Exploring strategies promoting interprofessional collaborative practice in spinal cord injury rehabilitation at a private South African hospital group

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Background. Implementing an interprofessional collaborative practice (IPCP) in hospitals improves health outcomes, enhances patient safety and reduces length of stay by optimising resource utilisation. Although this approach was desired at a private hospital group in South Africa (SA), the specific strategies for clinical guidelines and capacity management pertaining to spinal cord injury (SCI) patients and the implementation of IPCP were unknown. **Objective.** To explore strategies for implementing clinical guidelines and capacity management for SCI rehabilitation to promote IPCP in a private hospital group in SA.

Method. This exploratory descriptive qualitative study included participants who were selected through purposive sampling. The participants comprised 11 staff from various disciplines and management of the private hospital group, one local and one international expert in IPCP. Three online focus groups (n=13) were conducted, involving three to five participants. The transcriptions were analysed thematically using Braun and Clarke's framework.

Results. Interprofessional communication and tools as well as capacity development were three emergent themes from the data. Strategies pertaining to communication methods, digitisation, visual displays, patient care information, educational information and education of healthcare workers were suggested to promote IPCP.

Conclusion. These findings from the emergent themes could assist in implementing and integrating an IPCP approach into the rehabilitation service. Further research assessing the efficacy of implementing the IPCP strategies and digital platform would be beneficial.

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Globally, healthcare workers are struggling to provide healthcare services in strenuous environments where the complexity of health issues continues to increase.^[1] The World Health Organization (WHO) has mandated the use of interprofessional collaborative practice (IPCP) to assist in addressing challenges, such as fragmented services, workforce shortages and increasing complexity of health issues.^[1] The WHO has defined IPCP as 'when multiple health workers from different professional backgrounds provide comprehensive services by working with patients, their families, carers and communities to deliver the highest quality of care across settings' and aims to achieve the 'quadruple aim' of improving population health, enhancing provider satisfaction, decreasing costs and optimising patient experience. [1,2] For healthcare workers to engage in IPCP, interprofessional education (IPE) must first occur. IPE equips healthcare workers with the necessary knowledge to effectively collaborate with other healthcare workers. [1] As defined by the Centre for the Advancement of Interprofessional Education (CAIPE), IPE is "... when members or students of two or more professions learn with, from and about each other to improve collaboration and the quality of care...'[3]

International research demonstrates that an IPCP approach in a hospital environment improves health outcomes, decreases medical errors, minimises healthcare costs, improves patient safety and reduces patient length of stay through improved utilisation of resources.^[1] Within the sub-Saharan African context however limited research is available, mainly since practising

professionals have had limited IPE training and thus have poor application of IPCP. [4,5] Although most higher education institutions (HEIs) in South Africa (SA) now train new graduates in IPE, teams working in a hospital setting usually refer to themselves as a multidisciplinary team (MDT) and may believe this is interprofessional practice. [6] SA has a two-tiered healthcare system, where a small portion of society has access to private healthcare services, either funded privately or through medical aid provision, while the remainder is government-funded or subsidised. When someone using private healthcare services has a spinal cord injury (SCI), they will usually be transferred to a rehabilitation unit or hospital after the initial acute phase of intervention. [7] These rehabilitation facilities exist in most provincial capital cities and may be available in other major metropolitan areas.

The context of the study was at a private physical rehabilitation hospital group which provides sub-acute physical rehabilitation services. Team members and management at one of the hospitals developed clinical guidelines for the rehabilitation of SCI patients drawing from both literature and anecdotal evidence. Upon review of these guidelines, it became evident that they did not promote the desired IPCP approach, nor did they adequately support aspects of capacity management conducive to IPCP. This could be due to the lack of IPE training for the healthcare workers. [4,5] When hospital management and the healthcare workers investigated how to possibly structure SCI rehabilitation, it was found that research is lacking on the

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strategies that should be used to promote IPCP. Therefore, this research study explores strategies promoting IPCP in the treatment of SCI patients to improve the services provided.

Methods

Study design and population

This study used an exploratory-descriptive qualitative study design.

The study population consisted of staff members from a private hospital group in SA and local and international experts in interprofessional education and collaborative practice (IPECP) (Table 1). Thirteen participants were purposively selected with staff members of the hospital group, each employed for longer than 6 months and possessing either practical or academic knowledge of SCI rehabilitation. The experts had to have presented and published work in IPECP. Participants were provided with IPE and IPECP training prior to the focus groups. A limitation was the purposeful exclusion of patients and families, who form part of the interprofessional team (IPT), due to the scale of the research study.

