Who gets into rehabilitation and why? A qualitative survey of decision making

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Executive Summary

Key messages

Inpatient rehabilitation is common following trauma, however variations in admission practices have been reported. Interviews with rehabilitation fellows conducted in this study revealed a lack of clarity around the role and value of rehabilitation within the health system, as well as concerns regarding the lack of rehabilitation options for patients with severe acquired brain injury or tracheostomy. This study points to a need for focused dialogue with stakeholders, informed by best available evidence, to clarify the role of rehabilitation across patient groups and ensure that patients gain access to timely, appropriate rehabilitation services.

Purpose

This study examined how and why rehabilitation fellows make decisions regarding admission to rehabilitation for trauma patients in Victoria.

Rationale

There is little information regarding current and best practices for referral to rehabilitation for Victorian patients with an acquired brain injury.The current, limited range of rehabilitation options may result in decisions about future care and rehabilitation that are not optimal or equitable. There is a need to examine and understand variations in referral and admission practices, to ensure that patients are able to access the best available care at the right time.

Methods

Rehabilitation fellows in Victoria were invited to take part in semi-structured interviews to explore their perspectives on the drivers of rehabilitation referral and acceptance. A detailed qualitative analysis was undertaken to identify common themes emerging from the interviews.

Research findings & implications

Rehabilitation fellows perceived that admission to rehabilitation was heavily influenced by health system drivers, including management of patient flow, and felt they had little control over these decisions. When assessing suitability for rehabilitation, the nature of the injury was perceived as less important than resolution of acute medical instability and the presence of rehabilitation goals. Case studies revealed little consensus regarding the suitability of patients for rehabilitation or the timing of referral. Fellows expressed concern regarding the lack of rehabilitation options for people with severe acquired brain injury or tracheostomy,

and in some cases were not aware of existing services. These findings suggest a lack of clarity regarding the role of rehabilitation within the health system and suggest there may be practices across institutions and clinicians regarding rehabilitation admission.

Use of the research

The outcomes of this project are an essential step towards developing robust and consistent processes for rehabilitation referral and admission in Victoria. Specifically, the outcomes of this project can inform structured dialogue with stakeholders to define the role and timing of rehabilitation for patients across the spectrum of injury, informed by best available evidence. Further investigation of the drivers of rehabilitation referral in acute care is warranted. The opening of the new state wide ABI service provides an important opportunity to disseminate information to clinicians regarding the rehabilitation options available for patients with severe ABI and tracheostomy.

Potential impact of the research

Rehabilitation is considered an essential component of care for people following trauma. The data from this project identifies clear opportunities to improve clarity round the role of rehabilitation in this patient group, and to work with stakeholders to improve consistency in referral and admission practices. This critical dialogue will assist clinicians and health care providers to design appropriate, efficient care pathways that provide optimal care and a smoother transition from hospital to home.

Background

Inpatient rehabilitation is common following trauma to maximise function and improve patient readiness for community living. Studies have reported 10% to 39% of trauma patients are discharged to inpatient rehabilitation [1, 2, 3]. However, there is little evidence regarding the superiority of home or inpatient rehabilitation for clinical outcomes following trauma. Data from Victorian trauma registries (Victorian State Trauma Registry - VSTR and VOTOR) [4] indicate that patients who attend inpatient rehabilitation may not achieve outcomes expected, with poorer risk-adjusted self-reported outcomes (including return to work, pain and functional outcomes). The reasons for this are unknown. In Victoria, the strongest predictor of discharge to rehabilitation is insurance status, with compensable patients with lower limb fractures having ten times the odds of discharge to inpatient rehabilitation than those uninsured [5].There is a clear need for a deeper understanding of the decision making and processes around discharge disposition for patients following trauma.

