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REHABILITATION IN PRACTICE

Addressing the elephant in the room: integrating sexual health practice in spinal cord injury rehabilitation

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ABSTRACT

Purpose: Sexual health, a basic human right, maybe disrupted after a spinal cord injury (SCI) and is often not addressed in rehabilitation. This quality improvement initiative embedded sexual health education and support for patients with SCI into clinical practice.

Materials and methods: In 2017–2018 a team of clinicians, researchers and persons with SCI developed and implemented a new sexual health practice in SCI rehabilitation. A systematic process was undertaken which included implementation science principles; the PLISSIT model and Sexual Rehabilitation Framework were foundational to the new practice.

Results: Adult inpatients with SCI began receiving the sexual health practice in June 2018. After 6 months, patient and health care provider surveys were conducted. Patients reported increased awareness of sexual health resources and increased satisfaction with sexual health concerns being addressed. Clinicians reported increased comfort in addressing patients' sexual health concerns and increased awareness of sexual health resources.

Conclusions: Embedding the new sexual health practice facilitates the reintegration of sexual health into the daily lives of SCI patients and supports a more comprehensive and holistic rehabilitation. It normalizes sexual health concerns and questions in an SCI rehabilitation facility.

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Implementation science; quality improvement; rehabilitation; sex education; sexual health; spinal cord injuries

➤ IMPLICATIONS FOR REHABILITATION

- Sexual health is noted to be a top priority among persons with spinal cord injury, however, this area of care is often overlooked by healthcare providers across the rehabilitation continuum.
- A team of clinicians, researchers, and persons with SCI used a systematic process to address this gap by developing and implementing a new sexual health practice in the SCI rehabilitation program.
- This quality improvement initiative resulted in increased clinician knowledge and confidence in this domain of practice and greater patient satisfaction in having their sexual health needs to be addressed during rehabilitation.

Introduction

Sexual health is a basic human right and a significant component of overall health and well-being [1,2]. The World Health Organization [3] defines sexual health as:

> [...] a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled.

After a spinal cord injury (SCI), there can be issues surrounding sexual health functioning [4,5]. Many people with SCI have concerns and questions about their sexual health that are often not addressed during rehabilitation [6]. Although many clinicians understand the importance of addressing sexual health concerns, most lack the knowledge and confidence that is necessary to consistently provide patients with education and support for their sexual health [7]. There is a common notion that people with disabilities are asexual [8]. When healthcare professionals choose to avoid discussions around sexual health, their silence may reenforce existing perceptions that people with disabilities are asexual; this can inadvertently impact the quality of life of their patients. Since these individuals still require answers to their questions, they may resort to seeking out sexual health information through other sources (e.g., online, peers) and this information may or may not be credible or reliable.

Several studies have highlighted the priority and importance of sexual health among individuals with SCI. A large sample of individuals with SCI ($n = 681$) was asked to rank seven functions, in order of importance, which impacted their quality of life [9]. Regaining sexual function was the first- or second-highest rated priority for 28.3% of patients with tetraplegia and 45.5% of patients with paraplegia. Sexual function was ranked as a top priority for functional recovery alongside bowel and bladder function and upper and lower extremity function in a systematic review of 24 studies ($n = 5262$ individuals) identifying health and life

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Supplemental data for this article can be accessed here.

priorities for people with SCI [10]. A recent multicenter study examining health problems secondary to SCI at 1 and 5 years after rehabilitation also identified sexual function as one of the most frequently mentioned health problems [11]. While these studies have illustrated the resounding influence of sexual health on quality of life, this makes the apparent lack of emphasis on sexual health education for patients throughout the course of rehabilitation even more concerning [12,13]. Barriers to the provision of sexual health education in rehabilitation settings have been documented and include lack of knowledge/training for staff, lack of time, perceptions that it is someone else's job, conflicting personal values and beliefs around sexuality and assumptions that the patient is not ready [13]. Identifying a successful and systematic development and implementation strategy for sexual health practice in SCI rehabilitation would be beneficial in increasing clinicians' knowledge and confidence and improving patient satisfaction and quality of life.

The Consortium for Spinal Cord Medicine Clinical Practice Guidelines for Sexuality and Reproductive Health in Adults with Spinal Cord Injury [14] suggests that sex and related issues should be integrated into assessment, planning, and ongoing therapeutic sessions with patients. In addition, it states that specific classes and counseling sessions regarding sexuality should be established as a component of the rehabilitation program. The guidelines also suggest using a treatment framework, such as the Permission, Limited Information, Specific Suggestions, and Intensive Therapy (PLISSIT) model for education, as it is designed to identify the various levels of service depending on the needs of the individual [15]. This approach allows clinicians to be more responsive to an individual's readiness to discuss issues around sexuality. Finally, the guidelines outline the importance of providing assurance to the individual as soon as feasible (preferably during early acute care) that basic information about sexuality will be provided and that more extensive information will be available throughout care. General information about sexuality and sexual function should be offered as early as possible in the rehabilitation process.

