goals questionnaires as described by Davis et al. [23]. Such tools provide structure for the goal-setting process including consideration of specific activities of daily living and participation in life events, including establishing and maintaining human relationships. They aim to assist the patient to reflect on these activities in light of their acquired disability. Henriksson et al. [10] and Playford et al. [22] suggested that putting such activities in context and establishing their relevance to lifestyle increases active involvement of the patient and facilitates advances in the rehabilitation process. Throughout the literature there is a demand for an objective, theoretically based structure to facilitate an effective process of patient centered goal-setting [2,6,10, 11,14]. The benefits of such was demonstrated in a study by Henriksson et al.[10] which found that a formalised process of goal-setting (i.e. COPM) greatly enhanced participation in rehabilitation when compared against an informal measure.

Formal assessment as a sole means of directing the goal-setting process has been criticised, but research strongly supports its use as a fundamental component of effective goal-setting. Playford et al. [22] suggested formal assessment is an essential and necessary beginning point of any rehabilitation process and is thus integral to the process of goal-setting. The *therapist led* and *patient focussed* approaches identified in the current study incorporated formal assessment into the goal-setting process. The *patient focussed* approach used formal assessment to inform preliminary goals set with the patient and family, while the *therapist led* approach used formal assessment only as a basis from which to open discussion about setting goals for rehabilitation. Therapists reported satisfaction with these processes and felt that it ensured patient involvement in goal-setting.

A third component that influenced the degree of patient centeredness in the goal-setting approaches was the need to orientate the patient and family to the term goal and the goal-setting process. Many therapists described difficulties in setting goals agreed to by patient, family and therapist. As such, ensuring a shared understanding of these terms was seen as imperative to the therapists. The views of the therapists seem to mirror Siegert and Taylor's [2] comments that the practice of goal-setting itself implies a set of assumptions or a world view that may

not necessarily be shared by all patients and therapists. It is widely agreed that it is important to provide patients with a definition that matches the therapist's definition to achieve an effective goal-setting process [2,12,13,34].

Patient and family education was seen as integral to the goal-setting process for the therapists who employed the *therapist led* and *patient focussed* approaches. These therapists placed significant importance on education during the goal-setting process and felt that this enhanced the therapist-patient interactions and the goals set. In line with the significance they placed on providing preliminary information before beginning the process of goal-setting, they subsequently rated highly the importance of educating the patient and family as to what they could hope to achieve through rehabilitation, what they could expect along the path of rehabilitation, and how they could be reintegrated into society following discharge from hospital. The importance of continued education throughout the rehabilitation process is largely considered in the literature to be representative of a truly patient centered goal-setting approach [3,35]. McAndrew et al. [13] argued that education significantly increases the effectiveness of patient-therapist collaboration as it is fundamental to the setting of more realistic, achievable goals. Hafsteinsdottir and Grypdonck [36] contend that failure to establish a patient centered environment, whereby patients are educated and initiated into the collaborative process of goal-setting, may result in decreased motivation to achieve outcomes. The education process can reduce stress and psychological strain that is inevitably placed on a patient post injury [36]. This has implications for the *therapist controlled* approach in which a lack of familiarisation of the patient with the rehabilitation process may potentially decrease motivation.

Classification of goal types

The current study showed therapists within a subacute rehabilitation setting predominantly worked towards goals that were representative of the impairment and activity limitation levels of the ICF [8]. Specifically, in this study, physiotherapy goals were primarily focussed on the level of impairment, occupational therapy goals were largely aimed at the level of activity limitation with associated impairment focussed goals, and speech pathology goals were targeted at levels of impairment and activity limitations. Few explicit goals aimed at the level of participation restriction were addressed. Those participation goals that were identified transpired from the disciplines of occupational therapy and speech pathology.

The high number of impairment focussed goals implores consideration. A study by Henriksson et al. [10] sought to describe the goals and treatment interventions of therapists against the ICF [8] levels of classification. They found that while goals were only expressed at the levels of activity limitation and participation restriction, treatment interventions were expressed at all three levels. These findings hold relevance to the current study. In the current study, the expression of goals was described in two ways (i) therapist goals and, (ii) patient goals as perceived by the therapist. Therapists tended to express goals as viewed by patients more at the activity and participation levels, while in contrast, goals expressed by themselves (although ultimately aimed at the level of activity limitations perceived for the patient) were targeted at the level of impairment. The high focus on the impairment may be an artefact of different internal definitions of goals by therapists. Many of the goals listed by therapists could actually be interpreted as treatment interventions. As such, it could be inferred that therapists' goals are actually stepping stones to an end point that may be representative of a goal at the activity or even participation level. It could be concluded then, that not only do patients and families require a common definition of therapy goals, but so too do therapists. The goal types expressed by therapists in the current study parallel Wressle and colleagues [12] view of rehabilitation; 'the steps towards independence proceed from adjunctive methods, to enabling activities, purposeful activities and occupational performance, where adjunctive and enabling activities are used at the level of impairment' (p. 85).

