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Elucidating the Information Exchange during Inter-facility Care Transitions: Insights from a Qualitative Study

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Abstract

Objective to explore the perceptions of patients, their caregivers, and health care professionals associated with the exchange of information during transitioning from two acute care hospitals to one rehabilitation hospital.

Design An exploratory qualitative study using semi-structures interviews and observation.

Participants and setting Patient over the age of 65 admitted to an orthopedic unit for a non-elective admission, their caregivers, and health care professionals involved in their care. Participating sites included orthopedic inpatient units from two acute care teaching hospitals and one orthopedic unit at a rehabilitation hospital in a downtown urban setting.

Findings Three distinct themes emerged from participants' narrative of their transitional care experience: 1) having no clue what the care plan is; 2) being told and notified about the plan; and 3) experiencing challenges absorbing information. Participating patients and their caregivers reported not being engaged in an active discussion with health care professionals about their care transitions plan. Several health care professionals described withholding sharing the plan until they themselves knew where the patient was going to and what would be happening next.

Conclusion This study highlights the need for further efforts to ensure effective information exchanges are occurring with patients and their caregivers as they transition from acute care hospital to rehabilitation settings.

Article Summary

Strengths and limitations of this study

- This study explores the understudied area of the perceptions of patients, their caregivers, and health care professionals associated with the exchange of information during transitioning from two acute care hospitals to one rehabilitation hospital
- The study was only conducted with non-elective orthopedic patients and their caregiver at two acute care teaching hospitals and one rehabilitation hospital in an urban setting in Canada. Thus, our findings may not be transferrable to other geographical locations or other patient populations (e.g. medically complex patients without orthopedic injury)
- There is a potential for social desirability bias when conducting interviews with participants

Elucidating the Information Exchange during Inter-facility Care Transitions: Insights from a Qualitative Study

INTRODUCTION

It is well established that care transitions points present potential for threats to safety and quality.[1] These threats can result in harm to patients,[2] an increased risk of readmission,[3] increased length of stay,[4] and economic burden to the health care system and patients and their families.[5] Underpinning these threats often is deficits in communication and inadequacies in exchange of information around discharge home from hospital[1, 6] or transfer to another health care facility.[2, 7, 8] Poor information exchange often includes inaccurate or missing information regarding patients current health status, medication plan, functional and psychological history and unresolved plans for follow-up care post discharge or transfer from a hospital to another facility.[4, 7] Patients and their caregivers (e.g., family) may then be uninformed or misinformed about their illness and medications and not be able to carry out the care transitions plan or manage their own health.[9]

The exchange and transfer of accurate and complete information to patients and their caregivers around what is currently happening and what to expect next is an important component of ensuring quality care transitions.[8, 10, 11] By providing information to patients (and when available their caregivers) they are more informed and have the potential to actively participate in their care[8] which is associated with improved patient satisfaction and clinical outcomes.[12] However, varying degrees of information exchange with patients[13] and their subsequent participation in their care planning[11, 14] have been reported. The information exchange between acute care

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3 hospitals to rehabilitation settings has received less attention in the literature as compared
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5 to those discharged home from the hospital.[7,8,15] Minimal evidence exists around the
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7 nature of the information exchange[15] including the patients' (and when available
8
9 caregivers') desire for information.[8] Insight is needed around the nature of information
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11 exchange with patients as they transition from acute care hospital to rehabilitation
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13 settings, as these patients are potentially more vulnerable and their medical conditions
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15 more active than for patients discharged home.[15] Further this exchange of information
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17 often forms the basis for admission orders in the rehabilitation setting influencing
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19 subsequent transitions in care.[15] In this context, a study was undertaken to explore the
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21 perceptions of patients, their caregivers, and health care professionals associated with the
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23 exchange of information during transitioning from two acute care hospitals to one
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25 rehabilitation hospital.
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31 **METHODS**

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34 This study employed an exploratory qualitative design to gain insight into the
35
36 perceptions and experiences associated with care transitions of non-elective patients 65
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38 years and older, caregivers, and health care professionals being transferred out of the
39
40 acute care hospital to a rehabilitation facility. Non-elective patients did not expect to be
41
42 admitted to hospital and therefore had no planning for transfer to another setting from
43
44 hospital or discharge to home. Ethics approval was obtained at all of the participating
45
46 institutions (two acute care hospitals and one rehabilitation hospital). Funding was
47
48 received by the Ontario Ministry of Health and Long Term Care (Grant Number: 06693).
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51

52 **Setting**

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Participating sites included orthopedic inpatient units from two acute care teaching hospitals and one orthopedic unit at a rehabilitation hospital in a downtown urban setting. Our study targeted patients 65 years and older who had undergone a non-elective admission (e.g. a patient who had fallen or had an accident that had sustained a fracture) their family member (referred to here within as caregiver), and health care professionals (physicians, nurses, nurse practitioners, physiotherapists, occupational therapists, pharmacists and social workers).

Recruitment and Data Collection Process

A purposeful sampling strategy was employed whereby study participants who met the eligibility criteria (see Box 1) were identified and approached face-to-face by a research coordinator (MS).[16] The research coordinator was a Master's prepared nurse with extensive experience in qualitative research. Eligible patients, who were unknown to the research coordinator prior to study commencement, were provided an overview of the study and the research coordinator then obtained consent from those patients willing to participate. Once the patient was enrolled, the research coordinator approached caregivers at the participating sites for involvement in the study. Caregivers were provided an overview of the study and then the research coordinator obtained their consent. Health professionals were recruited from the participating units by the research coordinator. For those who agreed, the research coordinator provided an overview of the study and then obtained consent from willing participants. Patient and caregiver interviews took place at

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3 the rehabilitation facility following the transfer from the acute care hospital. Most
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6 interviews conducted were face-to-face; however, for several caregivers, interviews took
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9 place over the phone for convenience.
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12 Health care professionals were informed of the study by their respective unit
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14 managers. Members of the interprofessional team were selected based on their direct
15
16 involvement in the care transition of the study patient at either the acute care or
17
18 rehabilitation site. Those involved were approached face-to-face by the research
19
20 coordinator who then provided an overview of the study and obtained informed consent
21
22 prior to conducting the interview. Health care professionals consisted of nurses, social
23
24 workers, occupational therapists, physical therapists, pharmacists, physicians, and unit
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26 managers. Health care professionals were interviewed face-to-face either at the acute care
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28 site and the rehabilitation site following the transition of the patient.
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40 **Box 1**

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42 Patient: 65 and older; able to comprehend English and provide consent; and non-elective
43 orthopedic patient being transferred to specific rehabilitation facility
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46 Caregiver: caregiver of non-elective patient being transferred to specific rehabilitation
47 facility who is 65 and older and able to comprehend English and provide consent
48

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50 Health care professional: health care professionals at the acute care hospital or
51 rehabilitation facility and able to comprehend English and provide consent and
52 provided care the patients who were recruited for the study.
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55 Semi-structured interview guides were used with study participants to elicit their
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57 perceptions and experiences associated with the care transitions of non-elective medically
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3 complex patients 65 and older. The interview guides were developed from a realist
4 review and Delphi panel detailed in a separate paper. [17] Pilot testing of the interview
5 guide occurred with the first few participants with additional prompts made to the
6 interview guides. Patients and caregivers were interviewed after they transitioned from
7 the rehabilitation hospital from the acute care and where possible prior to being
8 discharged home from the rehabilitation organization. This occurred in six incidences
9 where patients or their caregiver were interviewed either shortly before or after discharge
10 home. Health care professions were interviewed at one time. All interviews were audio
11 recorded and transcribed verbatim by a professional transcriptionist. Field notes were
12 taken by the research coordinator following the interview and shared with the research
13 team. Duration of interviews averaged between 6 and 60 minutes. The shortest interview
14 at 6 minutes was the result of the participant being called away to attend to patient care.
15 Participants completed a short demographic questionnaire prior to the start of the
16 interview. Data saturation occurred once data findings were noticeably redundant despite
17 new participants.

