Mentoring for Competency and Skills Development in Wheelchair Services

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**Background**

The most commonly used assistive technology device to support personal mobility is the wheelchair.1 The World Health Organization (WHO) estimates that more than 70 million people worldwide need a wheelchair to be mobile, but only 5–15% have access to one.2 Furthermore, of those with access, less than 5% receive the appropriate technology and services that meet their mobility needs.1 The appropriate wheelchair is the foundation for independence and full inclusion in work, education, and the community for individuals with mobility impairment.1 However, there is lack of training among service providers globally on appropriate wheelchair service delivery, which further contributes to the unmet need of the appropriate technology.3-5 For service providers afforded the opportunity, WHO recommends “further practice with a mentor...to build competencies and enhanced capacity for independent work” in wheelchair service provision.1

Research on mentoring health and rehabilitation professionals demonstrates a positive impact on perceived competence and clinical practice.6 E-mentoring, or the use of telephone and online platforms to engage in a mentoring relationship, is a relatively new approach in health fields, but also has potential for capacity building and offers flexibility in some contexts.7  In 2010, Schichtel reported for medical educators, e-mentoring could potentially improve training and patient services, especially when coupled with a face-to-face intervention.8 Similarly, Doyle, Jacobs, & Ryan (2016) conclude e-mentoring is useful for post-graduate occupational therapy doctoral students, especially when the intervention is multimodal and includes the use of web-cameras to mimic the in-person strategy.7 However, there is little evidence in the literature that supports mentoring for competency and skills development of wheelchair service personnel specifically, especially for those in low and middle-income countries (LMICs).

The International Society of Wheelchair Professionals (ISWP), an organization with a mission “to serve as a global resource for wheelchair service standards and provision through advocacy, education, evidence-based practice, innovation and a platform for information exchange”, developed a mentoring initiative for trainers to further build upon the skills of intermediate service providers after completing relevant training.9 The paper, therefore, will introduce the international mentoring initiative and discuss how it can be integrated into current practice and adapted for specific organizational and training needs to help providers better serve wheelchair users around the world.

**Methods**

To date, we are unaware of documented evidence-based mentoring interventions specifically for wheelchair service provision, therefore, ISWP initiated a pilot project to determine the use of e-mentoring for wheelchair service providers with a focus on building capacity in LMICs. The impetus for the pilot was three-fold: 1) a literature review provided evidence to suggest e-mentoring had potential to increase competency for our target population; 2) the ISWP Training Working Group members – professionals with vast experience in training and education in the global wheelchair sector – stress the importance of mentoring yet do not follow or consult a standardized or scalable approach; and 3) wheelchair service providers were not passing the case study portion of the ISWP Wheelchair Service Provision Intermediate Test - an assessment that measures clinical skills in intermediate level seating. The goal of the program, therefore, was to understand the impact of e-mentoring on intermediate level wheelchair service providers’ knowledge and skills, while providing a remediation option for service providers who had not yet passed the intermediate skills test.

Three mentors were selected to adapt activities from the World Health Organization Wheelchair Service Training Package (WSTP) Intermediate Level to form an 8 week curriculum and deemed the program would be appropriate for 12-15 mentees. Mentors selected the Adobe Connect online platform to facilitate group mentoring sessions. In developing the activities, mentors selected two key approaches. The first was a review of failed case studies submitted for the ISWP intermediate skills test to allow mentees to reflect on clinical errors and learn from discussions with colleagues. Second, mentors developed tutoring sessions that reinforced the assessment, prescription, and fitting wheelchair service steps, which included the use of postural support devices (PSDs).

Researchers planned to facilitate online, semi-structured focus groups with the mentees and mentors at midpoint and after the pilot to identify any challenges and understand the benefits of the online methodology. All correspondences and logistics were facilitated through email by ISWP.

**Results**

The first phase of the project was facilitated in June 2017 by the mentors who developed the mentoring protocol and materials. Mentors ranged from 8 to 20+ years in intermediate seating from South Africa. Twelve service providers were recruited from 5 LMICs (Mexico, Tanzania, Kenya, Pakistan, and India). Mentors were matched with 4 mentees each based on timezone. All mentees had experience working with intermediate level clients, including pediatric wheelchair users, and worked in less-resourced settings.

