ORIGINAL REPORT

EARLY ACCESS TO VOCATIONAL REHABILITATION FOR INPATIENTS WITH SPINAL CORD INJURY: A QUALITATIVE STUDY OF STAFF PERCEPTIONS

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Introduction: **Early intervention is among the factors frequently associated with more positive vocational rehabilitation outcomes; however, vocational rehabilitation is not generally a core component of inpatient rehabilitation following spinal cord injury.**

Objective: **This qualitative study explored the opinions and perceptions of health professionals regarding InVoc, an early vocational rehabilitation intervention provided to spinal cord injury unit inpatients. The aim of this evaluation was to determine the critical elements of the InVoc programme, and whether it was perceived as successfully implemented in the hospital setting.**

Methods: **Twenty-five medical and allied health staff working in the 3 Spinal Cord Injury Units in New South Wales, Australia, participated in the qualitative study. Three staff focus-group discussions were conducted and data analysed thematically.**

Results: **Four themes emerged: timeliness of the intervention, support and advocacy, value of early intervention, and conflicting messages to patients. Three critical programme elements were identified: flexibility, coordinators working on the ward, and good communication between all staff.**

Conclusion: **Early vocational rehabilitation was perceived as appropriate and successfully implemented in the spinal injury unit in-patient setting, addressing an existing gap in patient care. The InVoc programme was seen to assist patients identify the possibility of returning to work and/or education. The importance of programme flexibility was highlighted.**

Key words: spinal cord injury; early vocational rehabilitation; return to work; employment; staff perceptions.

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INTRODUCTION

Reviews of return-to-work for individuals with spinal cord injury (SCI) reveal that only 35% have paid employment in USA (1) and 30% in Australia (2), with it taking around 5 years to return to work (RTW) after injury (3–5). Employment rates for people with disabilities have consistently been found to be higher after receiving vocational rehabilitation (VR) services (6, 7), an approach that aims to optimize labour-force participation for those with health-related impairments and limitations. Despite this, VR traditionally only commences as an outpatient or community-based activity after the individual with SCI has completed a rather lengthy inpatient multi-disciplinary medical rehabilitation programme.

Early intervention is among the factors frequently associated with more positive vocational outcomes, with rehabilitation services proving to be more effective when both medical and VR overlap (8, 9). Work-oriented rehabilitation has been recommended for various medical conditions, seeking to distribute responsibility for employment outcomes among all interdisciplinary team members throughout the entire medical-vocational rehabilitation continuum (7, 10–12). Four Belgian and 4 Dutch medical rehabilitation centres experimented with early intervention, integrating work-related rehabilitation activities for individuals with acquired brain injury (ABI) and multiple sclerosis (MS). It was found that all centres had higher rates of RTW (an increase of 30–50%) compared with a historical control group without an early intervention model. They concluded that a more integrated approach with a specific focus on work within the medical rehabilitation setting was not only feasible, but had a positive influence on the early RTW for people with long-term severe disabilities such as ABI and MS (12).

Based on this evidence, Lifetime Care of iCare (a state government statutory authority in New South Wales (NSW) Australia) funded a pilot intervention called InVoc where people being treated in NSW Spinal Cord Injury Units (SCIUs) received VR services during their inpatient stay (13). The primary aim of this pilot intervention (a world first to the knowledge of the authors) was to achieve sustainable and meaningful employment following hospital discharge. The rationale for developing the programme was to promote early positive patient expectations, while incorporating clear and realistic RTW goals into the patients' overall rehabilitation. It was also based on the realization that the delay in provision of employment services until after the patient is discharged from

hospital might contribute to the loss of pre-injury vocation opportunities and delayed return to work.

This qualitative study investigated the perceptions and experiences of the SCI Unit staff in 3 hospital settings who were working alongside the InVoc trial intervention. Perceptions of the value and timeliness of this very early VR service, the types of support and assistance provided to patients, and any issues arising from the programme were examined. The purpose of this qualitative study was to determine whether staff found vocational intervention to be appropriate in the medical rehabilitation setting, if the InVoc intervention was well implemented across sites, and if InVoc impacted on other therapies or services.