38 **Data analysis**

39
40 Directed content analysis was used to analyze the transcribed interviews.[18] A
41 line or two to describe directed content analysis. Each transcript was individually
42 reviewed and coded by the principal investigator (PI) and two research staff.
43 Simultaneous and iterative coding occurred with the patient, caregiver and health care
44 professionals. The initial coding schema, derived from the data, was developed once
45 consensus was met between the coders. The codes were combined into categories that
46 were further refined into themes by the PI and two research staff. As a final step to ensure
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3 methodological rigor, the PI reviewed all of the original transcripts with the emergent
4 coding schema to ensure all codes and categories had been captured from the transcripts
5
6 in the final coding schema.[16]
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10 RESULTS

11 Participant characteristics

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15 In total, 15 patients from an orthopedic unit who met the eligibility criteria were
16 identified and 13 patients consented to participate. Two were screened and found to be
17 ineligible with one patient subsequently transferred to a non-rehabilitation unit and the
18 other presented with cognitive deficits. Patient participants were mostly female (n = 9 or
19 69%) with 4 males (31%). The patients had an average age of 82.9 years with a range
20 from 68 to 91. The patients had on average 5.4 morbidities (e.g. Parkinson's disease,
21 chronic obstructive pulmonary disease, hypertension), which ranged from 2 to 16. All
22 patients lived alone with the exception of one patient who lived with a spouse. The
23 patients were prescribed on average 8.5 medications with a range of 5 to 17 medications.
24 Of the 13 patients who were enrolled in the study, nine caregivers (n=9) were recruited
25 and enrolled in the study. Caregiver participants reported an average age of 63.1 years,
26 which ranged from 51 to 89 years. All caregivers were female with seven being adult
27 children, one was a spouse, and one was a sibling. Duration of caregiver role in years was
28 6.25 on average, with a range of 1 to 20 years.
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48 In total, 50 health care professionals participated in an interview with 29 (58%)
49 nurses, 6 (12%) pharmacists, 8 (16%) physical therapists, 3 (6%) social workers, 2 (4%)
50 occupational therapists, 1 (2%) patient care manager, and 1 (2%) physician. Seventy-
51 eight percent were female (n=39), while 22% were male (n=11). Years of experience
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3 varied from less than 1 year reported in three participants (6%), to between 2 and 5 years
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5 in 14 participants (28%), between 6 and 10 years in 6 participants (12%), between 11 and
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7 15 in 12 participants (24%), and 15 (30%) participants reported more than 16 years of
8
9 experience. Most of the HCPs reported working full-time (n=39, 78%) compared to part-
10
11 time (n=11, 12%). The highest degree obtained by participants was university degrees
12
13 (n=24, 48%), followed by graduate degrees (n=17, 34%), and the remaining completed a
14
15 college degree (n=9, 18%). One HCP approached for the study refused to participate
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17 because of concerns related to anonymity.
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22 FINDINGS

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24 The following three themes emerged from the interviews: having no clue what the
25
26 care plan is; being told and notified about the plan; and experiencing challenges
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28 absorbing information.
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31 *Having no clue what the care plan is*

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33 This theme reflects how several patients and their caregivers experienced care
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35 transitions across the acute to rehabilitation hospital spectrum, while not knowing what
36
37 their care plan was. Several participants described not having a clue about their care plan.
38
39 Caregiver and patient experiences ranged from receiving “*tidbits of information*” to “*no*
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41 *information*” and “*leaving without a plan*” around what was going on and where and
42
43 when the patient was being transferred. As a result, some caregivers described not
44
45 knowing what to expect at the rehabilitation hospital. For example, one caregiver
46
47 described being “*plunked*” in the hospital with a package of follow-up appointments
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49 provided (referred to as envelope, paper and list by participants) but this was not
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51 explained and information about the transitions plan was not provided. A few health care
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3 professionals acknowledged that they either did not know if the plan had been
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5 communicated to patients and their caregivers. This theme is illustrated in the following
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7 quotes:
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10 *I just assume that somewhere along the way I was going to get out. Then it was*
11 *one day, you're going tomorrow and I thought, really? Already? And off we*
12 *went. I don't recall anyone saying, when you get there, you can expect this to be*
13 *different or that to be the same or ... it was just, okay, now is the time and off you*
14 *go. (patient hospital site 2)*
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16

17 *I was given a package with her follow-up appointments in it but it wasn't*
18 *explained to me. So I have no clue - How does she get there? Is anything*
19 *happening over the weekend? Is it starting on Monday? What's going to*
20 *happen? No information. We've just been plunked here with no information.*
21 *(caregiver hospital site 1)*
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23

24 *It was to my surprise yesterday, that I received a call from one of her visitors*
25 *telling me that your mom is going to Hospital-X tomorrow and that she needs*
26 *clothes. I think that I should have received a more formal call from somebody*
27 *with the plan. There are questions, little tidbits of information I have received, i.e.*
28 *mom's current drugs that she's taken. So apparently that's being changed...I*
29 *don't know the outcome of anything so I don't know the plan except that she's*
30 *here now at Hospital-X. (caregiver hospital site 2)*
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34 *They have a discharge list, a little envelope that the patients get. I'm not sure that*
35 *they go through all of that with the patient. I think it probably varies. I don't*
36 *know. I'm going to guess that some nurses are really good and go over it in*
37 *detail, and I think others just say, here's your envelope, goodbye. (physician*
38 *rehabilitation hospital)*
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42 Caregivers also described that they would have to wait to connect with health care
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44 professionals to engage in a conversation around the care transitions plan and goals for
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46 their family member who was a patient. In some cases, caregivers questioned whether
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48 there was a plan in place that had not been communicated to them or their family member
49
50 who was the patient. A few health care professionals described withholding sharing the
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52 plan until they themselves knew where the patient was going to and what would be
53
54 happening next. For some participants when they did speak to health care professionals
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3 they described receiving information around the immediate status of their family member
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5 who was a patient but minimal to no information about the follow-up plan. One caregiver
6
7 described that the health care professionals were “*dealing with the stage you are at*” and
8
9 one health care professional described “*being focused on doing the rehab part*”. The
10
11 following narrative examples elucidate this theme.
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15 *No one has spoken to me or to my mother about the goal. No one's talked about a*
16 *deadline or time period, which they tell you in the booklet they will. So I keep*
17 *waiting for someone to call me so we can sit down and talk about this. I still have*
18 *no idea how long my mother will be here. It seems that they deal with the stage*
19 *you're at. Hospital-X was an acute care, just to deal with the pain management,*
20 *to start physiotherapy and this is the next stage in the physiotherapy, more intense*
21 *physiotherapy. In terms of follow up or whether there will be follow up, nothing.*
22 *In terms of being put in communication as to where my mother is going, there's*
23 *been no connection whatsoever. (caregiver hospital site 1)*
24
25