Trauma patients referred to rehabilitation may have a variety of injuries, ranging from isolated orthopaedic injuries to severe acquired brain injuries. Access to rehabilitation services requires that the acute care team makes a referral to the rehabilitation service, which then assesses the suitability of the patient for rehabilitation at their centre. For people with relatively simple injuries there are a wide range of suitable rehabilitation services. However, for people with more complex injuries there are limited options and acceptance to rehabilitation is not guaranteed. A recent systematic review has shown that adults with acquired brain injury value the opportunity afforded by rehabilitation, both to find out what level of function can be achieved, but also to come to terms with the limitations of the acquired disability (6). However, the scarcity of rehabilitation resources for this group may result in decisions about future care and rehabilitation that are affected by resource considerations as well as clinical presentation. There is a need to examine and understand the variations in referral and admission practices across the range of patients who are considered for rehabilitation, to ensure that patients are able to access the best available care at the right time.

To date there has been very little exploration of the factors that impact on decisions regarding the discharge disposition of patients following trauma. This information will assist health care providers to design care pathways that provide a smoother transition from

hospital to home and improved allocation of health care resources in the period following acute hospital admission.

The Research Question:

How and why do rehabilitation fellows make decisions regarding admission to rehabilitation for trauma patients?

Method

A qualitative study was undertaken, using semi-structured interviews and thematic analysis.

All rehabilitation fellows currently working in Victoria were invited to participate. The Australasian Faculty of Rehabilitation Medicine (AFRM) sent an email to all rehabilitation fellows, inviting them to contact the researchers if they would like to take part. Eligible fellows were currently working rehabilitation, or responsible for assessing patients for rehabilitation in the acute setting.

Individual interviews were used to enable an in-depth exploration of clinician decision making. These semi-structured interviews were performed by telephone [7], using open ended questions designed to allow participants to discuss key issues and factors relating to discharge disposition. Case studies were also included (Appendix 1). The cases were created based on typical presentations of patients with trauma and associated injuries, including traumatic brain injury and tracheostomy. Fellows were asked to rate each case on a scale of 0 (would refuse inpatient rehabilitation) to 5 (would definitely accept for inpatient rehabilitation). For key cases fellows were also asked to state how many days into the acute admission they would consider making the decision regarding suitability for rehabilitation. Each interview was recorded using a digital voice recorder with a telephone adapter.

Interviews were transcribed verbatim from the audio recording and analysed using NVIVO Version 9.0, a software program specifically designed for the analysis of qualitative data, including interviews. Thematic analysis was used to identify important thematic groupings [7]. Two investigators coded the transcripts and interviews.

Results

Ethics approval was sought and received from the Human Research Ethics Committees of Alfred Health and La Trobe University.

Interviews were undertaken with 10 rehabilitation fellows working across a range of settings including public and private hospitals, as well as metropolitan and rural settings.

Major themes arising from interviews:

1. **Financial considerations as drivers of decision making**
   Fellows reported that managing patient flow was an important contributor to decisions about rehabilitation admission:

   "....the pressure to fill beds with any type of patient, regardless of their level of clinical need, into subacute beds when the acute beds are escalating is constant pressure"

   "....the service it can provide in the public system and moving patients from acute to subacute, and I think we are increasingly seeing as being equally valued as the role of rehabilitation".

   As expected, fellows reported that compensable patients were more readily accepted to rehabilitation:
   "...when there's the compensable group involved I think some of the ones that we take at (rehabilitation centre X) probably don't necessarily need inpatient rehab and I think they're taken because there's a funding amount attached to it"

2. **Rehabilitation fellows have limited involvement in decision making regarding rehabilitation admission**
   Many rehabilitation fellows reported that the decision regarding transfer to rehabilitation was mostly made by others, either by nursing assessors or by staff in acute care:

   "...these days the role has changed in that I have very little to do with any decision making regarding admission to rehab for these patients".

   Whilst some fellows expressed a desire to have more input into these decisions, others felt that appropriate decisions were being made:

"...across the board, when rehab referrals are made, they're generally made with an understanding of what rehab involves. And so in good faith you're looking to always be able to accept a rehab referral because most people in a trauma setting by and large will need rehab."