Frequently, if any education about sexual health occurs it is during informal discussions between the person with SCI and their health-care providers [14]. The overwhelming reality is that sexual health concerns are frequently overlooked by health-care providers in both inpatient and community-based settings; many studies suggest individuals with SCI report low satisfaction with sexuality education during rehabilitation [16–18]. Patients commonly report a lack of opportunity to ask questions about their sexual concerns, feel ashamed or embarrassed about the topic of sexuality, do not know which provider is appropriate to answer their questions, and/or may not feel optimistic about the outcome of such a discussion. Health care professionals are often reluctant to bring up the topic of sexuality because of deficits in knowledge and communication skills, time and reimbursement constraints, unrealistic fear of offending the patient, and discomfort in asking and addressing sexual concerns [7]. Overall, there appears to be a discrepancy between preferred and current practice.

The overall aim of this quality improvement (QI) initiative was to embed sexual health education and support for patients with SCI into clinical practice by increasing clinicians' knowledge and confidence related to this topic area. Specifically, we targeted the SCI rehabilitation clinicians' ability to be comfortable giving patients the permission to talk about their sexual health concerns and feel confident providing limited education on the subject matter. From a patient perspective, our goal was that all SCI patients would be given permission to talk about sexual health concerns and given the opportunity to identify sexual health goals throughout their rehabilitation stay. In the present manuscript, we seek to describe both *what* was implemented (i.e., the sexual health practice), *how* it was implemented (i.e., the development and implementation process), and the *effects* of this practice.

Development and implementation of the practice

Setting

This practice was implemented at Parkwood Institute, a tertiary care rehabilitation hospital in London, Ontario, Canada. Parkwood Institute has 15 beds in its Regional Rehabilitation Program for individuals with SCI. The SCI program is specifically designed for patients who have experienced traumatic or non-traumatic SCI or peripheral nerve disorders with similar functional presentations. The program is open to persons 16 years of age or older and services Erie St. Claire and South Western Ontario regions. More specifically, this area encompasses 11 counties, a landmass over 28 000 km^2 with a combined population of over 1.6 million residents. Approximately 80–100 individuals receive SCI in-patient rehabilitation care at the hospital per year. The rehabilitation program is interdisciplinary and delivered via several clinician groups, including physicians, nurses, physical therapists, occupational therapists, social workers, speech-language pathologists, psychologists, therapeutic recreation specialists, dieticians, respiratory therapists, spiritual care practitioners, and others.

Research 2 Practice team

Parkwood Institute is fortunate to have a dynamic, collaborative clinical-research team called Research 2 Practice (R2P) which is embedded within the SCI and Acquired Brain Injury Rehabilitation Programs. The R2P team is composed of researchers, clinicians, persons with lived experience, and trainees. It uses an embedded implementation science approach within a participatory research framework. As an integral part of the SCI rehabilitation program, the R2P team supports projects and initiatives that are situated across the spectrum of clinical and practice-based research and quality improvement. In the case of the sexual health practice, the R2P team helped guide the process using implementation science principles and provided project management, data collection, and analysis expertise at multiple time points throughout this initiative. The Western Research Guidance document and checklist "Distinguishing Between Quality Assurance/Improvement, Program Evaluation & Research" was utilized to determine that this was a Quality Improvement Project (Supplementary Material available upon request). As such, under article 2.5 of Tri Council Policy statement 2, ethics approval was not required by the Western Research Ethics Board due to the quality improvement nature of this initiative. Ethical considerations were taken into account in that all patient and staff surveys were optional, anonymous and participation did not impact direct patient care or employment.

Theoretical framework

Two principal frameworks guided the sexual health practice: Permission, Limited Information, Specific Suggestions, and Intensive Therapy (PLISSIT) Model [15], and Sexual Rehabilitation Framework [19]. As supported by the Clinical Practice Guidelines, and studies by Tepper [20] and Fronek et al. [12], sexuality training programs integrating the PLISSIT framework for

interdisciplinary SCI rehabilitation teams help to improve staff knowledge, reduce staff discomfort when addressing sexual health concerns and improve attitudes toward sexuality for people with SCI. Fronek et al. [12] note that this model is particularly appropriate for interdisciplinary teams, as each member can contribute based on their comfort level, skill, and experience in sexuality counseling.