26
27 *I think families and patients have expectations that they want to go to a certain*
28 *rehab facility, but that doesn't always happen. I don't know if that is always*
29 *carried out clearly to the patient and their respective family members. I would say*
30 *I don't tell them consistently ... I would tell them if they asked me and it doesn't*
31 *come up naturally. (occupational therapist hospital site 1)*
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34 ***Being told and notified about the plan***

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36 This theme captures how some patients and their caregivers were informed about
37
38 their plan for care transitions. Experiences of being informed of the care transitions plan
39
40 mainly were passive in nature in that health care professionals told or notified and
41
42 explained the plan to patients and/or their caregivers. For some participants, health care
43
44 professionals explained what was going on and where the patients were going with the
45
46 patients and their caregivers. This often included telling the patients and caregivers
47
48 information about follow-up appointments, expectations about their recovery and therapy
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50 to where they were being transferred to and discharged home, and in some cases
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52 equipment that will be required once discharged home. Patients and caregivers did not
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3 report being engaged in an active discussion with health care professionals about their
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5 care transitions plan. For example, one caregiver and patient described being “well
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7 informed all the time” but not being involved in a discussion with the health care
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9 professionals about their care transitions plan. Often patients and caregivers were
10
11 comfortable with the passive nature of information exchange as they felt that the health
12
13 care team knew what they were doing and would connect with patients and their
14
15 caregivers at their discretion when required. This theme is further illustrated in the
16
17 following quotes:
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22 *Hospital-X did a really, really good job of keeping all of us informed and relaying*
23 *whatever information they had, they would give it. I certainly knew all that was*
24 *going on. I was well aware of the process. (patient hospital site 1)*
25
26

27 *It was more just us expressing our recommendations, and the patient agreeing,*
28 *and then we moved forward with the plan just by submitting it. So I think,*
29 *probably the patient’s role is also minimal once we’ve determined, yes, rehab is*
30 *the plan. So other than consenting and choosing his preferences, I think their*
31 *involvement in transitioning from here to rehab is also probably minimal.*
32 *(physiotherapist hospital site 1)*
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34

35 *Most of the time, the patient comes here, they’re expecting to have their lives*
36 *back, to do whatever they do before this fracture, these things happened. Now that*
37 *you ask it, some of the patients don’t know what the expectation is from after*
38 *surgery and going to a different facility. Because they think that’s like when you*
39 *have hip surgery or something like that, they only stay for 24 hours and then go to*
40 *another facility. But those patients that are first time, seriously they don’t know.*
41 *So that’s why when they come here, we have to explain. (nurse rehabilitation*
42 *hospital).*
43
44

45 *It was all in the folder that she got, and I was reading through it before we even*
46 *left the hospital. I knew what to expect when we left the hospital. I knew*
47 *everything ahead of time so I was up on all of it because the appointments and*
48 *everything that were scheduled for her were all in the envelope. Everything was*
49 *there, and it was all well put together. (caregiver hospital site 1, discharge*
50 *interview)*
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54 ***Experiencing challenges absorbing the information***

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3 This third theme elucidates a group of patients that were experiencing challenges
4 absorbing the information that was provided to them about their care transitions plan.
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6 Challenges absorbing the information were often associated with the patients being
7
8 “quite medicated” and “drugged up” or experiencing symptoms (e.g. pain and
9
10 constipation) that interfered with their ability to understand the information. The fast pace
11
12 of recovering from a non-elective injury and “getting bombarded” with a number of
13
14 health care professionals was also reported by patients and their caregivers. In turn, this
15
16 pace and number of interactions with health care professional was perceived as
17
18 contributing to patients not being able to remember and absorb information about what
19
20 was happening and their care transitions plan. A The following excerpts are examples of
21
22 this theme:
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30 *I have to say that, while I was at Hospital-X, I was quite heavily medicated*
31 *because of just having had the hip replacement done. I wouldn't have had a clue*
32 *what was happening about half the time, not because people weren't telling me*
33 *but just because I wouldn't have been able to keep up with them. (patient hospital*
34 *site 2) ... As mom says, things were coming like a train down a track. Everything*
35 *was moving at high speed. There is important information that is coming to you*
36 *all of the time and it's coming at you fast and furious. (caregiver hospital site 2)*
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39
40 *I think when our nurse practitioner and case manager speaks to family or a*
41 *patient about the next step in their plan. I'm sure they are being conveyed, but*
42 *sometimes, when everything is happening so quickly, a patient might have*
43 *forgotten what is going on or the family might be a little bit confused.*
44 *(occupational therapist hospital site 1)*
45

46
47 *It's a little bit hard in the first day because they either travelled, they're tired,*
48 *they're in pain, so they're not quite there and they get bombarded with everyone*
49 *talking to them on the first day. (pharmacist rehabilitation hospital)*
50

51
52 *But Mom, I don't think was in any position to absorb the amount of information*
53 *and the decision making. They can't just flit in and out of her bedroom with tons*
54 *of information and expect her to retain it. (caregiver hospital site 2)*
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56 DISCUSSION

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3 Our findings elucidate the nature of exchange of information amongst patients
4 and their caregivers with health care professionals during transitions from acute care
5 hospital to rehabilitation settings. The three emergent themes findings add to the growing
6 body of literature regarding information exchange during care transitions from acute care
7 hospital to rehabilitation settings.
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15 In our study, patients, caregivers, and to a lesser extent health care professionals
16 described the challenges patients experienced in absorbing information about their plan
17 for transitions to the rehabilitation setting. Patients, caregivers and health care
18 professionals attributed these challenges to high levels of medication and being
19 approached by too many people in a short period of time. Such things impacted patients
20 ability to understand or remember what information had been shared with them. This
21 frustration associated with complexity and timing of discharge information has also been
22 highlighted in research focused on discharge home from hospital.[9] Similar to Coleman
23 et al's (2013) findings,[2] the volume of information and number of interactions with
24 health care professions conveyed in a short period of time presented significant
25 challenges to patients being able to absorb and retain the information around their care
26 transitions plan.
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43 The experience of not knowing the plan and confusion about next steps (having
44 no clue) was consistent with what has been reported in other studies.[7, 8, 12, 19, 20, 21].
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46 Our finding of patients and their caregivers having tidbits of or no information is in line
47 with other studies, For example, one study reported that as patients transferred from the
48 hospital to a rehabilitation setting they received very little information about what
49 happened to them and when they did it was typically unstructured or insufficiently
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3 explained.[8] Likewise, another study reported that patients and caregivers did not
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5 receive the needed information about the reasons for their transfers to hospitals, medical
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7 diagnoses and planned treatments, resulting in lack of awareness of both their change in
8
9 health status and transition plan.[19] In our study, lack of information resulted in
10
11 confusion for patients and caregivers and no guidance on how to navigate post transfer
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13 from the hospital. In another study, more than one third of patients could not clearly
14
15 describe their diagnosis and less than half could recall follow up appointments that had
16
17 been made for them.[21]
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22 In our study, several patients and caregivers were waiting to find out information
23
24 from the healthcare team. The desire to connect with health care professionals to get
25
26 more information about their care transitions plan was reported in a study involving
27
28 elderly patients and their caregivers.[19] However, similar to our study, others have
29
30 reported not talking to anyone about their post-discharge care.[12] In our study, when
31
32 information exchange did happen between patients and their caregivers with health care
33
34 professionals, the exchange was often passive (e.g. patients and caregivers were told,
35
36 informed, notified) and focused on the immediate status or stage the patient was at
37
38 compared to the overall plan for transitions from the hospital to the rehabilitation hospital
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40 to eventually being discharged home or to a long-term care facility. The finding that
41
42 some patients and caregivers were being told about their care transitions plan (compared
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44 to being actively engaged) is consistent with other studies that described patients and
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46 caregivers as satisfied with the nature of information exchange [11] and not viewing it
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48 necessary to obtain more information than what was provided.[8]
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3 Our study findings elucidate the need for further efforts to ensure effective
4 information exchanges are occurring with patients and their caregivers as they transition
5 from acute care hospital to rehabilitation settings. Providing information to patients and
6 their caregivers in a timely fashion and with consistent health care professionals is
7 essential to ensure that they understand the information provided to them. Patients and
8 caregivers should be kept thoroughly informed throughout the various care transitions
9 points.[20] Health care professionals need to ascertain what information the patient and
10 caregiver want to know and when and how and when to best to convey this relevant
11 information to ensure adequate understanding of and carrying out of their care transitions
12 plan.[7] Furthermore, health care professionals need to determine whether patients and
13 caregivers prefer to be passively or actively involved in their care transitions
14 planning.[14]

