

# Words of wisdom – patient perspectives to guide recovery for older adults after hip fracture: a qualitative study

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**Abstract:** Recovery after hip fracture is complex involving many transitions along the care continuum. The recovery process, and these transitions, often present significant challenges for older adults and their families and caregivers. There is an identified need for more targeted information to support older adults and their families throughout the recovery process. Therefore, our goal was to understand the recovery phase after hip fracture from the patient perspective, and identify specific messages that could be integrated into future educational material for clinical practice to support patients during recovery. Using a qualitative description design guided by a strengths-based focus, we invited men and women 60+ years with previous hip fracture and their family members/caregivers to participate in interviews. We used purposive criterion sampling within the community setting to recruit participants. We followed a semi-structured guide to conduct the interviews, either in person or over the telephone, and focused questions on experiences with hip fracture and factors that enabled recovery. Two investigators coded and analyzed interview transcripts to identify key messages. We interviewed a total of 19 participants: eleven older adults who sustained a hip fracture and eight family member/caregivers. Participants described three main messages that enabled recovery: 1) seek support; 2) move more; and 3) preserve perspective. Participants provided vital information about their recovery experience from hip fracture. In future, this knowledge can be incorporated into patient-centered education and shared with older adults, their families, and health care professionals across the continuum of care.

**Keywords:** hip fractures, qualitative research, patient-centered care, education

## Introduction

Hip fractures create life-changing events for older adults and their families. Canadian estimates for health cost per person in the first year after hip fracture is between \$36,929 and \$39,479,<sup>1</sup> globally, hip fractures account for most fracture-related spending.<sup>2</sup> Entry into long-term care is a significant contributor to these costs,<sup>1</sup> and loss of mobility can necessitate this move. Despite medical advances, mobility recovery after hip fracture has not changed significantly in the past 25 years.<sup>3,4</sup> Health care professionals play a key role in the recovery process, which may take up to a year or more,<sup>5</sup> but this is well beyond discharge from hospital. Thus, informing patients and families on how to maximize recovery is essential. This is an especially high priority challenge given the anticipated number of older adults who will experience fractures in the coming decades.<sup>6</sup>

Communication challenges are often encountered during care delivery for older adults with hip fractures.<sup>7,8</sup> This is not surprising as the recovery process involves

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many care transitions and multiple health professionals.<sup>7,9</sup> Therapeutic goals in the recovery phase focus on adults' mobility recovery (activities of daily living, walking, and/or return to community participation), while addressing secondary prevention of future fractures through falls prevention and bone health strategies. There are established guidelines for care after hip fracture,<sup>10</sup> yet, they often focus on clinical pathways during the hospital stay, and less information is available on the post-discharge recovery period.<sup>11</sup> Yet, providing relevant and timely patient communication can educate and possibly reduce anxiety,<sup>12</sup> with positive consequences on recovery.

Developing patient-centered educational strategies are critical. Patient-centered communication aims to incorporate the patient and family perspective and to address their "needs, wants and preferences"<sup>13</sup> in order to make informed decisions about their health. Evidence illustrates that patient-centered care for individuals with multiple health problems can improve outcomes, facilitate connections between patient and health professionals, and make care more cost-efficient.<sup>14</sup> Given that hip fracture recovery occurs over months, or even years, older adults, and their family members are the "common link" across the care continuum.<sup>7</sup> Thus, it is essential to adopt a patient-centered approach to understand the recovery experience in greater depth to develop specific educational resources for low trauma hip fracture.

In future, we seek to develop patient education material based on best evidence, and co-created from the knowledge and guidance of patients and/or family members who have been through the fracture experience. Therefore, the first step to this process is to uncover patient and family wisdom and guidance that was most effective in recovery. Previous qualitative literature characterized the experience of older individuals following a hip fracture.<sup>15,16</sup> This research underscored the experiences of older adults with hip fractures but did not always provide concrete implications for clinical practice. Therefore, using a strengths-based approach, our goal was to ask patients and their caregivers about recovery advice they would provide to others. A strengths-based approach, also termed a strengths perspective,

Emphasizes the clients' unique attributes, talents, abilities, capacities, hopes, values, visions, and knowledge instead of focusing only on the clients' problems, difficulties, needs, and deficits;<sup>17</sup>

is an appropriate approach to use when trying to gather practical information relevant to practitioners and policymakers.<sup>18</sup>

In this study, our primary aim was to summarize patient-generated advice, or messages, for the recovery experience of older adults with hip fractures. Our secondary aim was to identify ways health professionals could utilize these messages to develop health communication for clinical practice.