The Sexual Rehabilitation Framework was selected because it also lends itself well to an interdisciplinary approach. The main focus of this framework is to systematically assess eight biopsychosocial factors that impact sexual health: (1) sexual functioning abilities, (2) fertility and contraception, (3) associated conditions, (4) motor and sensory influences, (5) bowel and bladder concerns, (6) sexual self-view and (7) self-esteem and (8) partnership issues [19]. Each interdisciplinary team member has the expertise to contribute within a given category and can play a role in introducing the topic of sexual health [19].

Implementation process

A systematic process for practice change was based on implementation science (IS), informed by the National Implementation Research Network (NIRN) principles and active implementation frameworks (AIFs) [21]. The team was deliberate in its efforts to apply the NIRN frameworks, namely, Implementation Teams, Stages of Implementation, Implementation Drivers and Improvement Cycles, to facilitate successful implementation and sustainability of the practice. The implementation process was distilled down to six key steps: (1) Exploration; (2) Implementation Team formation; (3) Identification of the current state; (4) Establishing a desired practice through practice profile mapping; (5) Action Planning informed by priority implementation drivers; (6) Initial implementation (launch) using Plan-Do-Study-Act (PDSA) cycles. Specific planning activities within each of these steps informed an integrated evaluation plan. These steps and associated activities are outlined in the flow chart below (Figure 1) and will be described further. Of note, the activities and steps described are not linear, but are cyclical and integrated, in congruence with the principles of IS. Importantly, they also lay the foundation for achieving a state of full implementation where the sexual health practice becomes "business as usual." It also allows for continuous improvement as the essential infrastructure is in place (i.e., implementation drivers) to enable ongoing evaluation through routine improvement cycles.

Exploration (Fall 2016–February 2017)

The initial gap in practice was identified through informal feedback from staff and patients and a number of ongoing discussions at the SCI Program Council, followed by literature/standards of practice review. Some of the limitations noted in the literature, as described briefly in the introduction (Current Practice), were identified within our own program. As the team was preparing for a Strategic Planning Day (early 2017), an environmental scan was done of the current state at five other Canadian SCI Rehabilitation Centers. It was discovered that significant variability existed in how sexual health practice was implemented, from a designated resource (i.e., sexual health clinic) to simply providing staff education within existing resources. A number of ideas and suggestions were gleaned from this scan that were felt to be useful to consider for the Parkwood experience. This initial gap in clinical practice was brought forward at the annual SCI Strategic Planning Day in February 2017 where it was formalized as an area of focus for the program.

Implementation Team formation (March–May 2017)

Following the Strategic Planning Day, the SCI program formed a Sexual Health Practice Implementation Team in May 2017. A thoughtful stakeholder representation was considered. The implementation team consisted of various interdisciplinary clinicians, research teams, leaders, and persons with lived experience. The