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32 Recently in Ontario, the implementation of a Patient-Oriented Discharge
33 Summary (PODS) tool with a variety of patient populations being discharged from
34 hospital to home has shown that the majority of patients who receive PODS have an
35 improved understanding of their discharge instructions.[22,23] This tool could be adapted
36 to be used to ensure accurate, timely and relevant information is exchanged during inter-
37 facility transitions of care. Further, promising signs are being observed with teach back
38 methods whereby patients are provided information about the care transitions plan
39 including where the patient is going to by health care professionals and are then asked to
40 share what information has been provided to them.[1, 21] This strategy allows for the
41 health care professional to verify the patients' (and when present the caregiver(s))
42 understanding of the care transitions plan and correct any misinterpretations.[19] Finally,
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3 the Registered Nurses Association of Ontario's Care Transitions Best Practice Guidelines
4 provides a series of evidence and expert informed recommendations to ensure effective
5 information exchange between patients, their caregivers and health care professionals
6 occurs during care transitions that can be used as a blueprint for action.[24, 25]
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12 Our study findings need to be viewed with the following potential limitations.
13 First, the study was only conducted with non-elective orthopedic patients and their
14 caregiver at two acute care teaching hospitals and one rehabilitation hospital in an urban
15 setting in Canada. Thus, our findings may not be transferrable to other geographical
16 locations or other patient populations (e.g. medically complex patients without orthopedic
17 injury). Second, there is a potential for social desirability bias when conducting
18 interviews with participants. To mitigate this bias, the interview guide was carefully
19 constructed to elicit patients', their caregivers', and professionals' perceptions and
20 experiences associated with the care transitions from acute care hospital to a
21 rehabilitation hospital.
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36 CONCLUSION

37 Our study provides insight around the nature of information exchange with
38 patients as they transition from acute care hospital to rehabilitation settings. Specifically,
39 our study revealed that many patients and caregivers have little to no information about
40 their plan and are waiting to get this information so they know what to expect. When
41 patients and caregivers received information it was a passive exchange where they were
42 told or notified of what was going on and what was next representing a more paternalistic
43 as opposed to collaborative exchange. For some patients they had challenges absorbing
44 the information provided due to being medicated, experiencing other symptoms, or being
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3 approached by too many health care professionals. Future efforts are required to ensure
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5 effective information exchanges are occurring with patients and their caregivers as they
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7 transition from acute care to rehabilitation to ensure that information is not only shared
8
9 but discussed with patients and caregivers. Bi-directional exchange between
10
11 professionals, patients and where possible, caregivers will provide opportunities for all
12
13 parties to provide input into the plan, confirm understanding and expectations. Further,
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15 choosing an appropriate time to share the information, where possible, when the patient is
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17 most stable, will ensure a greater potential of information retention.
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3 **Contributorship statement:** LJ conceived and designed the study. MS, ML, KK and SE
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5 planned and completed the analysis. LJ wrote the manuscript with revisions being made
6
7
8 by MS, ML, KK, SE, JM and CMB. All authors read and approved of the final
9
10 manuscript.
11

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13

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16
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Patient Characteristics

| | |
|---------------------------|-------|
| Total | 13 |
| Sex | |
| Female | 9 |
| Male | 4 |
| AGE | |
| Average (Y) | 82.9 |
| Range | 91-68 |
| CO-MORBIDITIES | |
| Average | 5.4 |
| Range | 2-16 |
| LIVING ARRANGEMENT | |
| Lives alone | 12 |
| Lives with spouse/partner | 1 |
| MEDICATIONS | |
| Average | 8.5 |
| Range | 17-5 |

Caregiver Characteristics

| | |
|-------------------------------------|-------|
| Total | 9 |
| SEX | |
| Female | 9 |
| AGE | |
| Average | 63.1 |
| Range | 51-89 |
| RELATIONSHIP TO PATIENT | |
| Child | 7 |
| Spouse | 1 |
| Sibling | 1 |
| DURATION OF CAREGIVER ROLE IN YEARS | |
| Average | 6.25 |
| Range | 1-20 |

Healthcare Professional Characteristics

| | |
|------------------------------|---------|
| Total | 50 |
| Sex | |
| F (%) | 39 (78) |
| M | 11 (22) |
| PROFESSIONAL BACKGROUND N, % | |
| Nursing | 29 (58) |
| Pharmacy | 6 (12) |
| Physical Therapy | 8 (16) |
| Social Work | 3 (6) |
| Occupational therapy | 2 (4) |
| Medicine | 1 (2) |
| Management | 1 (2) |
| YEARS OF EXPERIENCE | |
| <1 Year (%) | 3 (6) |
| 2-5 years (%) | 14 (28) |
| 6-10 years (%) | 6 (12) |
| 11-15 years (%) | 12 (24) |
| >16 years (%) | 15 (30) |
| PLACE OF EMPLOYMENT N, % | |
| Acute Care | 26 (52) |
| Rehabilitation | 24 (48) |
| EMPLOYMENT STATUS N, % | |
| Full-time | 39 (78) |
| Part-time | 11 (22) |
| EDUCATIONAL BACKGROUND N, % | |
| College | 9 (18) |
| University | 24 (48) |
| Graduate school | 17 (34) |

COREQ (COnsolidated criteria for REporting Qualitative research) Checklist

A checklist of items that should be included in reports of qualitative research. You must report the page number in your manuscript where you consider each of the items listed in this checklist. If you have not included this information, either revise your manuscript accordingly before submitting or note N/A.