"....it is very uncommon for me to feel an acceptance (to rehabilitation) was unreasonable".

3. **Medical stability and appropriate rehabilitation goals as important drivers of rehabilitation acceptance**

Fellows stated that the type of injury was of much lesser importance than the perceived readiness of the patient to undertake rehabilitation. The most frequently expressed markers of 'readiness' were resolution of acute medical problems, the presence of rehabilitation goals and the ability of the patient to participate in the rehabilitation process.

"...the injury type by and large isn't an issue"

"...the major issue is the patient's willingness to participate and their willingness to have appropriate goals for the rehabilitative process...".

4. **Inpatient rehabilitation options are limited for complex patients, particularly with tracheostomy and acquired brain injury (ABI).**

Most rehabilitation fellows reported that the options for patients with tracheostomies were limited, irrespective of funding source. Many also did not know what those options were.

"....if the trache doesn't come out then they'll stay in the acute sector because we can't do traches"

"...there are less units with less beds who are capable of looking after the tracheostomy"

Patients with severe ABI who require specialist services were also perceived to have limited rehabilitation options. Most fellows believed that the options were greater if the patient was compensable, but that public patients had insufficient services.

"We have issues with patients with consciousness impairment. So, they don't fit into a rehabilitation model anywhere. There are very few places that would take them"

"The big issue is trying to access a post-traumatic amnesia bed ... generally patients are waiting a very long time unless the stars are aligning or something".

Minor themes arising from interviews:

Smaller numbers of fellows expressed the following:

1) Specialist units have different criteria for acceptance to rehabilitation than general units, related to unique patient needs (eg traumatic brain injury and spinal cord injury).
2) Patient and family input is vital for decision making around rehabilitation admission and discussion with them should begin early.
3) A lack of consensus regarding the role of inpatient vs outpatient rehabilitation. Some fellows felt that all patients needed inpatient rehabilitation, whilst others said that outpatient rehabilitation was preferable as it avoided some perceived negative consequences of inpatient stays, including physical deconditioning and delay in discharge home.

Case studies: There was a lack of consensus regarding the suitability of each patient for rehabilitation, with fellows selecting a wide range of scores for each patient (Table 1). Similarly, fellows reported a variety in the timing of when a decision would be made regarding rehabilitation referral, in both uncomplicated patients and patients with traumatic brain injury, with a range of 1 to 5 days following admission.

Table 1. Ratings of suitability for rehabilitation across different patient presentations

Case	Median score out of 5	Range of scores
39 year old with isolated lower limb (LL) fractures	3	0 - 5
65 year old with isolated LL fractures	4	0 - 5
39 year old with isolated LL fractures and private health insurance	3	0 - 5
39 year old isolated LL fractures, compensable	5	2 - 5
39 year old with traumatic brain injury	4.5	0 - 5
65 year old with traumatic brain injury	4	0 - 5
65 year old with traumatic brain injury, compensable	5	0 - 5
65 year old with tracheostomy	0	0 - 5

Score of 0 = would refuse inpatient rehabilitation
Score of 5 = would definitely accept for inpatient rehabilitation

Discussion and implications

This qualitative study has provided a detailed understanding of reasons for discharge destination decision making through interviews with a range of rehabilitation fellows. Notably, fellows felt that the nature of a patient's injuries often had little impact on the decision making process. Health system factors such as patient flow imperatives were perceived as highly influential, whilst patient factors including medical stability and presence of rehabilitation goals were also important. Almost all fellows reported a lack of adequate rehabilitation options for patients with severe acquired brain injury or tracheostomy, which often resulted in delays in rehabilitation transfer.

The themes arising in this study show that decision making regarding rehabilitation acceptance is complex, subjective and arises from an interplay of system-related and patient-related factors. Fellows felt that they had very little input into this process, which they perceived to be frequently driven by the needs of the acute care setting. This suggests that to achieve a fuller understanding of rehabilitation discharge decisions, further study involving a wider range of clinicians would be required. This should include medical and allied health staff in acute care, as well as rehabilitation assessors.