PATIENTS AND METHODS

A published protocol paper describes the InVoc model and its implementation in detail (13). The theoretical framework that informs this study was drawn from Snyder's hope theory, where hope is defined as "a positive motivational state that is based on an interactively derived sense of successful agency (goal-directed energy) and pathways (planning to meet goals)" (14, p. 287). In this theory, "agency thinking" is the perceived capacity to use imagined routes to goals and is the motivational component of the model; and "pathways thinking" is defined as the person's belief that he or she can create plausible mental routes to desired goals (15). Hope may be considered a personal asset with unique benefits to people with disabilities in the rehabilitation process (15–17). Rehabilitation and positive psychology overlap in their focus on assets as opposed to a more exclusive focus on limitations (17, 18–20).

All SCIU staff who had worked alongside InVoc staff and/or clients were invited to attend a group discussion at their hospital with the sessions scheduled during routine meeting times when the majority of staff were known to be available. Three focus groups were conducted onsite at each participating SCIU over the final 6 weeks of the pilot period. A total of 25 staff members attended the sessions, consisting of 14 from 1 site, 6 from another, and 5 from the last. A diverse range of disciplines was represented, including management, nursing, physiotherapy, occupational therapy, medicine, psychology, recreation, and social work. The majority of participants were female, with 79% at site 1, 67% and 80% at sites 2 and 3, and 73% overall.

All focus groups were facilitated by a single researcher who was familiar with the pilot programme and the SCI inpatient medical rehabilitation setting. All sessions were audio-recorded and a scribe attended to take notes. All participants were asked identical target questions to generate discussion, with the facilitator using probing techniques to further expand discussion. Target questions concerned; (*i*) the timeliness of the intervention, (*ii*) the value of the services being provided, and (*iii*) problems, conflicts and difficulties encountered.

Focus groups were conducted instead of individual interviews due to the large number of expected staff participants at each study site as well as the desire to generate group discussion to investigate the different experiences and opinions.

Ethical approval to conduct the interviews was granted by a local human research ethics committee, with all participants providing informed consent. Focus groups were conducted instead of individual interviews due to the large number of staff participants expected at each study site as well as the desire to generate group discussion to investigate the different experiences and opinions.

Data analysis

All focus group data were transcribed verbatim. Analysis was conducted by an experienced qualitative researcher. Coding was both deductive around the pre-defined areas of questioning (e.g. timeliness of the intervention, value of the service, and difficulties encountered), and inductive, allowing the generation of new insights into the staff members' experience (as demonstrated by identification of the 4 critical elements of the programme). Principles of thematic analysis were used, such as familiarization with data, identifying codes and themes, coding the data-set, and organizing codes and themes (21). Elements of a grounded theory approach were also used (such as open coding, iterative analysis and constant comparison) without theory generation (21–24).

Open coding was used first, where all data were examined for the potential for a code (22). After a number of transcripts had been coded, patterns and themes began to emerge and these codes were examined and grouped into thematic categories (e.g. references to hope, options, and possibilities were identified by 1 code). All transcripts were read and re-read. Analysis included examination of any negative cases (disagreement in the group) (25) to avoid identifying only areas of consensus in the group and to ensure a rigorous approach. Data were constantly compared within and across categories, where each code was checked against the rest of the data to establish and refine categories that reflected nuances of the data (22). To ensure the validity and reliability of analyst interpretations, emerging themes and codes were presented to the research team for comment throughout the analysis process to enable cross-checking and to achieve consensus.

Triangulation is commonly used in qualitative studies to increase understanding of complex phenomena and to confirm validity when there is agreement among different sources (26). Data source triangulation (across participants) was used (26, 27) where data were obtained from multiple sources. In the case of data presented in this paper, the SCI staff had varying medical, nursing and allied health roles, which brought different perspectives to understanding the topic under study. Whilst this paper presents only the staff perceptions, the entire data-set also included InVoc coordinator and client data (being reported elsewhere). When examined together, this provided a detailed insight into the InVoc programme from multiple perspectives, which increased the credibility of the study findings.

RESULTS

Four themes emerged reflecting staff perceptions of the InVoc pilot programme: timeliness of the intervention, providing support and advocacy, value of early intervention, and conflicting messages to patients. In addition, 3 critical elements of the InVoc programme were identified: flexibility, the coordinator working on the ward (and not offsite), and good communication between all staff. Each of these is discussed below.

Timeliness of the intervention

A number of staff members acknowledged that either they, or other hospital staff, had some initial concerns about the vocational intervention being introduced to patients too early. However, those concerns were reported to be allayed once the programme became more established, and staff observed the benefits of the programme:

"I think it's been great … when the programme first started it felt early, because I think there was that culture shift. But now I think it's accepted that it's a part of rehab, and it's something that comes up early in goal setting and in early discussions…it's almost just one of those things now that it's routine. We talk about self care, equipment, housing, *return to work*, return to driving."