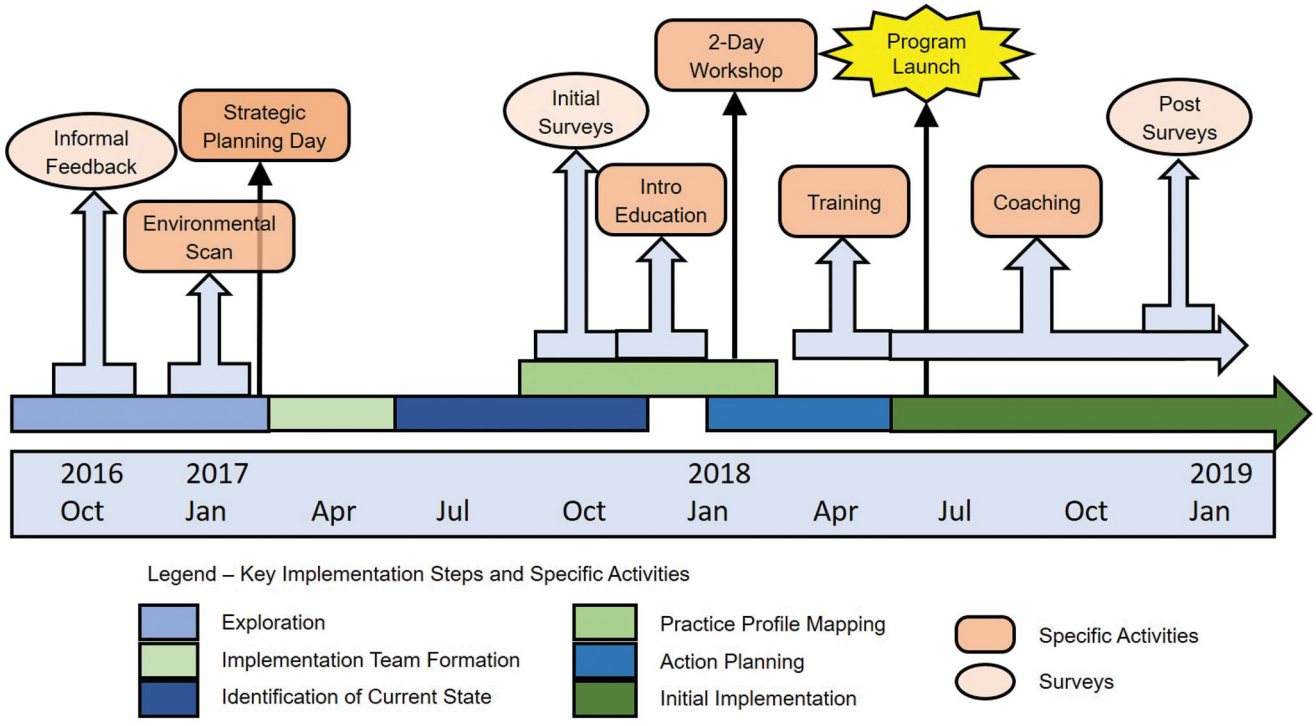

Figure 1. Flowchart outlining the sexual health practice initiative with implementation process steps and timeline.

team's mandate was to create a decision making and support structure to guide effective implementation of the practice.

Identification of the current state (June–November 2017)

As part of this quality improvement initiative, in the summer and fall of 2017, two surveys (staff and patient) were developed to collect baseline information on the current state of sexual health practice and validate the perceived gap in the clinical practice. A total of 10 inpatient baseline surveys (Supplementary Appendix A available upon request) were completed. All patients on the unit were approached over two weeks. Nursing staff helped distribute the surveys and recorded patient responses for those who were physically unable to do it themselves.

An online survey was distributed to all SCI rehabilitation staff. Staff from the following disciplines participated in this anonymous survey: physicians, nurses, physical therapists, physical therapy assistants, occupational therapists, occupational therapy assistants, social workers, speech-language pathologists, psychologists, therapeutic recreation specialists, and dieticians. Among 30 staff members, a total of 28 surveys (Supplementary Appendix B available upon request) were completed.

Establishing a desired practice through practice profile mapping (September–March 2017/18)

The implementation team operationalized the sexual health practice, through practice profile mapping and by using this tool developed a process for embedding the practice across all disciplines within the SCI program [22].

A Practice Profile (Supplementary Appendix C, available upon request), based on the PLISSIT model [15], was created by the team to standardize the various points of contact in which a patient's sexual health concerns would be addressed across the rehabilitation continuum. Essentially, the Practice Profile included five core components: (1) initial permission-giving, (2) permission-giving and opportunity to provide limited information, (3) exploring goal(s), (4) providing education support, including specific suggestions, and access to resources, and (5) discharge planning and referral for intensive therapy. In addition to the identification of the core practice components, the Practice Profile activity included identification of the patient impact and related process outcomes.

Action planning informed by priority drivers (January–May 2018)

The implementation team reviewed the key implementation drivers, namely staff competency, organizational, leadership, and performance assessment, to help identify what was already in place and any gaps that required further action. This activity helped to inform the development of an implementation action plan to support initial implementation. The action plan was based on the priority drivers: staff education, coaching/mentoring, and an evaluation plan. Additionally, the team worked on developing a comprehensive communication plan, to share key information in a timely manner, and to enable feedback loops in order to get input from all involved in the implementation process. Although not a priority, other examples of activities related to the organizational drivers (e.g., facilitative administration), included pamphlet creation, resource area set up, leave of absence checklist, and script development.

Staff education. The comprehensive education plan for the staff in the SCI program consisted of three stages: introductory sessions, 2-day workshop, and training sessions about the process. Introductory sexual health education sessions were led by one of the implementation team members – a person with lived experience and an active member of Spinal Cord Injury Ontario, a non-governmental agency involved in the support and advocacy of those with SCI and related disabilities. The goal of these sessions was to raise awareness, debunk common myths and discourses and start an open dialogue among staff. The sessions helped to engage staff who indicated a desire for more in-depth education and training (e.g. how to introduce the topic, how to teach and answer questions, etc.).

After much exploration, the Parkwood Institute Regional Rehabilitation Program invited Dr. Mitchell Tepper in January 2018 to facilitate a 2-day workshop on "Providing Sexual Health in Rehabilitation: An Interdisciplinary Approach." Dr. Tepper is a certified sexual health educator and counselor with a doctoral degree in human sexuality and has over 25 years of experience in the field of sexuality and disability. The workshop provided an opportunity for interactive learning and self-reflection. Evaluations were completed by all SCI rehabilitation staff in attendance ($n = 32$). All 32 staff agreed or strongly agreed that the workshop was a valuable learning opportunity and 31/32 staff reported being ready to incorporate their learning into clinical practice. Most staff (31/32) felt confident giving patients permission to discuss the topic of sexual health.

