The Wheelchair Procurement Process: Perspectives of Clients and Prescribers

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Abstract

Back ground—Increasing choices in assistive technology has made the process of procuring a wheelchair more complex and challenging.

Purpose—To explore the intricacies of the procurement process from the perspectives of clients and therapists.

Methods—Thirty-four participants were interviewed, including 13 wheelchair prescribers, 14 wheelchair users, and 7 wheelchair associates (family members and caregivers).

Findings—Analysis revealed five main themes. 1) “Who decides?” described varying degrees of client involvement in the procurement process. 2) “Expert knowledge” reflected the expert knowledge that all parties possessed. 3) “Form versus function” captured the primary and, at times, conflicting outcomes that participants wanted to achieve. 4) “Fitting in” depicted the environmental factors that affected wheelchair procurement. 5) “(Re)solutions” illustrated strategies that participants felt improved the process.

Implications—This study reveals clients’ experiences with wheelchair procurement, identifies potential issues therapists may encounter, and suggests possible remedies they might consider when prescribing wheelchairs within a client-centred framework.

Keywords

Assistive Technology; Client-centred Practice; Mobility Assessment

Gone are the days of the one-size fits-all approach to wheelchairs and wheelchair seating. Rapid changes in wheelchair technology and wheelchair seating options in conjunction with funding issues and demands for accountability have complicated the wheelchair procurement process for clients and therapists.

To create a client-centred, wheelchair outcome measure that would facilitate wheelchair prescription, a qualitative study was undertaken: (a) to identify the instrument domains and format and (b) to develop an understanding of the context in which this tool would be used. This paper addressing the second aspect of this study, describes the wheelchair procurement process from the perspectives of prescribers and clients.

In this paper, wheelchair procurement is defined as the process through which individuals obtain equipment or education designed to improve their wheelchair or wheelchair seating system. Client-centred practice is defined as an approach to practice in which occupational therapists acknowledge the clients' experiences and knowledge and involve them in decision making (Canadian Association of Occupational Therapists [CAOT], 2007). The Canadian Practice Process Framework describes a process of client-centred occupational enablement in which clients and therapists collaborate to identify objectives, to plan and to implement interventions. This framework places special emphasis upon the societal and practice contexts of this collaboration (CAOT, 2007).

Understanding the procurement process is important for two reasons. First, rates of wheelchair abandonment suggest there are serious issues with the procurement process. Cushman and Scherer (1996) reported 36% of wheelchairs were abandoned by individuals with spinal cord injuries within one year of prescription. Although wheelchairs are sometimes abandoned because of the changing individual needs or availability of mobility alternatives, lack of client involvement in the wheelchair procurement process has been suggested as another important explanation (Cushman & Scherer, 1996; Kittel, Di Marco, & Stewart, 2002). The financial costs associated with wheelchair abandonment can be substantial. Excluding the costs of therapists, a manual chair may cost \$5000 CDN and some power wheelchairs may cost over \$30,000 CDN.

Second, enhanced understanding of the procurement process may facilitate improved outcomes for wheelchair users. Although wheelchairs can provide a variety of benefits, there can also be negative consequences associated with their use (Miller-Polgar, 2006). For instance, wheelchairs may enhance well-being by promoting comfort, increasing independent mobility, facilitating social interaction and enabling participation in desired activities (Brandt, Iwarsson, & Ståhle, 2004; Sapey, Stewart, & Donaldson, 2005). Conversely, wheelchairs or seating systems may cause pressure sores (Brienza, Karg, Geyer, Kelsey, & Trefler, 2001) and discomfort (Crane et al., 2004), limit independent mobility, and prevent involvement in desired leisure and community activities (Hoenig, Landerman, Shipp, & George, 2003). In addition, wheelchair related accidents are a serious concern (Calder & Kirby, 1990; Mortenson et al., 2005).

Given the lack of research in this area, the complexity of the procurement process, and the importance of wheelchairs for those who use them, the following qualitative study was conducted with the overall purpose of exploring the wheelchair procurement process from the perspectives of clinicians and clients.

There were three study-specific research questions:

1. What perspectives do prescribers, individuals who use wheelchairs and their associates (family members and caregivers) have about the procurement process?
2. How are desired outcomes negotiated?
3. What factors facilitate or hinder the process?