| Topic | Item No. | Guide Questions/Description | Reported on Page No. |
|--|----------|--|----------------------|
| Domain 1: Research team and reflexivity | | | |
| <i>Personal characteristics</i> | | | |
| Interviewer/facilitator | 1 | Which author/s conducted the interview or focus group? | |
| Credentials | 2 | What were the researcher's credentials? E.g. PhD, MD | |
| Occupation | 3 | What was their occupation at the time of the study? | |
| Gender | 4 | Was the researcher male or female? | |
| Experience and training | 5 | What experience or training did the researcher have? | |
| <i>Relationship with participants</i> | | | |
| Relationship established | 6 | Was a relationship established prior to study commencement? | |
| Participant knowledge of the interviewer | 7 | What did the participants know about the researcher? e.g. personal goals, reasons for doing the research | |
| Interviewer characteristics | 8 | What characteristics were reported about the interviewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic | |
| Domain 2: Study design | | | |
| <i>Theoretical framework</i> | | | |
| Methodological orientation and Theory | 9 | What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis | |
| <i>Participant selection</i> | | | |
| Sampling | 10 | How were participants selected? e.g. purposive, convenience, consecutive, snowball | |
| Method of approach | 11 | How were participants approached? e.g. face-to-face, telephone, mail, email | |
| Sample size | 12 | How many participants were in the study? | |
| Non-participation | 13 | How many people refused to participate or dropped out? Reasons? | |
| <i>Setting</i> | | | |
| Setting of data collection | 14 | Where was the data collected? e.g. home, clinic, workplace | |
| Presence of non-participants | 15 | Was anyone else present besides the participants and researchers? | |
| Description of sample | 16 | What are the important characteristics of the sample? e.g. demographic data, date | |
| <i>Data collection</i> | | | |
| Interview guide | 17 | Were questions, prompts, guides provided by the authors? Was it pilot tested? | |
| Repeat interviews | 18 | Were repeat interviews carried out? If yes, how many? | |
| Audio/visual recording | 19 | Did the research use audio or visual recording to collect the data? | |
| Field notes | 20 | Were field notes made during and/or after the interview or focus group? | |
| Duration | 21 | What was the duration of the interviews or focus group? | |
| Data saturation | 22 | Was data saturation discussed? | |
| Transcripts returned | 23 | Were transcripts returned to participants for comment and/or | |

| Topic | Item No. | Guide Questions/Description | Reported on Page No. |
|--|----------|--|----------------------|
| | | correction? | |
| Domain 3: analysis and findings | | | |
| <i>Data analysis</i> | | | |
| Number of data coders | 24 | How many data coders coded the data? | |
| Description of the coding tree | 25 | Did authors provide a description of the coding tree? | |
| Derivation of themes | 26 | Were themes identified in advance or derived from the data? | |
| Software | 27 | What software, if applicable, was used to manage the data? | |
| Participant checking | 28 | Did participants provide feedback on the findings? | |
| <i>Reporting</i> | | | |
| Quotations presented | 29 | Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number | |
| Data and findings consistent | 30 | Was there consistency between the data presented and the findings? | |
| Clarity of major themes | 31 | Were major themes clearly presented in the findings? | |
| Clarity of minor themes | 32 | Is there a description of diverse cases or discussion of minor themes? | |

Developed from: Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 2007. Volume 19, Number 6: pp. 349 – 357

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Elucidating the Information Exchange during Inter-facility Care Transitions: Insights from a Qualitative Study

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Insights from a Qualitative Study

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Abstract

Objective To explore the perceptions of patients, their caregivers, and health care professionals associated with the exchange of information during transitioning from two acute care hospitals to one rehabilitation hospital.

Design An exploratory qualitative study using semi-structured interviews and observation.

Participants and setting Patients over the age of 65 admitted to an orthopedic unit for a non-elective admission, their caregivers, and health care professionals involved in their care. Participating sites included orthopedic inpatient units from two acute care teaching hospitals and one orthopedic unit at a rehabilitation hospital in an urban setting.

Findings Three distinct themes emerged from participants' narrative of their transitional care experience: 1) having no clue what the care plan is; 2) being told and notified about the plan; and 3) experiencing challenges absorbing information. Participating patients and their caregivers reported not being engaged in an active discussion with health care professionals about their care transition plan. Several health care professionals described withholding information within the plan until they themselves were clear about the transition outcomes.

Conclusion This study highlights the need to increase efforts to ensure effective information exchanges occur during transition from acute care hospital to rehabilitation settings.

Article Summary

Strengths and limitations of this study

- This study explores the understudied area of the perceptions of patients, their caregivers, and health care professionals associated with the exchange of information during transitioning from two acute care hospitals to one rehabilitation hospital
- The study was only conducted with non-elective orthopedic patients and their caregiver at two acute care teaching hospitals and one rehabilitation hospital in an urban setting in Canada. Thus, our findings may not be transferrable to other geographical locations or other patient populations (e.g. medically complex patients without orthopedic injury)
- There is a potential for social desirability bias when conducting interviews with participants

Elucidating the Information Exchange during Inter-facility Care Transitions:

Insights from a Qualitative Study

INTRODUCTION

It is well established that care transitions points present potential for threats to safety and quality.[1] These threats can result in harm to patients,[2] an increased risk of readmission,[3] increased length of stay,[4] and economic burden to the health care system and patients and their families.[5] Deficits in communication and the inadequate exchange of information around discharge home from hospital [1, 6] or transfer to another health care facility [2, 7, 8] underpin such threats. Poor information exchange often includes inaccurate or missing information regarding patients current health status, medication plan, functional and psychological history and unresolved plans for follow-up care post discharge or transfer from a hospital to another facility.[4, 7] Patients and their caregivers (e.g., family) may then be uninformed or misinformed about their illness and medications and not be able to carry out the care transitions plan or manage their own health.[9]

The exchange and transfer of accurate and complete information to patients and their caregivers around what is currently happening and what to expect next is an important component of ensuring quality care transitions.[8, 10, 11] By providing information to patients (and when available their caregivers) they are more informed and have the potential to actively participate in their care [8] which is associated with improved patient satisfaction and clinical outcomes.[12] However, varying degrees of information exchange with patients [13] and their subsequent participation in their care planning [11, 14] have been reported. The information exchange between acute care hospitals to rehabilitation settings has received less attention in the literature as compared

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3 to those discharged home from the hospital.[7,8,15] Minimal evidence in the literature
4 exists around the nature of the information exchange [15] including the patients' (and
5 when available caregivers') desire for information.[8] Insight is needed around the nature
6 of information exchange with patients as they transition from acute care hospitals to
7 rehabilitation settings, as these patients are potentially more vulnerable and their medical
8 conditions more active than for patients discharged home.[15] Further this exchange of
9 information often forms the basis for admission orders in the rehabilitation setting
10 influencing subsequent transitions in care.[15] In this context, a study was undertaken to
11 explore the perceptions of patients, their caregivers, and health care professionals
12 associated with the exchange of information during transitioning from two acute care
13 hospitals to one rehabilitation hospital.
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29 **METHODS**

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31 This study employed an exploratory qualitative design to gain insight into the
32 perceptions and experiences associated with care transitions of non-elective patients 65
33 years and older, caregivers, and health care professionals being transferred out of the
34 acute care hospital to a rehabilitation facility. Non-elective patients did not expect to be
35 admitted to hospital and therefore had no pre hospital planning for transfer to another
36 setting. Funding was received by the Ontario Ministry of Health and Long Term Care
37 (Grant Number: 06693).
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48 **Setting**

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50 Participating sites included orthopedic inpatient units from two acute care
51 teaching hospitals and one orthopedic unit at a rehabilitation hospital in an urban setting.
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53 Our study targeted patients 65 years and older who had undergone a non-elective
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3 admission (e.g. a patient who had fallen or had an accident that had sustained a fracture)
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5 their family member (referred to here within as caregiver), and health care professionals
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7 (physicians, nurses, nurse practitioners, physiotherapists, occupational therapists,
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9 pharmacists and social workers).
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12 **Recruitment and Data Collection Process**