## Methods

### Study design

We conducted semi-structured interviews in Metro Vancouver, BC, Canada with older adults and/or their family member/caregivers about experiences with recovery after hip fractures using a strengths-based qualitative approach.<sup>18,19</sup> We used this approach, along with the relevant literature to frame and refine<sup>20</sup> our semi-structured interview guide and to inform our analysis in order to identify opportunities that support and foster positive development<sup>21,22</sup> among patients recovering from hip fractures.

### Recruitment and data collection

From March to June 2013 we recruited older adults with a history of hip fracture and/or their caregivers or family members. Eligible participants sustained a hip fracture at the age of 60 years or older, and could participate in an interview in English, or were individuals who provided care to a family member following hip fracture. There was no eligibility restriction on the length of time since hip fracture. The University of British Columbia Ethics Committee approved this study. All participants gave written informed consent before data collection began.

We used purposeful-criterion sampling<sup>23,24</sup> to recruit participants. We chose criterion sampling as we had a pre-determined criterion of importance, (ie, older adults who sustained hip fractures).<sup>24</sup>

We recruited participants through: posting three advertisements in two local newspapers; sending recruitment emails distributed through the local health authority; approaching previous study participants who agreed to be contacted for future studies; sending information to four community organizations with a history of collaboration; and posting additional recruitment information in two local hospital research buildings and websites. We offered individuals a \$10 gift card for their participation. We terminated recruitment for the qualitative study when we obtained several information-rich cases and determined that topic-coded themes reached saturation through team analysis meetings and review of field notes.<sup>25</sup> We provide our interview guide in Table 1.

**Table 1** Interview guide for the study**We are interested in learning more about your hip fracture, and the care you received**

1. Can you tell me about your hip fracture?
2. What do you know about hip fractures?
3. What helpful information did you receive after your hip fracture?
4. What kinds of questions did you have about your recovery? What answers did you receive?
5. After leaving the hospital, are there factors, things, or people that helped in your recovery?
6. What would you say to help someone else going through this recovery experience?
  - a) If you could provide one or two words of wisdom, or a phrase, to help someone else through the recovery period, what would it be?
7. Did you have any goals or projects that motivated you to get your mobility back?
8. How did you overcome challenges to any difficulties?
9. What do you wish you knew then, that you know now?

We conducted most interviews in person (N=12), and completed three sessions in a phone call. We interviewed participants at the time and location of their choosing; in-person interviews took place in the participants' own homes, in our research offices, or a local community center. All interviews were conducted by one author (CS) who was trained in qualitative research methods. A second author (TF) acted as observer for five in-person interviews for training purposes. Interviews lasted between 30 and 90 minutes, and were audio recorded. All recordings were transcribed verbatim, and we assigned pseudonyms to each participant to maintain anonymity.

## Data analysis

We used topic coding, an inductive process (labeling segments of text to create categories; reducing overlap and redundancy among the categories in order to create a small number of summary categories that best capture the most important themes given the objectives), to analyze our data.<sup>26</sup> Initially, one author (CS) read through the interview transcripts and coded, a second author (JB) reviewed the coded data and revised the codes and added new codes based on her review. The two coders reviewed the data and discussed the codes, alongside excerpts of data and preliminary definitions during team analysis meetings to develop themes. One author (CS) coded using the informants' own words (segments of text) to create categories; segments of text coded into the category illustrate meanings, associations, and perspectives associated with the category.

A rigorous, systematic reading and coding of the transcripts enabled us to identify major themes. We created groupings

based on similarities and differences in meanings, and then combined them to reduce redundancy and to develop overarching common themes (topics) that best captured the key findings. The overarching themes were strengths-based and identified as facilitators to the recovery process. We explored similarities and differences across sub-groups (eg, older adults with hip fractures and caregivers), regarding advice they would offer others.<sup>27</sup> Analysis meetings and memo writing facilitated the development of the topics/categories and patterns that best illustrated the experiences of the participants,<sup>28</sup> and we recorded decisions made throughout data collection and analysis (ie, an audit trail).<sup>29</sup> We used qualitative analysis software, NVivo 10 (QSR International Pty Ltd, Burlington, MA, USA).