Theoretical Foundation

Standpoint theory was an important theoretical lens that informed this study. It recognises that the marginalised position, or standpoint, of those in non-dominant groups provides them with an “epistemic privilege” (Narayan, 1998) in understanding 1) their own lives, 2) the lives of those in dominant positions, and 3) relations between them (Harding, 1998; Smith, 1987). The theory recognizes that people’s lives are multiple and at times conflicting (Harding, 1998). For example, although wheelchair prescribers are frequently in a position of power over the clients they work with, their autonomy is constrained by institutional and governmental policies and procedures (Townsend, 1998).

Method

In-depth, qualitative interviews were used as the primary method of data collection. For the first round of interviews, three semi-structured interview guides were constructed based on a literature review and on the researchers’ personal experiences about wheelchair procurement as noted in table 1. After explaining the purpose of the study and obtaining informed consent, all participants were interviewed once; and then, during a second round of interviews, 14 targeted key informants (N=10 wheelchair prescribers and N= 4 participants who used wheelchairs) were interviewed again. Key informants were those with an expressed interest and ability, determined based on the first round of interviews, to review all of the required documents and to provide important data deemed necessary to address the study objectives. During this second round of interviews, key informants were asked to provide feedback on two documents: a one page summary of the content of their interviews and a two page summary of the initial themes identified across all participant interviews. The study was approved by the local university ethics review board.

Participant recruitment

To ensure a diverse sample of participants, we purposefully recruited individuals from three different but relevant groups, wheelchair prescribers, individuals who use wheelchairs and their associates (defined as those with experience interacting with individuals who use wheelchairs such as friends, family members, and care-givers). Wheelchair prescribers, including international, national and local experts with a wide range of clinical experience, who were known to the researchers, were invited to participate in the study. These experts had to have prescribed at least two wheelchairs in the previous six months, so that they had some current experience with the process. Individuals who used wheelchairs and their associates were recruited through letters of invitation given out by the wheelchair prescribers enrolled in the study and by other therapists who were known to the study investigators. Inclusion criteria for wheelchair users included (a) use of a power or manual wheelchair as a primary means of mobility for at least six months; (b) ability to communicate in English and

(c) ability to provide informed consent. Associates needed to communicate in English and provide informed consent. Although the study primarily included participants from Vancouver, British Columbia, individuals from other locations (Victoria, Edmonton and New York) were also included, because these centers varied in terms of their climate, wheelchair procurement services, or funding policies.

Description of participants

Twenty-nine initial interviews were conducted with a total of 34 interviewees, as some family members chose to be interviewed together, including 13 wheelchair prescribers, 14 individuals who used wheelchairs, and seven wheelchair associates. All participants, except one wheelchair prescriber, were Caucasian.

Wheelchair prescribers—The one male and 12 female wheelchair prescribers represented a broad cross-section of clinicians who varied in terms of: 1) clinical population with whom they worked (individuals with congenital, progressive, sudden onset conditions); (b) types of wheelchair they prescribed (manual, power, scooter, all); (c) work-site (acute care, residential care, community, seating clinic, private practice); (d) geographical location (British Columbia, Alberta, New York State) and; (e) profession (occupational or physiotherapy). The experience of prescribers ranged from 3 to 30 years.

Individuals who used wheelchairs—The seven male and seven female individuals who used wheelchairs in this study varied in terms of their: (a) diagnoses (congenital, progressive, sudden onset (i.e., traumatic injury or acute illness)); (b) funding (none, private, income assistance, veterans); (c) living situation (facility, community alone, with others); (d) wheelchair use (manual, power, both) and; (e) geographical location (Vancouver, British Columbia or Edmonton, Alberta). The experience with wheelchairs of these participants ranged from 0.5 to 35 years.

Associates of individuals who used wheelchairs—Associates included spouses, parents, professional caregivers and one wheelchair designer. Four of these seven participants were associated with one resident from a group home that primarily housed individuals with brain injury. These participants' experience with wheelchairs ranged from 2 to 26 years.