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15 A purposeful sampling strategy was employed whereby study participants who
16
17 met the eligibility criteria (see Box 1) were identified and approached face-to-face by a
18
19 research coordinator (MS).[16] The research coordinator was a Master's prepared nurse
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21 with extensive experience in qualitative research. Eligible patients, who were unknown to
22
23 the research coordinator prior to study commencement, were provided an overview of the
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25 study and the research coordinator then obtained consent from those patients willing to
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27 participate. Once the patient was enrolled, the research coordinator approached caregivers
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29 at the participating sites for involvement in the study. Caregivers were provided an
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31 overview of the study and then the research coordinator obtained their consent. Patient
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33 and caregiver interviews took place at the rehabilitation facility following the transfer
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35 from the acute care hospital. Most interviews were conducted were face-to-face;
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37 however, for three caregivers a total of four interviews (one caregiver was interviewed
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39 twice) took place over the phone for convenience.
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54 Health care professionals were informed of the study by their respective unit
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56 managers. Members of the interprofessional team were selected based on their direct
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3 involvement in the care transition of the study patient at either the acute care or
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6 rehabilitation site. Those involved were approached face-to-face by the research
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9 coordinator who then provided an overview of the study and obtained informed consent
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12 prior to conducting the interview. Health care professionals consisted of nurses, social
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15 workers, occupational therapists, physical therapists, pharmacists, physicians, and unit
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18 managers. Health care professionals were interviewed face-to-face either at the acute care
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21 site and the rehabilitation site following the transition of the patient.
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25 Box 1

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27 Patient: 65 and older; able to comprehend English and provide consent; and non-elective
28 orthopedic patient being transferred to specific rehabilitation facility
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31 Caregiver: caregiver of non-elective patient being transferred to specific rehabilitation
32 facility who is 65 and older and able to comprehend English and provide consent
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35 Health care professional: health care professionals at the acute care hospital or
36 rehabilitation facility and able to comprehend English and provide consent and
37 provided care the patients who were recruited for the study.
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40 Semi-structured interview guides were used with study participants to elicit their
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42 perceptions and experiences associated with the care transitions of non-elective medically
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44 complex patients 65 and older. The interview guides were developed from a realist
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46 review and Delphi panel detailed in a separate paper [17] and are included as
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48 Supplementary Files. Pilot testing of the interview guide occurred with the first few
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50 participants with additional prompts made to the interview guides. Patients and caregivers
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52 were interviewed after they transitioned from the rehabilitation hospital from the acute
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54 care and where possible prior to being discharged home from the rehabilitation
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3 organization. This occurred in six incidences where patients or their caregiver were
4 interviewed either shortly before or after discharge home. Health care professions
5 participated in one interview. All interviews were audio recorded and transcribed
6 verbatim by a professional transcriptionist. Field notes were taken by the research
7 coordinator following the interview and shared with the research team. Duration of
8 interviews averaged between 6 and 60 minutes. The shortest interview at 6 minutes was
9 the result of the participant being called away to attend to patient care. Participants
10 completed a short demographic questionnaire prior to the start of the interview. Data
11 saturation occurred once data findings were noticeably redundant despite new
12 participants.
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26 **Data analysis**

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29 Directed content analysis was used to analyze the transcribed interviews.[18]
30 Each transcript was individually reviewed and coded by the principal investigator (PI)
31 and two research staff. Simultaneous and iterative coding occurred with the patient,
32 caregiver and health care professionals. The initial coding schema, derived from the data,
33 was developed once consensus was met between the coders. The codes were combined
34 into categories that were further refined into themes by the PI and two research staff. As a
35 final step to ensure methodological rigor, the PI reviewed all of the original transcripts
36 with the emergent coding schema to ensure all codes and categories had been captured
37 from the transcripts in the final coding schema.[16]
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50 **RESULTS**

51 **Participant characteristics**

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In total, 15 patients from an orthopedic unit who met the eligibility criteria were identified and 13 patients consented to participate. Two were screened and found to be ineligible with one patient subsequently transferred to a non-rehabilitation unit and the other presented with a cognitive deficit. Cognitive deficit was determined based on recent cognitive testing as reported in the patient's chart. Patient participants were mostly female (n = 9) with 4 males. The patients had an average age of 82.9 years with a range from 68 to 91. Of the 13 patients who were enrolled in the study, nine caregivers were recruited and enrolled in the study. Caregiver participants reported an average age of 63.1 years, which ranged from 51 to 89 years. In total, 50 health care professionals participated in an interview with 29 nurses, 6 pharmacists, 8 physical therapists, 3 social workers, 2 occupational therapists, 1 patient care manager, and 1 physician. There were 39 female and 11 male study participants in this cohort. One HCP approached for the study refused to participate because of concerns related to anonymity. Table 1 provides more details on the study participant characteristics.

Table 1 Study Participant Characteristics

| Characteristic | Description |
|----------------------------|--|
| Patients | |
| Morbidities | Patients had on average 5.4 morbidities (e.g. Parkinson's disease, chronic obstructive pulmonary disease, hypertension), which ranged from 2 to 16 |
| Living arrangements | All patients lived alone with the exception of one patient who lived with a spouse |
| Medications | The patients were prescribed on average 8.5 medications with a range of 5 to 17 medications |
| Caregivers | |
| Sex | All caregivers were female |
| Relationship to patient | Seven were adult children, one was a spouse and one was a sibling |
| Duration of caregiver role | 6.25 on average with a range of 1 to 20 years |
| Health care professionals | |

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|---------------------|--------------------|------|
| Years of experience | less than 1 year | n=3 |
| | 2 - 5 years | n=14 |
| | 6 - 10 years | n= 6 |
| | 11 - 15 years | n=12 |
| | more than 16 years | n=15 |
| Job status | Full-time (n=39) | |
| | Part-time (n=11) | |
| Level of education | Baccalaureate | n=24 |
| | Graduate | n=17 |
| | College | n=9 |

FINDINGS

The following three themes emerged from the interviews: having no clue what the care plan is; being told and notified about the plan; and experiencing challenges absorbing information.

Having “no clue” what the care plan is

This theme reflects how several patients and their caregivers were unaware of the details of their transition plan from the acute care to rehabilitation hospital setting.