## Results

We completed 15 interviews with 19 participants; eleven participants experienced a hip fracture (ten women, one man) and eight participants were family members or other caregivers (two husbands, two sons, three daughters, and one woman who was a caregiver). In three of the 15 interviews, both the individual who had a hip fracture and their caregiver(s) were present. Our sample reflected 15 incidences of hip fracture, which occurred on average, 2.5 years before the interview (range 0.25 to 8 years). Table 2 summarizes the older adults with hip fractures.

**Table 2** Summary of participants with hip fractures

Demographic variables	N (total =15)
Sex	
Men	2 (13%)
Women	13 (87%)
Age at time of fracture (years)	
60–65	2 (13%)
66–70	3 (20%)
71–75	2 (13%)
76–80	0 (0%)
81–85	5 (33%)
86–90	3 (20%)
Time between fracture and interview (years)	
≤1.0	3 (20%)
1.1–2.0	4 (27%)
2.1–3.0	5 (33%)
>3.1	3 (20%)
Living arrangement pre-fracture	
Alone	10 (66%)
With spouse and/or family	3 (20%)
Care facility	2 (13%)
Time in hospital post-surgery (days)	
<7	1 (7%)
7–14	8 (53%)
15–21	1 (7%)
>21	5 (33%)

**Table 3** Summary of main themes and tangible actions which could be applied to future educational materials for older adults after hip fractures

Main themes	Tangible actions for health professionals
<b>Seek support</b>	
Ask others for help	Acknowledge that it is not uncommon to have difficulty asking for help, and ask older adults how they will manage at home following discharge (eg, develop plans).
Ask key questions	Provide educational material, and opportunities to describe the recovery process, and key milestones.
Identify peer support	Provide information to connect older adults and family members/caregivers with support network or community resources.
<b>Move more</b>	
Engage in physical activity	Focus physical activity information on important exercises, and emphasize the importance of everyday activities when able (eg, avoid prolonged sedentary behavior). Physiotherapists can further develop targeted messages to address the specific needs of the older adults, and inform family members/caregivers, eg, addressing fear of falling, and opportunities for ongoing community engagement.
Engage in physiotherapy	Provide community resources for physiotherapy access across the care continuum.
<b>Preserve perspective</b>	
Be positive	Review with patients that other older adults can sometimes feel discouraged by (lack of) progress after hip fractures, however, items such as identifying goals and documenting progress to date are ways to achieve gains in mobility and recovery in general.
Be patient	Include opportunities to record goals or targets to measure progress based on realistic milestones.

Following data analysis, we identified the overarching common themes that emerged as: i) seek support; ii) move more; and iii) preserve perspective (Table 3).

## Theme I – seek support

One topic discussed by all participants was “seek support”. Individuals with hip fractures and their caregivers spoke at length about the importance of asking for help and needing to find answers to key questions. Support was characterized as assistance with transportation, bathing, meal preparation, and other activities of daily living. Participants expressed a perceived need for information about community resources; indicating that this practical support was especially needed early on in the recovery process, and was often provided by family.

Oh, the early challenges. Well, it was just all challenges [...] and every so often they [family members] would phone, they would say, “Have you eaten?” I would say, “No, not really.” So they said, “Oh, we’ll come have dinner with you.” So they would bring dinner, stuff like that [...] But nobody comes, no nurse, no nothing. No public health, to see if you are just dying or rotting or lying there. [Joan, aged 79 years]

Participants most frequently identified a need or expressed appreciation for help with activities of daily living including cooking, bathing, and driving (especially to follow-up medical and rehabilitation appointments). Though the identified need for help was expressed, participants acknowledged the

difficulty of asking for support when wanting to maintain one’s independence.

And don’t say, how can I help? Just go to visit, take a look around, you know, like, if the dishes haven’t been done in three days or can I make the coffee or can I make you a sandwich or can I take your garbage out or vacuum for you or whatever the case may be. Don’t phone and say how are you doing and what can I do to help. Because people who have never had to ask for that before are very reluctant to say what they really need, you know. [Gladys, aged 69 years]

Participants spoke about the importance of accepting others’ help, while also recognizing the goal of personal independence. As Janice (aged 64 years) stated:

Even though you want to be independent, accept the help when it’s there because it helps other people feel like they’re helping you. So like I said it was hard for me to do and as soon as I could do without the help I did. But I knew that there were times I had to accept it and to do it graciously.