Data Collection

All of the interviews were completed within a range of 40 to 120 minutes, and all were audio recorded and transcribed verbatim by a research assistant. Pseudonyms were used for the participant names. The first author conducted all the interviews, took field notes, and kept a personal journal. The field notes recorded interview date and time, location, description of the environment, non-verbal behaviour of the interviewee, impressions, and technological problems. Interviews were conducted in two waves so the researchers could gain a better understanding of their different perspectives. Prescribers were interviewed first and then the clients and associates were interviewed.

Data analysis

Data analysis was ongoing through the data collection process (Hammersley & Atkinson, 1995) and was facilitated through the use of Atlas Ti qualitative analysis software (Muhr, 1997). By repeatedly reading the initial interviews, the authors identified key concepts and themes along with illustrative examples from the data. This information was used to establish broad categories so that the first author could organise and inductively code the raw data. The study co-author provided feedback about ongoing analysis and coding of the interviews. Additional transcripts were received and reviewed using the same coding schedule; and new/emergent codes were added with input from the second author. As analysis progressed and the coding schedule evolved; interviews were re-coded by the first author. Following completion of interviews and coding for the first round, similar codes were grouped together into themes that were common within and across participants and participant groups. A conceptual understanding of the wheelchair procurement process was developed at the end of analysis.

Trustworthiness strategies

Four trustworthiness strategies were employed in this study. First, the use of multiple perspectives (prescribers, clients and associated) served as means of triangulation. This use of triangulation was intended to provide a complementary rather than confirmatory view (Morgan-Ellis et al., 2006) of the procurement process. Second, to facilitate researcher reflexivity, the first author kept a personal journal in which he recorded how the research was conducted and his thoughts and feelings about the research process (Hammell, Carpenter, & Dyck, 2000). He reviewed the field notes and used the personal journal as a reflective tool to try to understand how his positioning influenced the research process. For instance, as an occupational therapist the first author needed to carefully interpret client and therapist behaviour in light of societal factors and to avoid becoming defensive when clients were critical about the occupational therapist's role during the procurement process. Third, involvement of the co-author in the coding and analysis of the interviews provided another strategy to improve the plausibility of the study findings. Finally, six participants (four prescribers and two individuals who use wheelchairs) reviewed the final draft of this paper and generally indicated their agreement with the paper. Their additional comments are described in the following sections of the paper.

Findings

Analysis of the interview transcripts revealed five main themes and eleven sub-themes. The main themes were "Who decides?", "Expert knowledge", "Form versus function", "Fitting in", and "(re)solutions." "Who decides?" described who and to what extent different parties were involved in the procurement process. "Expert knowledge" revealed the expertise that participants possessed. "Form versus function" depicted the, at times competing, outcomes that participants sought to achieve. "Fitting in" illustrated important environmental factors that shaped the procurement process. "(Re)solutions" depicted participant identified strategies that improved the process of wheelchair procurement.

Who decides?

During member checking, Samuel (a community dwelling participant with spinal cord injury with 35 years wheelchair experience (power and manual), stressed the need for competent clients, as consumers, to be ultimately responsible for equipment choices. All therapists, regardless of discipline, described involving clients to a varying extent in the outcome identification process. On one hand, Monica (a seating clinic physiotherapist with 30 years' wheelchair experience), noted "I want to make sure that whatever my client wants, that's what I am going to focus on. On the other hand, Erin (a seating clinic occupational therapist with 11 years' wheelchair experience) said, "I do focus a lot on their orthopaedic needs and making sure that they are aligned really well but sometimes I have to sacrifice some of those things for function. [...] It comes down to what my client needs to do."

Not all individuals who use wheelchairs, however, indicated this level of involvement in the procurement process. Four of the 13 individuals who used wheelchairs voiced concerns that their input was limited in at least one therapeutic encounter. For instance, Tommy (a community dwelling participant with cerebral palsy with 18 years' wheelchair experience) indicated, "I wasn't given options about what kind of chair I could have. I was treated like a passive wheelchair occupant rather than an active participant in the process."

Wheelchair procurement rarely involved only the wheelchair user and the prescriber; often a variety of individuals had input during the process. Sylvia (a combined trained private practice therapist with 22 years' wheelchair experience) remarked, "In the case of people with severe developmental disabilities [...] your client includes the client, the day program, the residential program, the family, probably some other professionals." In this regard, the term "client" was often very inclusive.