Several participants described having “no clue” about their care plan. Caregiver and patient experiences ranged from receiving “*tidbits of information*” to “*no information*” and “*leaving without a plan*” when the patient was being transferred. As a result, some caregivers described not knowing what to expect at the rehabilitation hospital. For example, one caregiver described being “*plunked*” in the hospital with a package of papers in an envelope that contained information on follow-up appointments that were not explained to them. Health care professionals acknowledged that they often did not know if the transition plan had been communicated to patients and their caregivers. This theme is illustrated in the following quotes:

I just assume that somewhere along the way I was going to get out. Then it was one day, you’re going tomorrow and I thought, really? Already? And off we

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went. I don't recall anyone saying, when you get there, you can expect this to be different or that to be the same or ... it was just, okay, now is the time and off you go. (patient hospital site 2)

I was given a package with her follow-up appointments in it but it wasn't explained to me. So I have no clue - How does she get there? Is anything happening over the weekend? Is it starting on Monday? What's going to happen? No information. We've just been plunked here with no information. (caregiver hospital site 1)

It was to my surprise yesterday, that I received a call from one of her visitors telling me that your mom is going to Hospital-X tomorrow and that she needs clothes. I think that I should have received a more formal call from somebody with the plan. There are questions, little tidbits of information I have received, i.e. mom's current drugs that she's taken. So apparently that's being changed...I don't know the outcome of anything so I don't know the plan except that she's here now at Hospital-X. (caregiver hospital site 2)

They have a discharge list, a little envelope that the patients get. I'm not sure that they go through all of that with the patient. I think it probably varies. I don't know. I'm going to guess that some nurses are really good and go over it in detail, and I think others just say, here's your envelope, goodbye. (physician rehabilitation hospital)

Caregivers also described that they would have to wait to connect with health care professionals to engage in a conversation around the care transitions plan and goals for their family member who was a patient. In some cases, caregivers questioned whether there was a plan in place that had not been communicated to them or their family member. Health care professionals described withholding details of the plan until they themselves knew where the patient was going to and what would be happening next. For some participants when they did speak to health care professionals they described receiving information around the immediate status of their family member but minimal to no information about the follow-up plan. One caregiver described that the health care professionals were “*dealing with the stage you are at*” and one health care professional

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2
3 described “*being focused on doing the rehab part*”. The following narrative examples
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5
6 elucidate this theme.

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8 *No one has spoken to me or to my mother about the goal. No one’s talked about a*
9 *deadline or time period, which they tell you in the booklet they will. So I keep*
10 *waiting for someone to call me so we can sit down and talk about this. I still have*
11 *no idea how long my mother will be here. It seems that they deal with the stage*
12 *you’re at. Hospital-X was an acute care, just to deal with the pain management,*
13 *to start physiotherapy and this is the next stage in the physiotherapy, more intense*
14 *physiotherapy. In terms of follow up or whether there will be follow up, nothing.*
15 *In terms of being put in communication as to where my mother is going, there’s*
16 *been no connection whatsoever. (caregiver hospital site 1)*
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20 *I think families and patients have expectations that they want to go to a certain*
21 *rehab facility, but that doesn’t always happen. I don’t know if that is always*
22 *carried out clearly to the patient and their respective family members. I would say*
23 *I don’t tell them consistently ... I would tell them if they asked me and it doesn’t*
24 *come up naturally. (occupational therapist hospital site 1)*
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27 ***Being told and notified about the plan***

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29 This theme captures how some patients and their caregivers were informed about
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31 their plan for care transitions. Experiences of being informed of the care transitions plan
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33 mainly were one-direction in nature in that health care professionals told and explained
34
35 the plan to patients and/or their caregivers, but did not engage in an interactive dialogue.
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37 For some participants, health care professionals explained what was going on and where
38
39 the patients were going with the patients and their caregivers. This often included telling
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41 the patients and caregivers information about follow-up appointments, expectations about
42
43 their recovery and therapy to where they were being transferred to and discharged home,
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45 and in some cases equipment that will be required once discharged home. Patients and
46
47 caregivers did not report being engaged in an active discussion with health care
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49 professionals about their care transitions plan. For example, one caregiver and patient
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51 described being “*well informed all the time*” but not being involved in a discussion with
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3 the health care professionals about their care transitions plan. Often patients and
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5 caregivers were comfortable with the passive nature of information exchange as they felt
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7 that the health care team knew what they were doing and would connect with patients and
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9 their caregivers at their discretion when required. This theme is further illustrated in the
10
11 following quotes:
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15 *Hospital-X did a really, really good job of keeping all of us informed and relaying*
16 *whatever information they had, they would give it. I certainly knew all that was*
17 *going on. I was well aware of the process. (patient hospital site 1)*
18

19
20 *It was more just us expressing our recommendations, and the patient agreeing,*
21 *and then we moved forward with the plan just by submitting it. So I think,*
22 *probably the patient's role is also minimal once we've determined, yes, rehab is*
23 *the plan. So other than consenting and choosing his preferences, I think their*
24 *involvement in transitioning from here to rehab is also probably minimal.*
25 *(physiotherapist hospital site 1)*
26

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28 *Most of the time, the patient comes here, they're expecting to have their lives*
29 *back, to do whatever they do before this fracture, these things happened. Now that*
30 *you ask it, some of the patients don't know what the expectation is from after*
31 *surgery and going to a different facility. Because they think that's like when you*
32 *have hip surgery or something like that, they only stay for 24 hours and then go to*
33 *another facility. But those patients that are first time, seriously they don't know.*
34 *So that's why when they come here, we have to explain. (nurse rehabilitation*
35 *hospital).*
36

37
38 *It was all in the folder that she got, and I was reading through it before we even*
39 *left the hospital. I knew what to expect when we left the hospital. I knew*
40 *everything ahead of time so I was up on all of it because the appointments and*
41 *everything that were scheduled for her were all in the envelope. Everything was*
42 *there, and it was all well put together. (caregiver hospital site 1, discharge*
43 *interview)*
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46 47 ***Experiencing challenges absorbing the information***

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49 This third theme elucidates that some patients experienced challenges when
50
51 attempting to absorb the information that was provided to them about their care
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53 transitions plan. Challenges in absorbing the information were often associated with the
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55 patients being “quite medicated” and “drugged up” or experiencing symptoms (e.g. pain
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3 and constipation) that compromised their ability to understand the information. The fast
4
5 pace of recovering from a non-elective injury and “getting bombarded” with a number of
6
7 health care professionals was also reported by patients and their caregivers. In turn, this
8
9 pace and number of interactions with health care professionals was perceived as
10
11 contributing to patients not being able to remember and absorb information about what
12
13 was happening and their care transitions plan. A The following excerpts are examples of
14
15 this theme:
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20 *I have to say that, while I was at Hospital-X, I was quite heavily medicated*
21 *because of just having had the hip replacement done. I wouldn't have had a clue*
22 *what was happening about half the time, not because people weren't telling me*
23 *but just because I wouldn't have been able to keep up with them. (patient hospital*
24 *site 2) ... As mom says, things were coming like a train down a track. Everything*
25 *was moving at high speed. There is important information that is coming to you*
26 *all of the time and it's coming at you fast and furious. (caregiver hospital site 2)*
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29 *I think when our nurse practitioner and case manager speaks to family or a*
30 *patient about the next step in their plan. I'm sure they are being conveyed, but*
31 *sometimes, when everything is happening so quickly, a patient might have*
32 *forgotten what is going on or the family might be a little bit confused.*
33 *(occupational therapist hospital site 1)*
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36 *It's a little bit hard in the first day because they either travelled, they're tired,*
37 *they're in pain, so they're not quite there and they get bombarded with everyone*
38 *talking to them on the first day. (pharmacist rehabilitation hospital)*
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41 *But Mom, I don't think was in any position to absorb the amount of information*
42 *and the decision making. They can't just flit in and out of her bedroom with tons*
43 *of information and expect her to retain it. (caregiver hospital site 2)*
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46 **DISCUSSION**