Just prior to the launch of the practice (April–May 2018) education sessions were offered to all staff to review the practice profile and everyone's role and responsibilities in delivering the new sexual health practice.

Coaching and mentoring. Often implementation processes fall short in focusing only on the training of eventual implementers, whereas a well-developed coaching/mentorship program is more likely to enable sustainability [23]. This is especially important when this resource is made consistently available and is part of a data-driven approach identifying those in most need. Therefore, to intentionally provide staff with ongoing support during the implementation, a coaching strategy was developed. The team identified an occupational therapist and two nurses, who demonstrated a keen interest in the topic of sexual health and had the skills to mentor others. With leadership support, the occupational therapist enrolled in the Introduction to Sexual Health Rehabilitation 1 and 2 courses offered by correspondence by the British Columbia Institute of Technology (BCIT). This course facilitated the acquisition of advanced knowledge and skill development and the availability of this expertise on the team.

Initial implementation (launch) using Plan-Do-Study-Act (PDSA) cycles

The newly developed sexual health practice was initially launched in June 2018. Using the improvement (PDSA) cycles framework allowed for ongoing evaluation and iterative practice improvements.

The team established a regular feedback system via informal touch points with patients and staff at multiple times throughout the practice launch, reviewed their feedback, and shared it with the larger team. This helped to inform several mini PDSA cycles and support the evolution of the practice ("PDSA: Plan-do-study-act," 2018). For example, at the onset of the practice, some patients were able to identify sexual health as a goal but felt uncomfortable reviewing that goal during the discharge planning meeting with their family members present. The implementation team reviewed this feedback and put a more explicit process in place, whereby a patient was asked whether they would like that goal reviewed at the discharge planning meeting or individually

and their preference was clearly noted in their plan of care. Several other small modifications were made during the first few months of implementation.

Evaluation plan

To assess whether the new practice was being carried out with fidelity, the evaluation plan was developed. This plan included establishing feedback loops to monitor the practice initially during each PDSA cycle, as described above, as well as a similar approach to conduct a more formal evaluation after the initial launch. Routine collection and analysis of both process and outcome data were planned as part of a continuous improvement model. Both patient and staff reported outcomes were included in the evaluation.

The formal evaluation was conducted at approximately 6-months post-launch (December 2018–January 2019). Patient paper-based surveys and semi-structured interviews (Supplementary Appendix D available upon request) aimed to re-evaluate patients' comfort levels with staff to engage in discussions related to sexual health and to determine whether sexual health concerns were being addressed during their rehabilitation stay. All patients on the unit were approached over an approximate two- week period; 10 patients agreed to participate.

Patients were also asked about their awareness of sexual health resources and satisfaction with the newly implemented sexual health education group. Following each group session, patients were asked to complete a brief paper-based survey. A total of 10 patients participated in the evaluation of the sexual health education group.

Staff online surveys (Supplementary Appendix E available upon request) evaluated staff's level of comfort discussing sexual health concerns with patients, their knowledge of sexual health resources, and their perceptions of whether or not addressing sexual health was their responsibility. This online anonymous survey was distributed to all staff in the SCI rehabilitation program and 20 of 30 staff participated.

The process evaluation included auditing patients' medical charts to assess whether staff was documenting sexual health practice as per the practice profile. As with all aspects of this quality improvement initiative, the audits were conducted under the approval of program leadership. The following processes were reviewed: initial permission-giving and provision of limited information, documentation of sexual health goals within the patient's interdisciplinary plan of care and discussion in the discharge planning meetings where appropriate, as well as documentation of interventions in discharge summaries.

Results of development phase

Output from the practice profile mapping process

As noted above, there were five core components identified within the Practice Profile (Supplementary Appendix C available upon request). The first core component, initial permission-giving, involved a nurse opening a conversation about sexual health early in patients' admission and sharing the "SCI Sexual Health Pamphlet" (Supplementary Appendix F available upon request). The pamphlet was co-created by the implementation team and persons with SCI. The pamphlet served as the tool to facilitate the process of "Permission Giving" by staff, as well as providing an easy way of sharing "limited information" about sexual health and SCI. In doing so at this early time point, it was intended to normalize the importance of sexual health in rehabilitation.

The second and third core components included the following: at the time of the initial assessment, the occupational therapist would screen for sexual health concerns and identify sexual health goals with each patient. The Sexual Rehabilitation Framework [18] was used to guide that goal setting. If a sexual health goal was identified and found to be outside the scope of occupational therapy, the patient was guided to the appropriate team member or referral source (Supplementary Appendix G available upon request). This encounter provided another opportunity for permission-giving and limited information while setting the groundwork for the provision of specific suggestions and referrals for intensive therapy where needed. Specific scripts were also drafted by the implementation team for both nursing and occupational therapy staff to facilitate the instances of permission-giving described above. These scripts are outlined in the Practice Profile. The sexual health domain (goal) was also integrated into every patients' interdisciplinary plan of care and as such, if a goal was identified, it was reviewed regularly within team rounds along with all other rehabilitation goals. This process further promoted normalization of the practice among health care providers.