Data collection

Participants were contacted via email to request their engagement in heterogeneous synchronous online focus groups hosted on Microsoft Teams with a 60-minute duration. The focus groups were limited to a maximum of five participants per group to ensure thorough participation from everyone involved. [8] A pilot study (n=3) was conducted to determine the clarity of the predetermined questions and the feasibility of the online focus groups. Thereafter, the questions were reduced and the data was not included in bias, enhance triangulation and ensure rigour.

Data analysis

An inductive thematic analysis, employing Braun and Clark's six-step method, was used in conjunction with the qualitative tool Atlas.ti.[10] The automated transcription was checked by the researcher, during which she became acquainted with the data. Themes were identified, reviewed and clarified before the analysis was concluded. An audit trail on Atlas.ti enhanced rigour. The primary researcher acted as the only coder in consultation with the co-researchers to enhance rigour.

Ethical approval

Ethical clearance was obtained from the Faculty of Health Sciences Research Ethics Committee at The University of Pretoria (UP) (ref. no. 454/2022) and the private hospital group. Informed consent was obtained from participants and participant numbers were allocated to maintain anonymity.

Results

Through analysing the transcripts

the results. The primary researcher facilitated semi-structured focus groups consisting of a predetermined group schedule, established from the theoretical framework of IPCP along with probing questions.[9] Data was collected through video and voice recordings. Automated transcription by Microsoft Teams was used by the researcher and verified by participants to enhance triangulation and rigour. A research assistant collected field notes and reflexive journaling was completed by the primary researcher to prevent

triangulating the data, three major themes emerged: 'interprofessional communication', 'interprofessional tools' and 'capacity development' (Fig. 1).

Theme 1: Interprofessional communication

Interprofessional communication is presented with a sub-theme of communication methods.

Subtheme: Communication methods

This sub-theme identified the importance of formal and informal communication methods to promote IPCP.

Category: Formal communication methods

It emerged that there is great value in implementing formal communication structures, ensuring that team members come together to collaborate at a stipulated time. Formal communication methods were identified as team meetings, family meetings and huddles.

Team meetings are set aside time to discuss patients' progress, challenges and weekly goals as well as to collaborate on a specific patient.[11]

'We rely on the formal once-a-week meetings to discuss the patients, collaborate with the team members and discuss joint goals'. (Physiotherapist, FGD2)

Family meetings are held once or twice throughout a patient's rehabilitation journey and are essential for optimising communication between healthcare workers, patients and their families.[12] Huddles, which are short, daily debriefings, aid daily communication, aim to enhance patient-centred care and ensure team members receive up-to-date patient information in real time.[13]

'I think huddles have been incredibly helpful in getting that daily input because we can't always bump into each other in the passages and wait for those once-a-week meetings'. (Physiotherapist, FGD2)

The participants highlighted that in some instances, team members lack the clinical and managerial skills required to effectively facilitate huddles, family meetings or team meetings.

'You can give a manager or therapist a cue code, but that doesn't mean anything if they don't have the clinical reasoning to facilitate that discussion. It's that experience you also need to bring and the understanding'. (Management, FGD3)

Focus group discussion number	Number of participants	Participant profession	Participant experience (years)
1	5	Psychologist	15
		Occupational therapist 1	8
		Occupational therapist 2	10
		Medical doctor	4
		IPECP Expert (Local)	17
2	5	Physiotherapist	16
		Nurse	14
		Social Worker	10
		Occupational therapist	8
		Rehabilitation programme manager (Management)	10
3	3	Occupational therapist	1
		Clinical Coach (Management)	15
		IPECP Expert (International)	21

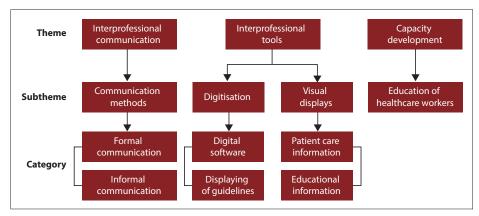


Fig. 1. Main themes, subthemes and categories.

Category: Informal communication

Informal communication ensures continuous communication to prevent interruptions to a patient's daily rehabilitation programme. Informal communication was identified as conversing in the corridors, email, open-door policy, shared office space and online messaging services.