When participants were asked to identify questions they had during their recovery many indicated, that prior to sustaining a hip fracture, they had little hip fracture knowledge (ie, available resources, expected recovery process). Because of this lack of knowledge, participants felt ill-equipped about the expected rate of recovery and indicated that perhaps a “recovery map” or checklist of indicators that provides a benchmark as to what should be happening (and when), would help their recovery.

You know, the actual care that I received in the hospital and the care of the surgeon, I think, was very good. But – how do you know what you're not getting? Does that make sense, you know? How do you know to say, okay, you should be doing this for me when you don't know what they should be doing for you? [Ruth aged 73 years]

Even though participants noted that asking questions was really important, there was recognition that asking questions of health professionals can be challenging for an individual who does not have an understanding of the recovery process. Several participants suggested that a patient advocate would be helpful. Reflecting on her father's experience with hip fracture, Jesse (aged 54 years) explained:

He's not the one to ask too many questions, and I think a lot of people do need sort of an advocate to talk for them and ask the questions for them [...] I think most patients would find it very intimidating being in that situation.

An unanticipated suggestion from older adults with hip fractures and their family members was an expressed desire for peer support. Reflecting on her mother's hip fracture experience, Angie (aged 67 years) stated:

It might be a nice thing to be able – for an older person to talk to another old person who's gone through the same thing. Cause often we're faced with a 23 year old who is telling us to do something that you think, you've never been 80, you don't know, you know?"

## Theme 2 – move more

Advice to “move more”, getting up to move or walk, and not remaining sedentary (ie, sitting still), was emphasized by caregivers and participants with hip fractures. Participants spoke at length about the importance of early ambulation, moving, and keeping active to speed up recovery from hip fracture. Moving was characterized as activities such as getting up out of bed or out of a chair, indoor and outdoor walking (with or without a mobility aid), and doing light exercises.

When I got out of the hospital I sat in my lazy-boy and I would really just like to sit here and not move, thank you. Television's there, computer's there, my little bar's over there. Got everything here. I told myself Elizabeth, get up and walk. So I did. I would, no matter what, and it didn't really hurt then. But it certainly wasn't comfortable. [Elizabeth, aged 86 years]

Several participants with hip fractures, acknowledged the fear of re-injuring their hip and pain upon movement as possible barriers to moving more. When asked what “words of wisdom”, or pieces of advice they could offer others, participants encouraged others to manage pain, to not be too fearful, and to stay positive throughout the process. For example, Edna (aged 66 years) said:

Go easy on yourself because it is a long process and move as much as you can, when you can [...] I certainly didn't want to move at first. I mean, I was pretty nervous about moving or doing anything because I didn't want it to break, but it had already been fixed. But in my mind, I didn't want to do anything that was going to make it worse, so I think that's the take it easy, go easy on yourself. But as you're able to, don't be afraid to move.

Physiotherapy and completion of exercises was commonly seen as contributing to recovery. Many participants reported that adhering to an exercise program was the advice most frequently received during recovery; in the words of Donna who had a hip fracture (aged 90 years):

You went to exercises, that was that. And I think that's good. I mean, you can't lie in bed and expect your leg to get better if you're not going to exercise. And that's what people told me, too. Do your exercises.

## Theme 3 – preserve perspective – attitude and recovery

“Preserving perspective” was a final message expressed by many participants. Participants explicitly emphasized the importance of remaining positive and patient while going through the gradual process of recovery from hip fracture. Preserving a “good attitude” was seen as contributing to a positive recovery experience and was often attributed to personal life experiences or general personal character. For example, Sharon (aged 72 years) encouraged others to:

[...] keep on trucking; don't stop. Don't – just keep your mind strong and your body will be strong. And keep believing you can do it.

There was also recognition that the recovery process may be slower than expected, and often gradual, thus participants encouraged others to set realistic expectations. Reflecting on her father's recovery, Jesse (aged 54 years) said:

[...] the patience is a big thing because they're having so much pain and just that loss of function [...] they will feel



the decline quite quickly, but they're also quite embarrassed when they can't do things and they've been doing them 60, 70, 80 years for themselves. So just a matter of being patient and keeping calm.