The fourth core component outlined how the SCI team offered education and support if sexual health goals were identified. Opportunities for patients included self-directed learning, one on one education and support, including specific suggestions, and/or participation in a monthly group session. The implementation team identified and amalgamated a variety of useful self-directed, online and print-based resources. A patient and family resource area was created on the unit to house those resources as well as many others related to SCI. Additionally, a monthly group education session was developed and was offered to all patients, however, completely optional. The session, facilitated by an occupational therapist or a nurse, contained an educational video by a person with lived experience and was intended to answer frequently asked questions related to sexual health and stimulate safe discussion of the topic. The group was yet another opportunity to normalize the topic of sexual health, debunk myths around sex and disability and allow patients an opportunity to learn how the different team members could be involved in addressing a variety of different sexual health concerns after SCI.

The fifth core component of the practice focused on discharge planning and referrals for intensive therapy. This involved utilizing a patient's first leave of absence from the hospital as an opportunity to follow up on possible sexual health concerns or challenges, via a leave of absence checklist. This checklist was developed by the team and sexual health was integrated among other relevant domains. Documentation of interventions related to education and the provision of resources was also standardized within the occupational therapy discharge summary template. Additionally, a list of local specialized professional resources was created by the implementation team to inform potential referrals in London, Ontario.

Results of implementation phase

Patient pre- and post-implementation surveys/interviews

A total of 20 inpatients completed surveys (10 pre-implementation and 10 post-implementation). The majority of individuals felt that sexual aspects of their lives were highly important to them (17/20), and that they were comfortable discussing sexual health topics with clinical staff (18/20). However, pre-implementation surveys showed a gap in sexual health education and support on the unit. For example, pre-implementation, few inpatients were

Table 1. Post implementation number of inpatients aware of different sexual health resources on the SCI unit and the number of staff who used the resources.

Resource	No. of inpatients aware	No. of staff who used the resource
Resource area on unit for independent learning	5/10	11/20
Monthly Sexual Health Education Group	5/10	11/20
1-on-1 Occupational Therapist or nurse session	5/10	7/20
"Sexual Health and SCI" information pamphlet	5/10	11/20

aware that their SCI could impact their sexual health (3/10); more individuals post-implementation understood the effect of an SCI (7/10). Furthermore, pre-implementation, all inpatients agreed there were no or few opportunities to discuss sexual health concerns with clinical staff, and their concerns were largely unaddressed. Conversely, 6 of 10 individuals agreed post-implementation that there were specific opportunities to discuss sexual health concerns and 7 of 10 had their concerns addressed.

Almost all pre-implementation inpatients (9/10) indicated they were unaware of resources on sexual health after an SCI. Post-implementation surveys showed that inpatients were aware of a variety of resources (Table 1) and many agreed that the resources were beneficial in addressing their sexual health concerns. After implementation, inpatients provided feedback on their comfort level with different modes of delivery. Most inpatients were comfortable receiving one-on-one education (10/10), followed by learning independently (i.e., online, written materials) (9/10), followed by group education sessions (5/10). Additionally, most patients (9/10) were comfortable receiving education from someone of different sex.

A monthly education group was offered to all patients as an option to receive general education about sexual health. An additional ten patients who attended the group completed satisfaction surveys which showed that they wanted to learn more about the topic (10/10), were comfortable asking questions (10/10), and were satisfied with the overall session content (9/10).

Narrative responses provided by inpatients on all surveys provided compelling support for the sexual health program. One patient reported "The Parkwood staff seems very eager and willing to talk about sexual health. I was informed upon my admission by my nurse that someone would be coming to speak to me about whether I wanted to identify goals." With respect to available resources, another wrote "The nursing staff was excellent and reminded me of where the resources were on the unit and when the classes would take place." When asked about "what could have been done differently to meet their needs or expectations" patients indicated the following: having resources available on a private device in their room (as opposed to the resource room), the greater number of opportunities for discussion with clinical team members, and access to more injury-specific or personalized resources.