"I think based in this setting, in the rehab setting, I don't think that it is too early … it fits in well with the model

of service here in regards to goal planning and getting the clients to then think about, "well I'm going to be returning back to work, what am I going to need to do in order to get back to work?"

Staff reported a variation in patient response to InVoc, with some ready to participate, some who started and then deferred participation, and others who found it too soon after their injury. Given this variation, the voluntary aspect of InVoc was identified as important:

"I've had feedback from some patients that it's way too early. They don't want anything to do with it … and other people are desperately keen to get back to work and re-establish that, so I think it's completely patient dependent and I think it's great that it is provided that early for the patients that need it. As it's a voluntary thing, patients that don't want anything to do with it can refuse, so I think the timing's good."

"[*occupational therapist*] I think for some clients it's been right timing, get them thinking straight away. For others it's been too early, again because of the emotional adjustment."

"[*social worker*] … there were a lot of the clients that, especially in the early days … two or three months … they're so busy with coping with everything else and for them it often feels it's just another pressure, and at times they've certainly shared with me that it's a pressure to return to work, or it's a pressure to perform … but then I think I've certainly seen the reverse where the [InVoc] worker who has been working with them has given them the hope that there is something that they can be doing later on down the line."

Importance was placed on sensitively introducing patients to InVoc. Assessing a patient's readiness to participate in the InVoc programme was a considered process, determined on a case-by case basis, and involved consultation with all staff in case conferences, as well as informal conversations with a patient's family.

Providing support and advocacy

Staff reported various ways in which the InVoc coordinators supported patients. This included visiting workplaces with patients, supporting patients through the process of a change in work or study, and general assistance to achieve goals.

"I think where InVoc is really vital is [the coordinator] actually goes with the patient to their previous place of employment and supports them in person, and that is tremendous, because there wouldn't be that opportunity if there wasn't [the coordinator] or InVoc. So, and also she just shows people how to do things differently…"

"I guess that there's assistance to make things happen, which, you know, might seem – might seem impossible to achieve on their own"

Communication with employers was considered helpful for understanding the process of returning to work for a person with a SCI. Support was also provided to unmotivated patients, by checking back with them from time to time, and, when appropriate, addressing known barriers.

Value of early intervention

The successful RTW for some patients was attributed to support and advocacy provided by InVoc. Based on some staff members' observed outcomes, InVoc was reported to accelerate a patient's return to work or study:

"…with InVoc obviously it's a lot easier and smoother transition. A lot more chance of failure when they don't have it."

InVoc was reported to be important for creating an expectation that RTW or study was possible. Many staff members reported the programme to be unique and important, instilling hope for many patients.

"[*social worker*]… from my experience, it often instils a lot of hope with patients because they come in and the first thing is, "I can't work anymore." So once they're able to speak to the InVoc person, they actually realize that there is hope after their injury that they can possibly return to work, or still continue with life after their injury, and that's been really helpful and positive."

The specific vocational perspective of InVoc was also perceived to address a gap in patient care. Allied health staff reported they did not have the specific vocational-related skills, or the time, to carry out the type of work the InVoc coordinator performed.

"[*occupational therapist*]… we don't have those community return to work type contacts, we don't have that familiarity with Centrelink systems *[the Australian government social security system]*, all that type of stuff to be able to do that."

"[*occupational therapist*] … if we could fit [vocational rehabilitation] in by the time we did everything else, it got filled in. So in terms of, is it filling in a gap in the service, absolutely."

Overall, staff perceived InVoc as a valuable service:

… the whole fundamental idea of rehab is to get people back living their lives. So without work, we spend most of our day at work. That is part of life. It's a necessity; it's such a valuable thing."

"… the way the team responded and reacted today, is indicative of how valuable and the value [the InVoc coordinator] adds to our unit and to the staff and the patients in general."

"It'd be terrible if they took the funding away."

Conflicting messages to patients

While no significant challenge to the InVoc programme was identified, there was consensus among staff that bureaucratic factors sent conflicting messages to patients. Staff reported that some patients needed to declare they were unfit for work when applying for government funding, which is in contrast to InVoc encouraging the possibility of returning to work:

"[*occupational therapist*] So some clients … are hesitant to look at that return to work because their DSP [Disability Support Pension] is their sole means of income while they're here in hospital, and if they're looking at a return to work I believe it impacts on their ability to receive that DSP as well."