Mentees followed the mentor-designed protocol of reviewing case studies with their assigned group and mentor and then participated in tutoring sessions together that reinforced the assessment, prescription, and fitting wheelchair service steps addressed in the case studies.

The mentee focus groups revealed that the e-mentoring pilot program was well-received. Despite the online format, mentees developed a meaningful rapport with mentors which reinforced the learning experience. Mentees reported more confidence in delivering intermediate level services and in their ability to pass the ISWP intermediate skills test upon completing the program. When asked about the online layout of the program, one mentee responded, “[there was] good interaction with mentors and participants,” while another responded, “[the] online program helped us to exchange ideas despite being in different locations in the world.” When asked about the mentors, one mentee responded, “She was helpful with different positions and made us think about what went wrong and what could have been done.” Another mentee responded, “...I received a lot of corrections and assistance on how to position my client and the right PSDs to use.” For future cohorts, mentees recommended more guidance and sessions dedicated to case study review as well as a thorough introduction to the online platform prior to participating. Mentees also suggested the use of live video during sessions provided there is appropriate internet bandwidth.

The mentor focus groups centered more around program development and format. In regards to curriculum development, mentors reported more time should be allocated to case study review as well as planning and delivering session topics to ensure ample time for insightful discussion. One mentor reported “I think one needs to have ongoing case studies...to see to what extent have they have integrated the sessions and theory.” It was suggested for future cohorts, sessions be scheduled to give mentees ample time to use what was learned in their practice and to report back with problems. For mentees having difficulties, mentors suggest offering one on one online sessions. Mentors also suggested facilitating multiple test-sessions with mentees to troubleshoot technological difficulties in advance, especially for individuals in areas with low internet bandwidth. For those participants, mentors recommended all materials should be available in printable versions for when technological difficulties occur. Lastly, mentors reported that mentees were able to better identify clinical errors after completing the program.

**Discussion**

As a supplement to learning and knowledge retention, mentoring has shown to be effective for the professional development of health and rehabilitation service providers. Due to the training deficit in the wheelchair sector around the world and the low number of trainers available to engage in an in-person mentoring relationship, the ISWP e-mentoring initiative may be a viable option after service providers have been trained in appropriate wheelchair service provision, especially for those living in remote areas. It is anticipated e-mentoring would build upon training goals and ensure better learning outcomes for service providers, ultimately allowing better services to be delivered to clients.

After a review of the literature and completing the pilot program, ISWP supports the potential of e-mentoring to help facilitate current training and capacity building efforts in the global wheelchair sector. Our literature review and pilot program results recommend:

1. Using a formal, semi-structured protocol that includes a) defined goals b) initiating and maintaining open communication c) a sufficient number of pre-arranged meetings and d) an indication of time commitment.
2. Involving mentees in the mentor selection process and rationale based on his/her needs and expectations.
3. Assuring mentors possess a high level of knowledge on the subject matter, benevolent characteristics, and a passion to facilitate learning.
4. Several practice sessions occur in the area where the mentee plans to participate to ensure adequate bandwidth and guidance is received, in advance, on what to do when technical difficulties occur.
5. Sufficient time is allocated to sessions and activities and flexibility in scheduling to accommodate individual trainee needs.
6. Having mentors who are knowledgeable about the mentees’ context to create a sense of trust within the relationship, allowing mentees the opportunity to further engage and apply mentors’ experiences to their own practice.

**Future Work**

 In regards to the ISWP mentoring program for intermediate level wheelchair service providers, since completing the pilot, mentees are expected to submitted new client case studies with a goal of passing the ISWP Wheelchair Service Provision Intermediate Test. The ISWP is also working to further develop the program through a research study that will determine the feasibility of a sustainable intervention as well as validate outcome measures to determine the impact of mentoring on service providers’ self-efficacy and clinical skills.

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