Therapists were not always involved in the procurement process with clients. Mona (a community dwelling participant using a manual wheelchair for 10 years) went directly to a vendor to purchase a wheelchair and Jonathan (a community dwelling participant with an above knee amputation with 5 years manual wheelchair experience) indicated three of his four wheelchairs had been donated to him without any vendor or therapist input.

Expert knowledge

Prescribers and clients had different expertise that they brought to the procurement process. This sometimes led to conflicts about the type of wheelchair equipment to be acquired. For instance, Sylvia described a situation in which,

[The client] had to have a tilt chair for a variety of reasons, but all the foster mother wanted was a chair like a little stroller. Something that she can fold that's super small and super light. [...] That was what the mother wanted and as far as she was concerned all the postural things were my concern with this young lady who was definitely going to develop a number of problems.

Although Sylvia was eventually able to get a chair that met both her goals and those of the foster mother, there was the potential for serious discord.

Therapist knowledge—Therapist knowledge was revealed in overt and subtle ways. For instance, for clients with chronic pressure sores, Margaret (a private practice occupational therapist with 8 years' wheelchair experience) stated, "I think a lot of times people that I work with don't have a vision of what life could be like [...without a pressure sore] and that's where I come in." Therapist knowledge was based on: (a) their experiences from prescribing wheelchair to multiple clients and (b) knowledge obtained from performing formal and informal assessments with clients. New graduates, however, indicated that the procurement process could be intimidating for them. Christine (a rehabilitation hospital occupational therapist with 3 years' wheelchair experience) stated, "I think for me as a fairly new therapist, you're prescribing these really expensive items and you're just hoping that you've chosen the right thing. So it's a little bit scary."

It was particularly noteworthy that only three prescribers (3/13 = 23%) reported regularly using standardized instruments. According to Adam (an acute care occupational therapist with 10 years wheelchair experience) this was primarily because, "therapists [...] don't have a lot of time to be collecting data like that."

Client knowledge—This sub-theme described the knowledge that clients had, which was based on their experiential knowledge and through discussion with others (individuals who use wheelchairs, vendors and therapists). Rachel (a residential care occupational therapist with 8 years' wheelchair experience) noted: a) "What [clients] bring to the table [is] a huge amount of experience" and b) "Whenever a new product [like a power chair] is brought into the centre there is a big discussion about how fast does it go, the tires and all sorts of things." Individuals who used wheelchairs described how their knowledge grew through use and, over time, improved the procurement process.

Form versus function

This theme described how clients and therapists disagreements came about issues related to form and function.

Positioning versus function—Sometimes participants described how prescriber's goals for positioning were in conflict with the functional outcomes that clients wanted to achieve. Anne (a residential care occupational therapist with 20 years' of wheelchair experience) said of a client with muscular dystrophy, "When we had him [...] positioned well [so] that he had good postural alignment. We killed everything. He couldn't feed himself [and he couldn't drive his power chair.] The two things he could [previously] do in life." Conversely, Sylvia, observed that, when using certain positional aids, "Some care-givers think it's so cruel. You're tying them down. Then you need to do a lot of education about the fact the when the person is [seated using a pelvic bar] you're actually freeing them up for function."

Aesthetics versus function—Appearance was typically a greater concern for clients than for therapists. John (a community dwelling individual with multiple sclerosis (MS) with 5 years' wheelchair experience (power and manual)) stated, "I looked at all the various types of chairs and what I didn't want was something medical looking [and...] When I first saw this one I was a little put off [by its appearance]."

Performance—Wheelchair performance was also particularly significant for some clients. Tommy explained, “The speed of my chair is very important to me – I’m an adrenaline junkie.”

Skin breakdown—Skin breakdown or the potential for skin breakdown that could impact function was one of the most prevalent concerns for therapists, because, as Erin indicated, clients who develop pressure sores “might not be able to sit in the chair as long.” Although most therapists did not advocate such an extreme position, Adam asserted he would tell a client, “If you’re not interested in talking to me about your chair and including skin care, I’m not going there with you, it’s not negotiable.”

Fitting In

This theme described some of the important environmental factors that influenced and in some cases determined the procurement process.