Staff surveys/interviews

A total of 28 staff completed pre-implementation surveys, and 20 staff completed surveys post. Prior to implementing the sexual health plan, staff indicated that sexual health was an important area to address, but most felt they had minimal knowledge and confidence in this area, irrespective of years of experience. For example, just 2 of 28 staff were comfortable discussing sexual health concerns with patients. In fact, most staff reported either always (15/28) or sometimes (11/28) avoiding the topic of sexual health unless the patient brought it up. After the sexual health program was initiated, staff attitudes changed dramatically. Most staff were comfortable giving patients permission to discuss sexual health concerns (18/20) and giving limited information on sexual health and SCI (16/20). Figure 2 shows how staff confidence in the provision of sexual health support changed from pre- to post-practice implementation with respect to specific topic areas. Compared to pre-implementation (5/28), afterward, most staff knew where to direct patients for accurate information and resources (13/20). Most staff had familiarized themselves with the sexual health resources available on the unit (14/20) which had been used to varying degrees (Table 1). Several topics were identified by staff as areas for future education and training: practical resources for staff, permission-giving and information, cultural competence, and management of sexually "inappropriate" behaviors.

Narrative statements from the staff surveys supported the benefit of the program. One staff member wrote "Subject matter experts on the floor help me feel comfortable, along with the resources available in the resource room that I can use to answer specific questions." Another clinician stated, "It would be beneficial to extend this program to the outpatient program and community where the need may be more evident." The narratives also reinforced the ongoing need to debunk common myths that could be negatively impacting patients. For example, one staff member said, "I find with our older demographics/clientele, sexuality is not a priority at this time," while another said "I always make sure I bring up sexual health with the young guys because it's an important part of life when you're young, but sometimes I wonder whether it is appropriate to bring up with certain patients based on their injury/mental capacity, age, or relationships status."

Practice adherence – chart audits

Sixteen patient medical charts were audited to evaluate adherence to the documentation of sexual health practice. Documentation of permission given to patients to identify sexual health goals during their rehabilitation was noted by nurses and occupational therapists on 10/16 charts. This is important because, at baseline, approximately half of the staff felt that they rarely approached patients about the topic of sexual health.

Provision of the Sexual Health Pamphlet to patients at admission was documented in 7/16 charts. The occupational therapy initial assessment of patient interest in sexual health education was found in 8/16 charts. Additionally, documentation of sexual health goals was present in the 8/16 charts. The discharge section on sexual health was completed by occupational therapy in 3/16 charts. These represent opportunities for continued improvement of the sexual health practice.

Discussion

Overall, the implementation of the sexual health practice at Parkwood Institute has been successful on many levels. From a patient perspective, there has been a significant increase in the number of patients who felt that their sexual health concerns were well addressed during their in-patient stay and they had