Although the above discussion provides one explanation for the high number of impairment goals, it is important to acknowledge that some of the goals set at the level of impairment may have been intended to focus on the return of discrete movement/function. Playford et al. [22] suggest that setting goals specific to impairment is a direct result of impairment focussed assessment used as part of the goal-setting process. As such, the impairment based goals identified in the current study could be an expected outcome as the goal-setting approaches used incorporated formal assessment. Further to this, Glazier et al. [6] and Salter et al. [37] proposed that setting impairment goals is common amongst professionals as it allows patients to see obvious changes in their presentation which further facilitates motivation and continued adherence to therapy tasks [6,11,37].

Therapists who chose impairment focussed goals in the current study commented on the advantage of goals that were easy to objectively measure and report. It is commonly accepted that improvements in physical functioning or discrete return of a

previous function are easier to objectively measure than return to a previously valued activity [36,38]. From an organisation's point of view, measurement of effective outcomes is vital [11] and in many cases linked to funding. Organisations will necessarily insist that individual disciplines demonstrate their worth and point to their demonstrably effective measurable treatments [2]. Given such considerations, this may offer an explanation as to why goals are expressed at the impairment level were perhaps predictable as they are easier to measure even though ultimate outcomes were directed at the level of participation.

Another arguable reason proposed for the lack of participation goals described by therapists in the current study, is the inability to implement therapy activities that require context within the subacute environment. Therapists questioned the efficacy of artificially contrived settings in attempting to achieve such goals. Despite the challenges faced in addressing such goals, research indicates that it is important to provide context through all means possible [10]. Henriksson et al. [10] suggest that intervention at all levels, should be provided in appropriate context in order to reach a higher step and higher degree of independence.

Facilitators of and barriers to patient centered goal-setting

Facilitators of and barriers to an effective patient centered goal-setting process emerged in the current study. The most commonly reported advantage of adopting a patient centered approach was its effects on increased patient motivation. This concurs with research conducted by McPherson et al. [11], Wade and DeJong [9] and Pollock [16] that found effective patient centered goal-setting encourages patient motivation and helps to achieve better outcomes. It also draws parallels with a study by McAndrew et al. [13] which found that patient centered goal-setting can achieve increased patient satisfaction, shorter inpatient stays and better goal attainment.

A number of barriers to goal-setting were identified in the current study. A prominent barrier was the reduced capacity of individuals with stroke to participate in a communication exchange concerning their future. This was relevant to patients who presented with expressive deficits due to aphasia and also, patients who presented with reduced insight. As previously discussed, patient centeredness is a relatively new development. Its relevance to rehabilitation is still being trialled with persons with intact communication and cognition and people with aphasia have largely been excluded from studies [22]. As a result, limited research is available on the efficacy of patient centered methods with this

population. In light of the above challenges, however, a number of therapists in the current study went on to detail attempts to facilitate involvement of these individuals including modified communication, in addition to visual and gestural stimuli. Such efforts were considered to facilitate an increased level of patient involvement in the goal-setting process, drawing parallels with Sumsion's [33] findings that occupational therapists exhibited great skill in overcoming barriers to ensure patients were engaged in a process that was meaningful to them [33]. Such findings give direction to future research and suggest that modifications can be made to accommodate a patient centered approach with all populations.

A second major barrier pinpointed by therapists in the current study comprised discrepancies between therapists and patient goals. Therapists commented that patients would often present goals that were unachievable or unrealistic considering their point on the rehabilitation continuum. Hafsteinsdottir and Grypdonck [36] suggested that patients offer goals that are unachievable as the term recovery holds different meanings to each party. To the health care provider, recovery is measured in terms of isolated and discrete return of movement, whereas to the patients, recovery is a return to previously valued activities [36]. Studies by Henriksson et al. [10] and Lawler et al. [14] found that patients frequently reported a desire to attain pre-stroke status. The role of establishing meaning behind terminology used during the rehabilitation process as discussed earlier therefore holds a significant place in an effective goal-setting process [10,14,36], along with educating patients as to realistic goals within the environment and time point on the rehabilitation continuum.

Limitations on therapist time were also identified as a barrier to providing a patient centered goal-setting approach. Therapists indicated that they did not have the time needed to embrace a true patient centered approach whereby they consulted with family members and facilitated discussion outlining the process of goal-setting. Previous studies by Delbanco [39] and Brown et al. [40] indicated that it does take time to be patient centred, but that time spent enhancing relationships with patients and learning about their life prior to the injury showed long term benefits in their effective management [39,40]. Playford et al. [22] challenged this notion, however, commenting that such an intimate relationship cannot be realistically achieved given the time restraints in a clinical setting.