Accessibility—Participants described accessibility issues that either affected the type of chair prescribed or required environmental modifications. Cassandra (a residential care occupational therapist with 9 years’ wheelchair experience) related the story of “a colleague that prescribed a \$22,000 chair that didn’t fit on the person’s van. They went to drive on and, oh-oh. They couldn’t even take it home.” Most participants described the necessity for home modification to accommodate wheelchairs. Some accessibility problems, however, were not amenable to change and required alternative arrangements. As an example, if John wanted to watch hockey games at his local arena, he needed to have “four people physically lift” his chair into position in a passageway, where it then violated fire regulations.

Attitudinal barriers—Participants in the study had a variety of experiences with disability and stigma. Although some participants indicated they encountered no discrimination, Elaine revealed, “When I had a manual wheelchair and friends would take me shopping, I remember [store clerks] saying to my friend, what colour does she like, what size does she wear?” They did not talk directly to Elaine. Christine described how one of her clients was prescribed a power chair, but it ended up “collecting dust” in her garage because “she was very concerned about looking disabled and really didn’t feel comfortable being out in the community in her power chair at all.”

Wants versus needs—Funding concerns varied considerably for participants. Leo (a community dwelling individual with pulmonary disease with 2 years’ power wheelchair experience), was told to apply for a power chair rather than a scooter as the latter was unlikely to be funded. “The [therapist] said, “Please don’t [apply for] a scooter, because you might not get [...] because social assistance thinks that if you get a scooter, you’re just getting it so it will save you from walking.””

Therapists handled equipment limitations due to funding with two different approaches. With one approach Christine indicated,

Often times if the client has a real desire for a power chair or piece of equipment, but it’s not a basic daily mobility need then there just isn’t the funding for it. [I] try

to look what they want to achieve and see if there are any different ways they can achieve that. [Because] if they just don't have the funding then there is no way that you can get the wheelchair for them.

On the other hand Sylvia observed,

I feel that if the need is there [...] I should be recommending it and then we will, in a sense, deal with the funding later. I do find that I don't get many things turned down, because if you can justify something well, often times you'll get the funding through whatever source.

(Re)Solutions

Participants identified a number of methods to resolve procurement process issues.

Seeing is believing—Participants emphasised the need for clients to make educated decisions and for therapists to make knowledgeable recommendations. Therapists often encouraged clients to try equipment so that they could make an informed decision about it. Some therapists were very persistent in convincing clients to give certain equipment a trial run. Anne remarked,

I often insist we try and see how [an alternative wheelchair] works [but] in the end if they say, "No I prefer my old clunker," I pull back and say, "That's good. You have made an informed decision."

The influence of peers in this process is illustrated in a narrative from Samuel, who used a manual wheelchair for the first 17 years after his high spinal cord injury and so relied on others for his mobility. Samuel eventually started using a power chair explaining:

A friend of mine with a lower level injury suggested I give the power chair a try. He said I'd love it because when I'm in the sun//All quads like the sun because it warms the body and we're always cold. So that was the hook. And now I don't know what I would do without it. I grab the bus and head out. I just had no idea.

Furthermore, rather than getting all of his information from a therapist, Samuel noted a range of sources he might access. "Is there a web page where I can talk to other users? Are there breakdown reports on these things and where do I get that information? How can I as a client, be a good consumer?"

Collaborating—All prescribers emphasised the need to work cooperatively with clients. Sylvia stated, "You've got to be pretty collaborative to be able to [...] have people happy with things in the end so they feel they've been involved in the process," although as noted in the first theme, "who decides" clients did not always perceive it this way.

Therapists described a variety of strategies they used to uncover the goals of clients who were having difficulty articulating them. Sarah (an outpatient occupational therapist with 5 years wheelchair experience) indicated, "I always start with, how do they see themselves using this chair [...] and have them paint me a picture." A number of therapists described how they would help clients to imagine what was possible with an appropriate wheelchair and wheelchair seating.

Discussion

The discussion has been structured according to the three study objectives.