Table I. Three elements emerged as critical to the successful implementation of the InVoc pilot programme

Service providers working from hospital setting
• InVoc coordinators physically resided with allied health at each unit
• This contributed to the InVoc coordinators being viewed as an integral member of the overall team
• Being onsite contributed to the accessibility and flexibility
"[*occupational therapist*] I think it's good as well [the InVoc coordinator] now sits in the office with us [in OT] and just kind of … bounces, you know, we can chat to her at … any point and … we can have sort of lots of informal conversation with her, which I think works really well"

Programme flexibility
• Flexibility of service provision was important given the varying patient responses and needs
• Inpatient sessions with InVoc could be deferred and rescheduled to fit with other therapies
"[*occupational therapist*] … the reality of an inpatient hospital setting is that sometimes clients can't make it to appointments… it helps with rapport building if [the InVoc coordinator's] able to be flexible, if she's able to say, "look, OK, you'll miss your appointment this morning but I'll catch you this afternoon""

Staff communication
• InVoc coordinators were involved in case conferences and therefore up to date with patient progress
• When rolling out this new programme good communication was essential to ensure medical and allied health staff were fully informed and to address any concerns.
"[*occupational therapist*] I think it's also been good that the InVoc worker has been able to come to the weekly clinical meeting and have input to that. So she's able to hear what else is going on with the particular clients, what their delays are or what the progress is with each particular client, what the issues are that are impacting on them.""

Facilitating the success of InVoc: determining the most influential elements of the programme

Four specific elements were identified as being most influential to the success of the programme: the coordinator working on the ward, programme flexibility, and good communication between all staff (see Table I, with relevant participants' quotes presented in parallel).

DISCUSSION

Three salient features by which the programme was believed to enhance post-injury vocational achievement were identified by study participants: (*i*) the positive value added by having the coordinators working on the ward, which enhanced their contribution to the rehabilitation process; (*ii*) the programme had the required flexibility to cope with the frequently-changed situations of individual patients who regularly encountered set-backs that interfered with previously-planned vocational activities; and that (*iii*) the coordinators were all able to establish good communication and working relationships with the regular rehabilitation hospital staff, especially via effective participation in case conferences. In addition, hospital rehabilitation team members (who have the responsibility for the patients' overall rehabilitation progress) reported that

early intervention was both appropriate and successfully implemented in the inpatient setting, producing a positive impact particularly involving hope early after injury.

The extrapolation of results across rural regions and other Australian states may be limited by having all 3 study sites within one metropolitan region in NSW. Additional bias may have occurred due to the uneven group sizes and discipline representation across sites, as well as self-selection of participants attending the voluntary focus groups. The inclusion of so many staff representing such a wide range of disciplines was a study strength that allowed the exploration of the various study themes.

Many staff admitted being initially wary of the intervention timeliness; yet the majority reported that after witnessing the programme they found the timing both appropriate and effective. This is important as the inpatient medical rehabilitation setting can be unsupportive of a focus on return to work, with staff being "patient-" rather than "worker-" oriented, potentially overprotective and viewing work as a source of potential harm (loss) rather than of good. The inclusion and integration of VR into inpatient settings seemingly introduced an element of hope and support that encouraged patients to see the possibility of returning to some form of work and/or study in the future, with observable improvement in patient engagement in other aspects of inpatient rehabilitation. Hospital rehabilitation team members (who have the responsibility for the patients' overall rehabilitation progress) believed that the programme addressed an existing gap in patient care and that it had been successfully implemented across the 3 units.

Addressing the issue of work with patients at this early stage created awareness and hope that work/study was possible and that it could form a part of their rehabilitation and assist with goal setting. Possessing such positive expectations regarding future resumption of work after a SCI are consistent with Snyder's Hope Theory (15) and are consistent with recommendations that the rehabilitation team create a vocational reintegration plan to prepare the patient, the employer and professionals involved in the reintegration process (28).

For many disability groups, such as brain injury and mental health, "best practice" is typically early VR intervention occurring soon after impairment and closely integrated with inpatient medical rehabilitation treatment (29–31). Current standard practice in SCI rehabilitation does not include VR services, with the results of this study indicating that a review is required.

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