Although the current study offers valid discussion on the place of patient centered goal-setting within a subacute setting, some limitations apply to interpretation of the findings. The study was small and limited to one facility; therefore opinions expressed were representative of a limited number of therapists.

Further to this, due to the fact that patients selected as case examples were receiving intervention from all three disciplines, they may not have been completely representative of those in the unit. In addition, the chosen method for data collection – in depth email communication exchanges – is a relatively new phenomenon. Although there were time efficiency advantages, the approach may have resulted in a lack of interpersonal relationships between parties in the interview process and online clarification of opinions offered.

It is suggested that future research considers the meaning behind the terminology associated with goal-setting as perceived by patients and therapists across all disciplines. This step is vital to a universal understanding of the goal-setting process and subsequent communication between therapists and patients. Furthermore, it is suggested that additional research focusses on the development of theoretical frameworks to support a move towards more formal, structured patient centered goal-setting approaches. Research concerning maximising the level of involvement of patients with communication impairments also requires consideration if patient centered rehabilitation is to become a global process used with all patients regardless of type of disability.

Conclusion

In the current study, three categories of goal-setting were described with varying levels of patient centredness. The *therapist led* approach predominated, characterised by the therapist guiding the collaboration between therapist and patient with respect to goals for rehabilitation. In this approach, importance was placed on (i) involving family members (ii) educating patients and family members on stroke and rehabilitation, and (iii) establishing a common definition for the term goal. Therapists reported that this led to increased patient motivation for therapy and ultimately better outcomes.

Goals set by therapists were predominantly expressed at the ICF [8] levels of impairment and activity limitations, and may be representative of stepping stones to ultimate goals related to participation restriction. The barriers to a patient centered goal-setting approach outweighed the facilitators and revolved around patients' reduced capacity to participate and inability to offer realistic goals. Strategies to overcome these difficulties included modifying communication and using education to overcome differences in knowledge and understanding of the goal-setting process between therapist and patient. Future research into patient centered goal-setting is required to advance rehabilitation practice.

Acknowledgements

The authors wish to acknowledge the time and thoughtful contribution of the therapists who participated in this study.

References

- Alladi S, Meena AK, Kaul S. Cognitive rehabilitation in stroke: therapy and techniques. *Neurol India* 2002;50:s102–s108.
- Siegert RJ, Taylor WJ. Theoretical aspects of goal-setting and motivation in rehabilitation. *Disabil Rehabil* 2004;26:1–8.
- Cott CA. Client-centered rehabilitation: client perspectives. *Disabil Rehabil* 2004;26:1411–1422.
- Barnes MP, Ward AB. *Textbook of rehabilitation medicine*. Oxford: Oxford University Press; 2000.
- Gage M. The patient-driven interdisciplinary care plan. *J Nurs Admin* 1994;24:26–35.
- Glazier SR, Schuman J, Keltz E, Vally A, Glazier RH. Taking the next steps in goal ascertainment: a prospective study of patient, team, and family perspectives using a comprehensive standardized menu in a geriatric assessment and treatment unit. *J Am Geriatr Soc* 2004;52:284–289.
- World Health Organisation. *International classification of impairments, disabilities and handicaps. A manual of classification relating to the consequences of disease*. Geneva: WHO; 1980.
- World Health Organisation. *ICF: International Classification of Functioning, Disability and Health*. Geneva: WHO; 2001.
- Wade DT, de Jong BA. Recent advances in rehabilitation. *Br Med J* 2000;320:1385–1388.
- Henriksson C, Wressle E, Eeg-Olofsson A-M, Marcusson J. Improved client participation in the rehabilitation process using a client-centered goal formulation structure. *J Rehabil Med* 2002;34:5–11.
- McPherson KM, Siegert RJ, Taylor WJ. Toward a cognitive-affective model of goal-setting in rehabilitation: is self-regulation theory a key step? *Disabil Rehabil* 2004;26:1175–1183.
- Wressle E, Henriksson C, Oberg B. The rehabilitation process for the geriatric stroke patient - an exploratory study of goal setting and interventions. *Disabil Rehabil* 1999;21:80–87.
- McAndrew E, McDermott S, Vitzakovitch S, Warunek M, Holm MB. Therapist and patient perception of the occupational therapy goal-setting process: a pilot study. *Phys Occup Ther Geriatr* 1999;71:55–62.
- Lawler J, Dowswell G, Hearn J, Forster A, Young J. Recovering from stroke: a qualitative investigation of the role of goal setting in late stroke recovery. *J Adv Nurs* 1999;30:401–409.
- Schut HA, Stam HJ. Goals in rehabilitation teamwork. *Disabil Rehabil* 1994;16:223.
- Pollock N. Client centered assessment. *Am J Occup Ther* 1993;47:298–301.
- Locke EA, Latham GP. Building a practically useful theory of goal setting and task motivation: a 35-year odyssey. *Am Psychol* 2002;57:705–717.
- Wade DT. Goal planning in stroke rehabilitation: how? *Top Stroke Rehabil* 1999;6:16–36.
- Law M, Baptiste S, Carswell A, McColl MA, Plolatajko H, Pollock N. *Canadian occupational performance measure*. Toronto: CAOT Publications; 1998.
- Whiteneck GG. The 44th Annual John Stanley Coulter lecture. Measuring what matters: key rehabilitation outcomes. *Arch Phys Med Rehabil* 1994;75:1073–1076.