1. Perspectives on the procurement process

This study indicates that wheelchair procurement is a complex, negotiated process in which therapists and/or clients select a wheelchair and wheelchair seating system that reflects their preferences and values within the context of environmental constraints and facilitators. A conceptual model of this process is presented in figure 1. This iterative process begins with goal identification and prioritization by those involved in the process. Through an ongoing wheelchair trial (and, at times, error) process, interventions (including different wheelchairs and accessories, training and/or environmental modification) can be evaluated in terms of the outcomes that they produce. Although the goals that are identified and the way they are prioritized may remain static, goals may be also revised based on this trial process as indicated by the left pointing arrow. Environmental factors play a critical role throughout this process, as they influence which goals are deemed realistic, what equipment is available and will be funded, what supports and treatment can be obtained and whether accessibility can be altered. In fact, for clients like Jonathan, the process was reversed; and it was the donated equipment that determined his goals, rather than his goals that determined what equipment he should have. Ultimately, because of the existence of multiple, and at times competing goals and environmental barriers, the final wheelchair usually represents a compromised choice that meets some goals better than others (Lenker & Paquet, 2003). This model has parallels with the idealized Canadian Practice Process Framework, especially in terms of its emphasis on contextual factors (CAOT, 2007).

During the procurement process, prescribers and clients felt what Smith (1987) would describe as “tensions” when the reality that they encountered was incongruent with the expectations that they had, but the experiences that both groups had were distinct. Clients experience first-hand how physical barriers prevent them from engaging in some activities and alter where and when they accomplished others. In this regard, individuals who use wheelchairs are taught to both “know their place” and feel “out of place” (Kitchin, 1998). This type of geographical and social segregation has been described by Imrie (2001) as “design apartheid.” This perception is reinforced by funding that a) prevents some clients from obtaining equipment, and b) forces others to adopt the role of supplicant, which accentuates the power differential between clients and prescribers. Socio-economic status seems to have a profound effect on the availability of equipment and other resources, especially if an individual is not eligible for disability assistance.

In comparison to clients, prescribers occupy relatively privileged positions (Harding 1998), but they are still constrained by the same accessibility and funding issues. For example, prescribers often have considerable discretionary power as equipment gatekeepers, for funding agencies make decision based on the assessments they submit (Jörg et al., 2006). As Christine indicated, however, prescribers are sometimes uncomfortable with this role, which may create a disjuncture between the ideals of client-centred practice and its actual implementation (Mortenson & Dyck, 2006; Townsend, 1998). In a gatekeeper role,

prescribers may be viewed by some clients as parasites¹ who actually interfere with the procurement process.

2. Outcome negotiation

Most participants described how power was shared relatively equally during the procurement process, an approach to client-centred practice that could be described as “led by the interaction” rather than “led by the client” (Falardeau & Durand, 2002, p. 140). Given the expert knowledge of both prescribers and clients, this power sharing model was likely more palatable to prescribers than a client-driven model (Gage & Polatajko, 1995) that downplays the therapist’s role in negotiating outcomes. Although this finding may reflect the client recruitment strategy that we employed, this degree of client involvement is also in keeping with Swedish research by Wressle and Samuelsson (2004), who found that most clients felt like active partners in the prescription process. In contrast, some examples of the procurement process, like Adam’s assertion about the importance of pressure management, seemed to be based on a medical model of practice (Oliver, 1990), which is an issue that has been identified by other assistive technology researchers (Cushman & Scherer, 1996; Kittel et al., 2002; Sapey et al., 2005). Although client-centred practice has been seen as a way of correcting the power imbalance between prescribers and clients, its focus on the individual can downplay the impact of societal factors (Mortenson & Dyck, 2006).

The different outcomes therapists and clients identified were a potential source of tension between them. For instance, the provision of a tilt-in-space wheelchair may improve comfort; however, it may also interfere with independent mobility and participation in activity (Dewey, Rice-Oxley, & Dean, 2004). The difficulty associated with harmonizing disparate goals is in keeping with Sumsion and Smythe’s (2000) finding that disagreement about goals was the “barrier which most prevented client-centred practice” (p. 15).

The limited use of standardized measures during the procurement process is somewhat surprising, as such measures could serve as useful tools for identifying and reinforcing prescriber concerns. The percentage of prescribers using standardized assessments is far lower in this study compared to a survey of British occupational therapists that found over 50% reported using objective assessments (Curtin & Jaramazovic, 2001). Although this could reflect the purposeful nature of the study sample, it is interesting in light of demands for increased evidenced practice and accountability (Law, 2002).