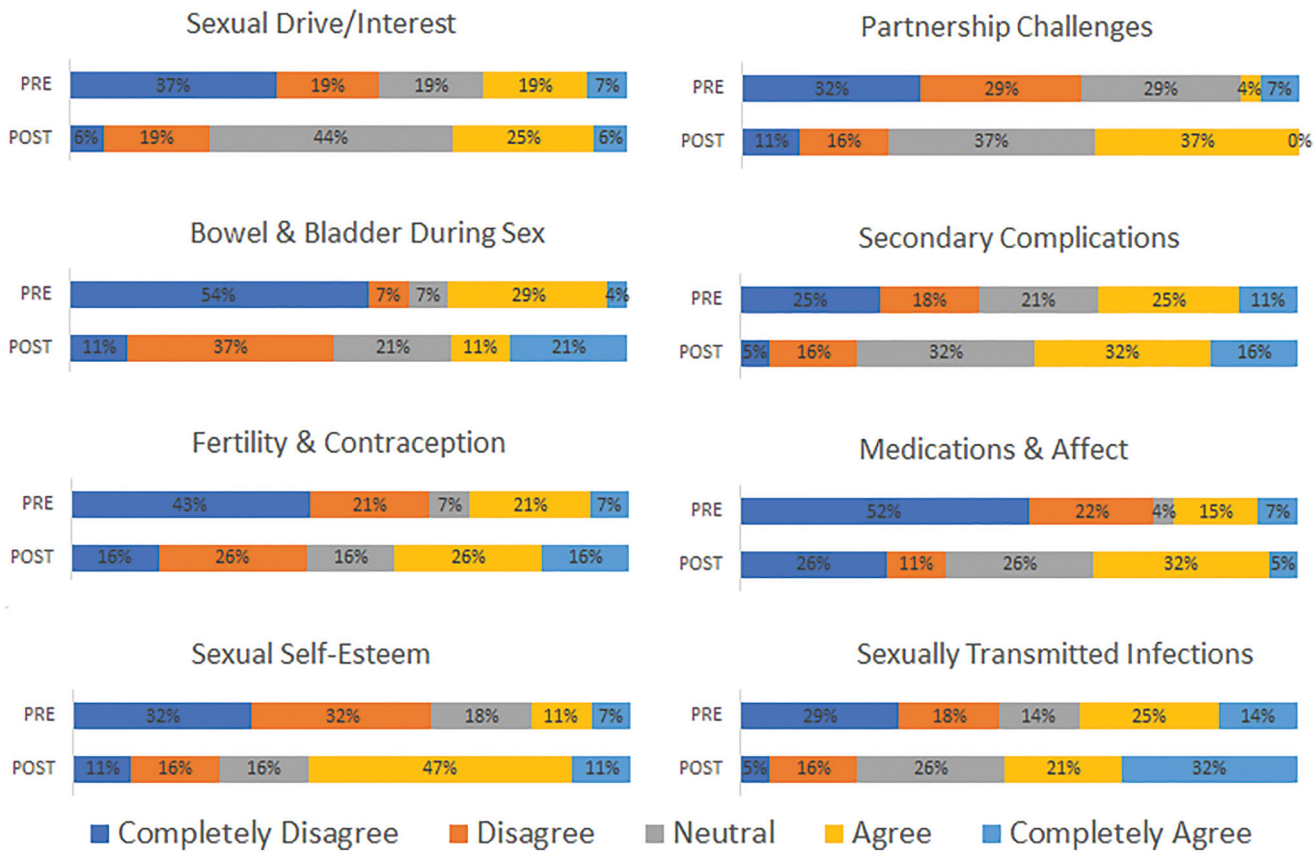

Figure 2. Proportion of staff expressing comfort with specific sexual health topics pre- and post-implementation.

greater access to sexual health resources. Consistent with the literature, our patients with SCI identified sexual health as a high priority area. This fact was particularly helpful during staff education to debunk myths that certain subsets of patients were not interested in receiving sexual health education.

From a healthcare provider perspective, increasing knowledge about addressing sexual health, as well as reflecting on the conflicting personal values, beliefs, and assumptions around sexuality were important benefits. A comprehensive, multi-prong approach to staff education was effective. Additionally, implementation of a clearly defined process and roles within the team helped to address barriers of lack of time and perceptions that it is "someone else's job." Moreover, as a result of embedding sexual health practice, healthcare providers demonstrated a significant increase in comfort discussing sexual health concerns with patients, greater comfort providing limited information, and increased knowledge of resources. Important areas for ongoing education and coaching include permission-giving, practical resources, and debunking of common myths. Another area for ongoing coaching is more consistent documentation of the practice. This result came as no surprise to the implementation team since establishing consistent documentation can be challenging for any new quality improvement initiative. Reasons for this often include perceived lack of time, difficulty establishing new habits, and possible disengagement from the practice [24,25].

From a program perspective, embedding sexual health practice into "business as usual" has resulted in all patients in the Rehabilitation program having an opportunity for education and support related to sexual health and SCI. By including the domain of sexual health into the Nursing and Occupational Therapy initial assessments, as well as weekly rounds discussions, the topic of sexual health among rehabilitation staff continues to be normalized. At a minimum, there is an expectation that all staff plays a role in giving patients permission to discuss sexual health. Educational resources (i.e., pamphlets and Sexual Health Education group) were created and additional resources (online and paper copy) were amalgamated to support ongoing patient and staff education. These resources were noted to be helpful for patients and staff in addressing concerns around sexual health. Specifically, the Sexual Health Education Group had the added benefit of normalizing the sexual health education programming, as it was being offered in a similar format to pre-existing Pain and Skin Health Education Groups. One area for future consideration for the program is the digitization of resources. This would enhance their availability for private consumption and would help patients overcome barriers of accessibility and privacy.

To fully understand the success of this initiative one must not overlook the involvement and support of the Research 2 Practice team. The team helped guide the process using implementation science principles and provided project management, data collection, and analysis expertise at multiple time points throughout the initiative. This area is a common pitfall for quality improvement initiatives as clinicians often may not have the capacity or skill set to support practice change. Ongoing evaluation and feedback that informs practice change is essential and needs to be supported to facilitate sustainability. The orientation of new staff is another sustainability factor that must not be overlooked. New staff would need the opportunity to learn about the importance of sexual health for persons with SCI, how to address it by following the PLISSIT model, what their role is within the team by following the established process, and how to access available resources. Ideally, this orientation would be completed initially as

a comprehensive e-learning module, followed by coaching and mentoring on the unit. The implementation team is currently embarking on the development of an e-learning module.

Conclusion

Sexual health, a basic human right, maybe disrupted after an SCI, and many people may have questions that are not adequately addressed in rehabilitation. A collaborative effort between clinicians, researchers, and persons with SCI resulted in the development and implementation of new sexual health practice in SCI rehabilitation. A review of this process showed that increased clinician knowledge and level of comfort facilitated the normalization of sexual health concerns and questions, thereby addressing the "elephant in the room." By embedding sexual health into clinical practice, we have facilitated a more comprehensive and holistic rehabilitation, inclusive of reintegration of sexual health into the daily lives of SCI patients.

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No potential conflict of interest was reported by the author(s).

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