Conversing in the corridor consists of team members imparting information to one another and engaging with family members during visiting hours. An open-door policy ensures that team members are approachable throughout the day, and shared office space aids informal communication and collaboration.

'When there is a struggle or a query, you can just turn around and open it to the whole group and then anybody, whether they're from the same discipline or different discipline, they would give you some advice based on their experience.' (Occupational Therapist 1, FGD1)

Using email and online messaging services facilitates the instantaneous distribution of important information, ensuring patient safety and minimising daily programme disruptions.

Theme 2: Interprofessional tools

The utilisation of interprofessional tools emerged as a theme to aid IPCP.

Subtheme: Digitisation

The use of digitisation and information storage on digital platforms prominently emerged from the focus groups.

Category: Digital software

Digitisation centralises large amounts of information, ensuring easy accessibility to all team members. Digitisation fosters efficiency in

information dissemination and the streamlining of processes facilitates task completion, contributing to the cultivation of trust within the team members.

Category: Displaying of guidelines

Participants suggested strategies to display guidelines through digital programmes that could be structured around treatment fundamentals (e.g., motor abilities and adaptive approaches) and SCI patient care needs (e.g., bladder and bowel management). Tasks could be identified around structured codes using scientific models such as the International Classification of Functioning, Disability and Health.

'[It helps to] identify a few pillars in this patient's journey. I know the funders also look at what is your discharge planning, what is the managed health care approach or the plan'. (Management, FGD3)

Participants expressed that it would be ideal if the digital programme could allow doctors to refer and follow up on patients and send families condensed progress reports regularly to facilitate continuous feedback throughout the rehabilitation process.

Visual notifications for the health care team were also suggested to bring attention to new information and to encourage task completion.

'I think if we could, in real-time, get a notification that someone posted something and then if you click [on the pop up], [it states] Mr X is going home 13 days earlier due to medical aid [fund depletion]. Then everyone is kind of on the same page.' (Social Worker, FGD2)

Subtheme: Visual displays

Visual displays consist of posters and care charts to facilitate conversation and highlight pertinent information and tasks.

Category: Patient care information

Visual displays such as care charts or boards were highlighted as an effective tool to display guidelines or tasks and their completion.

'I think what works quite nicely is the charts that we have, and those charts have a lot of information on them, just consolidated in one area' (Medical Doctor, FGD1)

Category: Educational information

Participants emphasised the value of utilising posters to improve knowledge and facilitate team discussions on a topic.

Theme 3: Capacity development

Due to the complexity of an SCI injury and the rehabilitation thereof, participants expressed the importance of education to optimise knowledge, skill and competence. Capacity development influences education and skill development as well as attitudes and behaviours which is essential for IPCP.[14]

Subtheme: Education of healthcare workers

The participants indicated that training healthcare workers in the rehabilitation of an SCI patient in an interprofessional manner is important and could be achieved through continuous professional development training, national webinars and workshops. Digitisation can assist in ensuring training documents such as guidelines are continuously accessible.

'And then after the training has been completed, publish these [guidelines] on the intranet where staff members can have access to it at any time, to read through it again, to make sure they understand it, and that they are following a certain process'. (Management, FGD2)

Discussion

The purpose of this study was to explore the tested and emerging strategies that promote IPCP in the treatment of SCI patients at a private hospital group.

The WHO highlights that communication is an essential component of IPCP and is an IPE core competency. [1] Communication is an important factor contributing to establishing common goals, trust, mutual respect, shared decision-making and role clarification among team members, which can be achieved through team and family meetings and huddles. [15] Huddles are increasingly utilised as common practice in healthcare. An observational study

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by Lin *et al.*^[13] identified that huddles could enhance teamwork, and improve collaboration, communication and quality of medical care. During patient treatment, huddles and meetings are essential as multiple facets of their care require the input of all team members and are run by team members. Skilful role models should be identified since some team members may struggle to facilitate huddles, team and family meetings. The effective facilitation of huddles and meetings necessitates structured observation to ensure that team members feel safe and open to engage in discussions, thus establishing healthy organisational practices. Currently, definitive recommendations on structuring huddles, team and family meetings are limited.^[11]