3. Barriers and facilitators of the procurement process

Individuals who use wheelchairs have unique phenomenological experiences that cannot be ignored during the procurement process. Illnesses, injuries or declines in function that lead to wheelchair use can represent a form of “biographical disruption” (Bury, 1982) in which an individual’s life story is dramatically altered. Experiences and expectations of stigma were common (Cahill & Eggleston, 1995; Oliver, 1990) and influenced the types of wheeled mobility that some participants were willing to accept. With additional experience,

¹During member checking two prescribers felt this word was a too strong, but as it did capture the perspectives of some clients, it was maintained in the final paper.

individuals who use wheelchairs gained more knowledge, which made the process easier for them, a finding echoed by Kittel et al. (2002)

The benefits of the client's peer interactions can be seen as a reflection of the health belief model (Becker, 1974), which suggests that informal sources of information (including friends and family) are often the most potent element in effecting behavioural change. To illustrate, Samuel only started using a power wheelchair with the encouragement of and information from another individual with spinal cord injury. In this case, that individual helped Samuel to identify the "anticipated benefits" of using a power chair and acted as a "cue to action" or a precipitating force that made Samuel feel the need to take action. (Becker, 1974) Samuel's comments about the role of the client as a consumer fits a client driven model of practice (Gage & Polatajko, 1995), and suggests that the use of peer resources, such as blogs or web sites may be beneficial for individuals who use wheelchairs.

Limitations

There are a number of limitations to this study that need to be acknowledged. The research was conducted as part of a larger study, which did not focus exclusively on issues of wheelchair procurement. In-depth interviews were the only source of data; and, although purposeful sampling and repeated interviews were strengths, no attempt was made to compare the experiences of clients with the perceptions of the therapists for the same mutually experienced wheelchair procurement episode. Although participants varied considerably in terms of a number of characteristics, the relative ethnic homogeneity of participants prevented an exploration of how race may have played a part in the procurement process. Only occupational and physical therapist prescribers were interviewed, and their perceptions might have been different from those of other healthcare prescribers and vendors. As coding was performed only by the first author, no attempt was made to compare the reliability of this coding across investigators. Finally, because most key informants were prescribers, only a small number of clients were interviewed twice.

Conclusion

This research represents one of the few studies that explore the wheelchair procurement process within a client-centred practice framework. The wheelchair procurement process is multifaceted and at times controversial. Wheelchairs represent sites where occupational engagement, self-identity and the cultural and physical environment are negotiated. Wheelchair procurement, therefore, requires careful consideration of all of these elements, because the type of wheelchair selected and its configuration have a powerful impact on the lives of wheelchair users. This paper helps occupational therapists understand the various perspectives of this complex and important process and provides insight into the nuances of wheelchair procurement that can assist us in improving this therapeutic intervention. By documenting what many involved in wheelchair procurement tacitly know but have not discussed, the paper provides a platform for further research in this crucial area of study. Future directions for research in this area could include the use of participant observations in combination with interviews to explore the procurement process and use of outcome

measures in even greater detail or the use of institutional ethnography to understand more thoroughly how translocal processes shape local experiences.

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Key Messages

- Resolving conflicts between client and therapist identified outcomes requires skilful negotiation.
- As gatekeepers in the process, therapists need a) to carefully evaluate the role that they play from a client-centred perspective to prevent being perceived as barriers to occupational engagement and b) to identify accessibility and funding issues that require advocacy.
- Therapists should consider the use of outcome measures to determine the effectiveness of their interventions.

Figure 1. Conceptual Model of the Procurement Process

Note: Themes and sub-themes associated with elements of the procurement process are indicated in *italics*

Table 1**Interview guidelines for prescribers, individuals who use wheelchairs and associates**

Prescribers:

- How do you go about prescribing a wheelchair?
- How do you identify the outcomes that you want to achieve?
- How do you negotiate those outcomes with clients?
- How do you handle disagreements over outcomes?
- What strategies do you use to facilitate the process?

Individuals who use wheelchairs:

- How did you get the chair you have now?
- Have you had other wheelchairs?
- What was that process like?
- What were you looking for in a wheelchair?
- How did you decide what you wanted?
- How would you improve that process?

Family members and caregivers:

- How did ____ [name] get his or her wheelchair?
 - What was the process like?
 - What was your involvement?
 - What were you looking for in a wheelchair?
 - How would you improve that process?
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