

PROSTHETIC USER -SATISFACTION AND CLIENT- CENTERED FEEDBACK FORM

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ABSTRACT

Individuals who present with upper limb loss or congenital difference experience challenges that impact physical and psychosocial functions. Many of these individuals utilize prosthetic technology to provide or restore some of the upper limb function. As no single technology is currently available to replicate the diverse functions of the human hand, upper limb prostheses come in many forms to serve many purposes from passive assistance to complex manipulative capabilities for bimanual tasks. Today's innovative prosthetic technologies can help to restore the consumer's independent function at home, at work and in the community and improve their perceived quality of life. Existing client satisfaction tools often appear inadequate; and the information is typically requested late in the process, hampering functional outcomes and hindering the opportunity to rectify dissatisfaction. In addition to the limitations in physical function, are the impacts of prosthetic wear on self-esteem and how one performs social roles and conducts social functions. All of this can result in rejection and/or abandonment of the prosthesis. The problem is multi-dimensional and ultimately impacts all who use or might potentially use prosthetic technology.

INTRODUCTION

As healthcare professionals and providers, it is incumbent upon us to provide client-centered care. The consumer demands it, the healthcare industry requires it and our professional ethics mandate it. Scaffa, Reitz and Pizzi (2010) call us to "understand the determinants of health, such as lifestyles and living conditions, so that these can be maintained or improved". The authors cite the meaning of health as defined by the World Health Organization (WHO) to be the "complete state of physical, mental and social wellbeing, and not just the absence of disease or infirmity". Patient satisfaction has long been a buzzword and in the prosthetic industry; it includes satisfaction with service delivery as well as with technology.

Hill et al. (2009) conducted a systematic review of assessment tools relevant to this population and prosthesis use. Their findings included barriers to communication culturally, linguistically and with lack of common terminology across professions. They cited the need to

implement a unified collaborative approach to improve communication between all stakeholders including the clients, clinicians and researchers (Hill et al., 2009). This viewpoint also coincides with the strategic directions of the National Prevention Strategy (2011) that include empowering people and eliminating health disparities.

The International Classification of Functioning, Disability and Health (ICF) was designed to serve several purposes such as to provide such common language and reach across the multiple health care disciplines and to provide a structure for advocacy for individuals with disabilities (WHO, 2001). The ICF model provides a framework of inter-relatedness of the health condition, environmental and personal factors to the components of body functions and structures, activities and participation. Hill et al. (2009) note that according to the ICF definitions, prostheses are perceived as assistive devices and designated as environmental factors. The disparity for individuals who utilize prosthetic technology is that for many, the prosthesis serves as an extension of the user's body. While it may serve as a tool to access bimanual functional tasks, it also becomes a replacement for the absent body structure/body function. According to Hill et al. (2009), this unfortunate classification stifles the voice of this population and ignores the experience of the prosthesis user.

Within the prosthetic industry there has been much queried about the use of the technology, how individuals perceive the technology, why they use it and how it is incorporated into the schema of the person. Few researchers have tackled and reported on the evidence as cogently as Craig Murray in his studies of 2005 and 2009. In the earlier study, he explored the factors toward adjustment and social meanings surrounding the use of prostheses and particularly sought the perceptions by limb users themselves. Several themes emerged including actual prosthesis use and social rituals, the perceptions of social isolation and the reactions of others, whether to conceal or disclose the limb difference and the social implications of each, and feelings/experiences relative to social and intimate relationships. Factors that influence adjustment and successful rehabilitation included early prosthetic fitting, prosthetic satisfaction and the need for individual expression (Murray, 2005). Satisfaction with the prosthesis is associated with increased self-esteem, increased social integration and absence of emotional challenges. The need for individual self-expression includes

social expression, 'person-first' societal acceptance and personalizing the appearance of the prosthesis to what is perceived as aesthetically pleasing to the wearer. It is this work that served as the impetus for the development of a platform to raise the voices of the consumers and to heighten the hearing of the practitioners.

Clinicians at Handspring (based in NY with additional clinics in FL, CO, and UT) use a client-centered collaborative approach with occupational therapy and prosthetic services. They recognize the need to obtain client feedback in a systematic way that would empower the individuals and allow provision of technology that wearers of upper limb prostheses would like and would use. They collaborated with clients to create a document that uses common language and offers a feedback loop during all phases of the prescriptive prosthetic process, initiating use of the information during the pre-prosthetic phase and extending it through follow-up after delivery of the definitive technology. The form addresses specific elements of prosthesis use cited as important by the clients such as comfort of the socket, aesthetics, ease to don/doff, tolerance to weight, length, socket and harness as appropriate; control systems, reliability, pain and functionality of the technologies. The user grades each item using a 3-point color-coded system that is easy to use by children and adults. Any item that the client rates in the red column is immediately addressed during that visit; items in the yellow column are addressed subsequently. By enacting emergent practitioner response to remediate the identified problem(s), the client experiences that his/her voice has been 'heard', that their perceptions are important and that they as individuals are important. What first began as a client-centered feedback form to improve prosthetic satisfaction, acceptance and use has additionally and more importantly become a tool to empower the population of individuals who have experienced upper limb loss to speak and to be heard.

METHOD

Individuals with upper limb acquired loss or congenital deficiency who present for prosthetic technology are given the McGann Client Feedback Form at different stages of development of prosthetic technology and training. Additional assessment using outcomes measures including the QuickDASH, Box and Blocks Test and tests of prosthetic function as appropriate to technology developed. Data: Scores are derived from the diverse tools, correlated by subject as they relate to prosthetic satisfaction, function and self-perception of disability or quality of life. Final outcomes will be reported at this event as the subject continues to participate in prosthetic rehabilitation. This tool has been expanded to include feedback forms relative to occupational therapy and prosthetic rehabilitation, orthotic satisfaction and lower limb prosthetic satisfaction.

DISCUSSION

This presentation specifically describes the feedback form and its implementation during the prosthetic fabrication and rehabilitation process. Case studies offer insight to its correlation to scores derived from measures such as the Quick DASH and the SF-36, changes to the prostheses and impact on functional performance of the client as measured by tools such as the UNB, SHAP and ACMC.

Murray (2005 and 2009) cites the importance of consumer perceptions, input and self-advocacy to the design of prosthetic technologies. He speaks of the social meanings of prosthesis use and the value of this as it relates to user satisfaction and integration to the community. By actively engaging the client and extracting personal feedback, as well as input from the family and/or case manager, the prosthesis user is able to influence his/her care. Relationships between prosthetic satisfaction, self-perception of ability and function emerge as important facets of the rehabilitation process. As clients use their voices to note the problems they experience and the functions they enjoy, they appear to develop self-advocacy skills and to be more confident in their observations and reporting. Functional abilities appear to improve and the personal perception of 'disability' appears to diminish. This speaks to population health relating to occupational justice as the clients appear to be more "ability-aware". The opportunity to provide meaningful feedback that is heard and is acted upon acts as a change agent to impact the individual consumer, the collaborative team and ultimately the care. It proves Reilly's statement that "man through the use of his hands as they are energized by mind and will, can influence the state of his own health" (Scaffa et al., 2010).

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