Participants who experienced a hip fracture acknowledged how gradual the recovery process could be and advised others to measure progress, for example by keeping a diary.

If nothing else, you – on a day-to-day basis you're not going to see progress. But if you keep a diary you'll know that a month ago you were taking three pain pills a day and today you're not (Gladys, aged 69 years).

## Discussion

We know older adults have challenges with recovery after hip fractures, and there are many reasons (or barriers) to explain this experience across the care continuum,<sup>30</sup> but less information is available, from the older adults themselves, and from a strengths-based perspective, on what tangible strategies facilitate the recovery process. In this study we identified three messages of great importance to older adults with hip fractures and their family members/caregivers during the hip fracture recovery process: i) seek support, ii) move more, and iii) preserve perspective. Our findings are highly relevant to health professionals, and can be incorporated into discussions and care plans during the recovery period. The novelty of our findings is that the messages are generated directly from the experience of older adults with hip fractures and can provide a level of peer-support and insight about the road to recovery if integrated into clinical care pathways, and educational resources. Although written educational material will not replace talking with another older adult, having more patient-centered information could enhance knowledge uptake, to facilitate decision-making and recovery.

Participants highlighted the importance of seeking support by asking for help, asking questions, and identifying peer support. These results emphasize the importance of patient centered care:<sup>13</sup> providing patients and their family members with empowering opportunities to express personal preferences, knowledge and understanding, and articulate recovery goals in order to ensure that individual needs are met and the best possible care is delivered. Along with opportunities to ask questions, guidance on which questions and resources to ask for at different points in the recovery process could facilitate more patient-centered care. Importantly, as suggested by our study participants, providing patients with a “recovery map”, such as information and resources that highlight where they should be at the various stages throughout their recovery process, could be beneficial.

Study participants highlighted two main points pertaining to movement: the role of physical activity (“moving more”) and the importance of physiotherapy exercises for the recovery process and, in general, this should begin early in the recovery process.<sup>31</sup> Having achieved early success with these activities may also enhance self-efficacy, reduce the fear to move more, and support continuation of effective balance and strength programs.<sup>32</sup> Collectively these are small steps on the path to recovery of mobility and resumption of previous activities. Importantly, as health professionals have a key role in the recovery after hip fracture, across the care continuum, consistent and relevant educational resources and messaging is crucial.

Participants stated that maintaining, or preserving, perspective was an important element of the recovery process. Young and Resnick also highlight the importance of the patient perspective, and especially a positive attitude and self-determination within the context of hip fracture recovery.<sup>16</sup> Advice to “be positive” was often voiced by our study participants; yet, being positive may not be sustainable for some, or without providing perspective on the stages of recovery, within the context of pre-fracture health status. Recognizing milestones and potential setbacks during the recovery process is valuable information for the patient-centered approach in order to assist patients to “preserve perspective.”

We recognize limitations with our study. Notably, the experiences of older adults with hip fractures are varied and within our sample we could not extensively represent all the diversity that exists. However, we aimed to reflect diverse perspectives and interviewed individuals and family members of varying ages, living situations, and levels of recovery so as to gain a broad understanding of common messages. The variable time periods from hip fracture to study participation reflect in part the challenges of recruiting and retaining individuals to research studies.<sup>33,34</sup> We note that 80% of participants were interviewed within 3 years of their fracture and recognize that a longer time elapsed for some participants, which could have influenced the responses and introduced the possibility of recall bias. Their insights nonetheless contribute to the collective wisdom and patient-experience. We acknowledge that our sample was predominantly women, and further research on the experience of men could benefit our understanding of hip fracture recovery.

## Conclusion

Recovery from hip fracture is a significant and often challenging process for both patients and their families. The advice to seek support, move more, and preserve perspective was emphasized by study participants. This advice could inform

tangible actions and clinical communication tools that adopt a patient-centered approach.

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## Author contributions

Schiller, Franke, Sims-Gould, Sale, and Ashe developed the study concept and design. Schiller and Franke acquired data. All authors contributed to analysis and interpretation of data, and preparation of the final manuscript.

## Disclosure

The authors have no conflicts of interest to disclose.

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