The lack of consensus regarding suitability for rehabilitation in individual patient cases (Table 1) was striking. Similarly, there was lack of consensus regarding the roles of inpatient and outpatient rehabilitation. Whilst medical stability was perceived as important, it was not defined consistently, with some fellows preferring to wait much longer than others before decisions about rehabilitation admission were made. This suggests that there may be varied practices across institutions and clinicians. In addition, rather than having a defined role in improving long term health and independence, many fellows felt that transfer to rehabilitation was a strategy for managing hospital demand. Further critical analysis is required in this area, to provide clarity around the role of rehabilitation for different patient groups, and to define referral processes which optimise the use of rehabilitation resources. A process of structured stakeholder dialogue, adequately informed by available evidence, would be valuable to move towards consensus and facilitate consistent practices across the state.

The challenges and frustrations of achieving rehabilitation admission for patients with severe ABI and/or tracheostomy were clearly expressed in the interviews. Whilst fellows felt that such individuals should have the opportunity to undertake rehabilitation and had realistic prospects of useful gains, they were unsure how this could be achieved. Notably, some fellows were not aware of existing rehabilitation options for these patient groups. The

opening of the new state wide ABI service provides an important opportunity to disseminate information to clinicians regarding the rehabilitation options available for these groups.

Conclusions

Rehabilitation fellows perceive that patient injuries are less important drivers of acceptance to rehabilitation than management of patient flow, medical stability and presence of rehabilitation goals. There was diversity of opinions regarding suitability of individual patients for rehabilitation, the role of outpatient rehabilitation or when decisions about discharge destination should be made. This research highlights opportunities to engage with stakeholders in both acute care and rehabilitation settings, to develop more consistent discharge processes that optimise the use of rehabilitation resources.

References

1) Williamson O, Gabbe B, Cameron P, Edwards E, Richardson M. (2009). Predictors of moderate or severe pain 6 months after orthopaedics injury: a prospective cohort study. J Orthop Trauma. Vol 23. p. 139 - 144,
2) Holbrook T, Anderson J, Siever W, Browner D, Hoyt D. (1999) Outcome after major trauma: 12-month and 18-month follow-up results from the Trauma Recovery Project. J Trauma. Vol 46. p. 765 - 771
3) Holtslag H, Post M, Linderman E, Van der Werken C. (2007) Long-term functional health status of severely injured patients. Injury. Vol 38. p. 280-289
4) Gabbe B, Sutherland A, Hart M, Cameron P. (2010) Population-based capture of long-term functional and quality of life outcomes after major trauma - the experiences of the Victorian State Trauma Registry. J Trauma;69:532-6
5) Kimmel L, Holland A, Edwards E, Cameron P, De Steiger R, Page R, Gabbe B. (2012). Discharge destination following lower limb fracture: development of a prediction model to assist with decision making. Injury. Vol 43 p. 829 - 834
6) Levack, WMM, Kayes, NM, Fadyl, JK. (2010) Experience of recovery and outcome following traumatic brain injury: a meta-synthesis of qualitative research. Disabil Rehab; 32: 986-99.
7) Pope C, Mays N. (2006). Qualitative Research in health care. Third edition, Oxford: Blackwell Publishing.

Appendix 1. Interview Guide

My name is……. You would have spoken to my colleague who posted/emailed you the information about this study, and arranged this interview time.

This interview will be recorded in order for analysis. Are you comfortable that this will occur?

Have you received and read the Participant Information Sheet? Do you have any questions in regards to the study?

Do you consent to take part in this study?

Please stop me at any time during the interview if you wish to withdraw from the study or choose not to answer any questions.

We do not want to discuss individual patients in this interview, rather concentrate on general factors that you take into account when making decisions.

Questions:

- What is your role in the hospital in which you work?
- What is your role in decision making in terms of inpatient rehabilitation for a patient following trauma?