A discovery from this study, not found elsewhere in the literature, is that shared office spaces facilitate informal communication among team members, fostering collaborative problem-solving. Email and online messaging services (e.g., WhatsApp) were identified in the literature and by the focus groups as possible tools for informal communication. This allows for efficient dissemination of information and improved communication. Moreover, it eliminates the need for desktop computers, potentially leading to faster responses.^[16] Previous studies have discussed the possible disadvantages of using online messaging platforms, including possible privacy challenges, differing opinions regarding urgency and managing expectations regarding constant availability, which were not echoed in this study. [16] The focus groups identified possible value in conversations in the corridors and emphasised the benefits of maintaining an open-door policy. Conversations in the corridors could create opportunities to clarify and share information with team members and provide frequent feedback to family members during visiting hours, who also form part of the IPT.[1] Participants in this study as well as those in the study by Kenner et al.[17] believe that an open-door policy promotes collaboration and trust as team members can be approached throughout the day to ensure that information and responses are relayed instantaneously. The disadvantage of an open-door policy is the potential for time-wasting if misused by team members.

The IPCP tool of digitisation in healthcare aims to improve the effectiveness of healthcare systems and influence thought patterns to promote trust, workforce competence, accountability, responsibility and decision-making. The participants believed that streamlining processes through digital software, currently partially developed at the hospital group, would positively influence the quality of care provided to SCI patients. They also hypothesised that digitisation would prevent loss of information, prevent poor implementation of team orders and allow access to high quantities of information at any time. This is beneficial when treating an SCI patient owing to the multifaceted nature of the injury.[18] Digitisation could assist with generating patient reports, tracking task completion and creating a central data point for SCI rehabilitation forms (e.g., the ASIA Impairment Scale) to be loaded, which could assist in building trust among team members. Participants identified the ideal scenario as having tablets readily available at each patient's bedside or at central designated areas to prevent team members from seeking information at different points, reducing time wasting. The focus groups did however identify the major disadvantage of digitisation being the costly purchasing and maintenance of electronic devices and programmes.^[19] Digital culture is extremely prevalent in today's society and should be integrated into daily healthcare practices, but should be uncomplicated to accommodate the older generations. [20] Studies and the opinions of the focus group participants in this study highlighted that digitisation should be used in conjunction with interpersonal communication since processes and tasks should not be performed solely through digital devices.[20]

Visual displays should be complemented with digitisation, considering that displays exhibit limited information. This is especially challenging in treating SCI patients due to the multitude of bodily systems that are affected.
[15] Visual displays such as rehabilitation care charts, allow for interventions to be documented instantaneously and can improve communication and trust between team members by highlighting task requirements and completed tasks.
[21] Communication can be enhanced through the use of posters, as they are proven to be effective tools that draw attention to specific topics, thereby influencing knowledge and practice.
[22] Another emergent strategy was for rehabilitation boards to be displayed in patients' rooms, stipulating the essential care needs and urgent tasks, while adhering to confidentiality principles. This commonly used low-cost visual tool is supported by research findings as effective in improving communication between the team, patient and their families.
[23] Participants expressed that the boards could also contain the week's goals to ensure the IPT remains focused.

The facilitation of IPE training was highlighted as a core underpinning for effective IPCP implementation. [11] Patient education forms a pivotal part of SCI rehabilitation to prevent secondary complications and to promote quality of life. [15,24] For patients to be effectively educated, the healthcare workers need to obtain IPE knowledge and core competency skills (e.g., SCI bladder and bowel management) to treat SCI patients interprofessionally, which the focus groups highlighted could be achieved through formal training, webinars and workshops. [1,25] A multi-faceted training approach, commencing with workshops and webinars and including team-based learning through coaching and role modelling with more experienced team members is required to assist in the mastery and implementation of skills. [26]

Since the study included only healthcare professionals (besides the IPECP experts) from the same hospital group, findings are limited to this context.

Conclusions

This study explored the strategies that promote IPCP for SCI rehabilitation in a private hospital group in SA. The use of digitisation was a major finding of this study where the need for the creation of a digital platform to promote IPCP is apparent. Even though there is currently an IPCP digital application (*Vula*) available, not all features identified in this research study are incorporated into that application. While not all strategies (i.e., digitisation) can be instantaneously implemented, healthcare workers can implement the low-cost, practical findings, such as communication methods, capacity development and visual displays to assist in immediately implementing an IPCP approach to the rehabilitation service. Further research assessing the efficacy of implementing the IPCP strategies and the digital platform would be beneficial to ensure IPCP is achieved and to add to the limited body of knowledge.

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Conflicts of interest. The researcher who facilitated the focus groups and analysed the data is also an employee of the same hospital group, which can present an unintentional bias. Reflexive journaling was completed after each focus group to assist in eliminating this bias.

Research

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