21. Peri K, Kerse N, Halliwell J. Goal-setting for older people: a literature review and synthesis. Auckland: UniServices Limited; 2004.
22. Playford ED, Dawson L, Limbert V, Smith M, Ward CD, Wells R. Goal-setting in rehabilitation: report of a workshop to explore professionals' perceptions of goal setting. *Clin Rehabil* 2000;14:491–496.
23. Davis A, Davis S, Moss N. First steps towards an interdisciplinary approach to rehabilitation. *Clin Rehabil* 1992;6:237–244.
24. Neistadt ME. Methods of assessing client's priorities: a survey of adult physical dysfunction settings. *Am J Occup Ther* 1995;49:428–436.
25. Marques K, Neistadt ME. An independent living skills training program. *Am J Occup Ther* 1984;38:671–676.
26. Mahoney FI, Barthel DW. Functional evaluation: the Barthel Index. *Md State Med J* 1965;14:61–65.
27. Nouri FM, Lincoln NB. An extended activity of daily living scale for stroke patients. *Clin Rehabil* 1987;1:301–305.
28. Mann C, Stewart F. Internet communication and qualitative research: a handbook for researching online. London: Sage Publishers; 2000.
29. McAuliffe D. Challenging methodological traditions: research by email. *The Qualitative Report* 2003;8:57–69.
30. Qualitative Solutions and Research (QSR). NVivo. 7. 1999.
31. Ritchie J, Spencer L, O'Connor W. Carrying out qualitative analysis. In: Ritchie J, Lewis J, editors. *Qualitative research practice: a guide for social science students and researchers*. Los Angeles: Sage Publications; 2003. pp 219–262.
32. Guion LA. Triangulation: establishing the validity of qualitative studies. Florida: Institute of Food and Agricultural Services; 2002. pp 1–3.
33. Sumsion T. Pursuing the client's goals really paid off. *Br J Occup Ther* 2004;67:2–9.
34. Kielhofner G, Barrett L. Meaning and misunderstanding in occupational forms: a study of therapeutic goal setting. *Am J Occup Ther* 1998;52:345–353.
35. Sullivan CW, Yudelowitz IS. Goals of hospital treatment: staff and client perceptions. *Perspect Psychiatr Care* 1996;32:4–6.
36. Hafsteinsdottir TB, Grypdonck M. Being a stroke patient: a review of the literature. *J Adv Nurs* 1997;26:580–588.
37. Salter J, Camp Y, Pierce LL, Mion LC. Rehabilitation nursing approaches to cerebrovascular accident: a comparison of two approaches. *Rehabil Nurs* 1991;16:62–66.
38. Doolittle N. Clinical ethnography of lacuna stroke: implications for acute care. *J Neurosci Nurs* 1994;30:401–409.
39. Delbanco TL. Enriching the doctor–patient relationship by inviting the patient's perspective. *Ann Intern Med* 1992;116:414–418.
40. Brown JB, McWilliam CL, Weston WW. The sixth component being realistic. *Patient-centered medicine transforming the clinical method*. London: Sage Publications; 1995. pp 102–113.

Appendix A

Clinician interview schedule

- Q1. Could you tell me the story of your patient since their stroke?
- Q2. What do you hope to help this patient achieve during their period of rehabilitation?
- Q3. What activities/treatment sessions are you doing with this patient during rehabilitation?
- Q4. Who made the decisions about the treatment this patient would receive? What was the process you went through to make these decisions?
- Q5. What do you think this patient would like to achieve, or focus on while they are in rehabilitation?
- Q6. What do you like or dislike about the processes involved in establishing a rehabilitation plan for this patient?
- Q7. Is there anything else you would like to tell us about what has influenced the management of this patient?