Prompts: directly make referrals, part of team decision making, individual discussions with patients

- What do you feel are the factors that influence your decision to accept a trauma patient for inpatient rehabilitation?
  I. Are there any other factors related to patient presentation or characteristics that influence your decision about acceptance for inpatient rehabilitation?

Prompts: age, gender, injury type, comorbidities, mechanism etc

II. Are there any other factors related to the trauma system or hospital system that influence your decision?

Prompts:

III. Are there any other specific factors relating to your organisation that influence your decision?

Prompts: bed pressures, other team members

IV. Are there any other specific financial factors that influence your decision?

Prompts: compensation, insurance

- How does the patient or family wishes influence your decision in regards to acceptance of a patient for inpatient rehabilitation?
  I. What part does the patient or family play in this decision making process?

- I would like you to listen to the following case and I will follow with a few questions regarding it.

Case:

A 39 year old man was admitted to hospital with

- Fractured distal femur
- Fractured proximal tibia

following a fall down an embankment whilst intoxicated.

Phx: depression, NIDDM

Shx: lives alone, unemployed, 3 steps into front door, previously independent

He underwent internal fixation of both the femur and tibia and his post op orders included Non Weight bearing for 12 weeks. Day 1 post operatively he managed to sit on the edge of the bed, but returned to bed due to pain.

Questions:

- What factors would you take into account when deciding if this man will be accepted for inpatient rehabilitation?

Prompts: On which day of the patient's stay would you make this decision? Does that depend on any factors?

- On a scale of 0 (refused inpatient rehabilitation) and 5 (definitely accepted for inpatient rehabilitation), where would you believe this man fits in terms of acceptance for inpatient rehabilitation.

If the original patient was in fact 65 years old, can you answer the following questions:

- On a scale of 0 (refused inpatient rehabilitation) and 5 (definitely accepted for inpatient rehabilitation), where would you believe this man fits in terms of acceptance for inpatient rehabilitation.
- .

Prompts: If the number changes: Tell me about why you chose a higher/lower number than before.

If the original patient sustained his injury in a motor vehicle accident and was covered by compensation, can you answer the following questions:

- On a scale of 0 (refused inpatient rehabilitation) and 5 (definitely accepted for inpatient rehabilitation), where would you believe this man fits in terms of acceptance for inpatient rehabilitation.

Prompts: If the number changes: Tell me about why you chose a higher/lower number than before.

Now let us consider this original patient (i.e. 39 years old and non- compensable) who had also sustained a severe traumatic brain injury in his accident. He had a period of PTA >5 days and he cannot follow commands.

- What factors would you take into account when deciding if this man will be accepted for inpatient rehabilitation?

Prompts: After how many days would you consider a referral to inpatient rehabilitation?

- On a scale of 0 (refused inpatient rehabilitation) and 5 (definitely accepted for inpatient rehabilitation), where would you believe this man fits in terms of acceptance for inpatient rehabilitation.

If this patient was in fact 65 years old, can you answer the following questions:

- On a scale of 0 (refused inpatient rehabilitation) and 5 (definitely accepted for inpatient rehabilitation), where would you believe this man fits in terms of acceptance for inpatient rehabilitation.

Prompts: If the number changes: Tell me about why you chose a higher/lower number than before.

-

If this patient sustained his injury in a motor vehicle accident and was covered by compensation, can you answer the following questions:

- On a scale of 0 (refused inpatient rehabilitation) and 5 (definitely accepted for inpatient rehabilitation), where would you believe this man fits in terms of acceptance for inpatient rehabilitation.

Prompts: If the number changes: Tell me about why you chose a higher/lower number than before.

If this patient has a tracheostomy, how does this change your decision making in regards to rehabilitation referral?

-

Prompts: *If required: how does this affect the options available for rehab?*

For trauma patients in general, can you tell me about the circumstances when you would NOT consider acceptance for inpatient rehabilitation?

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