47

48 Our findings elucidate the nature of the exchange of information amongst patients
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50 and their caregivers with health care professionals during transitions from acute care
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52 hospital to rehabilitation settings. The three emergent themes findings add to the growing
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3 body of literature regarding information exchange during care transitions from acute care
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5 hospital to rehabilitation settings.
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8 The experience of not knowing the plan and confusion about next steps (having
9
10 “no clue”) identified in our study was consistent with what has been reported in other
11
12 studies.[7, 8, 12, 19-21] Our finding of patients and their caregivers having tidbits of or
13
14 no information is in line with other studies. For example, one study reported that as
15
16 patients transferred from the hospital to a rehabilitation setting they received very little
17
18 information about what happened to them and when they did it was typically unstructured
19
20 or insufficiently explained.[8] Likewise, another study reported that patients and
21
22 caregivers did not receive the required information about the reasons for their transfers to
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24 hospitals, medical diagnoses and planned treatments, resulting in lack of awareness of
25
26 both their change in health status and transition plan.[19] In our study, the lack of
27
28 information resulted in confusion for patients and caregivers with little guidance on how
29
30 to navigate post transfer from the hospital. In another study, more than one third of
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32 patients could not clearly describe their diagnosis and less than half could recall follow
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34 up appointments that had been made for them.[21]
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41 Our study finding around patients and caregivers waiting to connect with health
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43 care professionals to find out information on the care transition plan has been reported
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45 elsewhere.[19] Similar to our study, others have reported not talking to anyone about
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47 their post-discharge care.[12] In our study, when an information exchange did occur
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49 between patients and their caregivers with health care professionals, the exchange was
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51 often uni-directional (e.g. patients and caregivers were told, informed, notified). Further,
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53 the exchange focused on the immediate status of the patient compared to the overall plan
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3 for transitions from the hospital to the rehabilitation hospital to eventually being
4 discharged home or to a long-term care facility. Interesting, other studies have described
5 patients and caregivers as satisfied with the nature of a uni-directional information
6 exchange [11] and not viewing it necessary to obtain more information than what was
7 provided.[8]
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18 Our study finding around the challenges that patients experienced in absorbing
19 information about their plan for transitions to the rehabilitation setting has also been
20 highlighted in research focused on discharge home from hospital.[9] Similar to Coleman
21 et al's findings,[2] the volume of information and number of interactions with health care
22 professions conveyed in a short period of time presented significant challenges to patients
23 being able to absorb and retain the information around their care transitions plan.
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34 Collectively, our study findings elucidate the need for a multi-component
35 approach to ensure effective information exchanges are occurring with patients and their
36 caregivers as they transition from acute care hospital to rehabilitation settings. Providing
37 information to patients and their caregivers in a timely fashion and with consistent health
38 care professionals is essential to ensure that they understand the information provided to
39 them. Patients and caregivers should be kept thoroughly informed throughout the various
40 care transitions points.[20] Health care professionals need to ascertain what information
41 the patient and caregiver want to know and when and how and when to best to convey
42 this relevant information to ensure adequate understanding of and carrying out of their
43 care transitions plan.[7] Furthermore, health care professionals need to determine whether
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3 patients and caregivers prefer to be passively or actively involved in their care transitions
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6 planning.[14]
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8 Recently in Ontario, the implementation of a Patient-Oriented Discharge
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10 Summary (PODS) tool with a variety of patient populations being discharged from
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12 hospital to home has shown that the majority of patients who receive PODS have an
13
14 improved understanding of their discharge instructions.[22,23] This tool could be adapted
15
16 for inter-facility care transitions and study findings could assist in tailoring the tool to the
17
18 local context and ensure accurate, timely and relevant information is exchanged during
19
20 inter-facility transitions of care. For example the inter-facility care transitions tool could
21
22 have information on the care transition plan on where the patient is being transferred to;
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24 follow-up appointments; who to contact should worsening symptoms occur; medications;
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26 and any other information deemed relevant and meaningful for the patient and caregiver
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28 to have included.
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34 This tool should be completed as part of a face-to-face conversation that health
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36 care professionals engage in with patients (and their caregivers when present) around the
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38 care transition plan. Further, promising signs are being observed with teach back methods
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40 whereby patients are provided information about the care transitions plan including
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42 where the patient is going to by health care professionals and are then asked to share what
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44 information has been provided to them.[1, 21] This strategy allows for the health care
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46 professional to verify the patients' (and when present the caregiver(s)) understanding of
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48 the care transitions plan and correct any misinterpretations.[19] This type of information
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50 exchange is particularly important for patient populations (like the older non-elective
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3 orthopedic patient included in this current study) who experience challenges absorbing
4 information.
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8 Finally, the Registered Nurses Association of Ontario's Care Transitions Best
9 Practice Guideline (BPG) provides a series of evidence and expert informed
10 recommendations to ensure effective information exchange between patients, their
11 caregivers and health care professionals occurs during care transitions.[24,25] Further, a
12 recent realist review and structured expert panel identified a series of interventions aimed
13 at enhancing care transitions at the system, organizational, health care professions/teams
14 and patient/caregiver levels.[17] Together, these data sources can be used as blueprints by
15 leaders in their efforts of creating and enacting policies and a cultivating a culture of
16 caring aimed at improving the information exchange as a mechanism to enhance the
17 quality of the relationship between patients and caregivers and health care professionals
18 during care transitions.
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34 Our study findings need to be viewed with the following potential limitations.,
35 First our findings may not be transferrable to other geographical locations or other patient
36 populations (e.g. medically complex patients without orthopedic injury). Second, there is
37 a potential for social desirability bias when conducting interviews with participants. To
38 mitigate this bias, the interview guide was carefully constructed to elicit patients', their
39 caregivers', and professionals' perceptions and experiences associated with the care
40 transitions from acute care hospital to a rehabilitation hospital.
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50 CONCLUSION

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53 Our study provides insight around the nature of information exchange with
54 patients as they transition from acute care hospital to rehabilitation settings. Specifically,
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3 our study revealed that many patients and caregivers have little to no information about
4 their plan and are waiting to get this information so they know what to expect. When
5 patients and caregivers received information it was a passive exchange where they were
6 told or notified of what was going on and what was next representing a more paternalistic
7 as opposed to collaborative exchange. For some patients they had challenges absorbing
8 the information provided due to being medicated, experiencing other symptoms, or being
9 approached by too many health care professionals. Future efforts are required to ensure
10 effective information exchanges are occurring with patients and their caregivers as they
11 transition from acute care to rehabilitation to ensure that information is not only shared
12 but discussed with patients and caregivers. Bi-directional exchange between
13 professionals, patients and where possible, caregivers will provide opportunities for all
14 parties to provide input into the plan, confirm understanding and expectations. Further,
15 choosing an appropriate time to share the information, where possible, when the patient is
16 most stable, will ensure a greater potential of information retention.
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3 **Ethics approval:** Ethics approval was obtained from the Research Ethics Boards from
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5 the Sinai Health System (one acute care hospital site and a rehabilitation site) and .St.
6
7 Michaels Hospital. Informed consent was obtained from all study participants prior to
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9 conducting the interviews.
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14 **Contributorship statement:** LJ conceived and designed the study. MS, ML, KK and SE
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16 planned and completed the analysis. LJ wrote the manuscript with revisions being made
17
18 by MS, ML, KK and SE. All authors read and approved of the final manuscript.
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26 Care.
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29 **Data sharing statement:** No additional data are available.
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Patient Characteristics

| | |
|---------------------------|-------|
| Total | 13 |
| Sex | |
| Female | 9 |
| Male | 4 |
| AGE | |
| Average (Y) | 82.9 |
| Range | 91-68 |
| CO-MORBIDITIES | |
| Average | 5.4 |
| Range | 2-16 |
| LIVING ARRANGEMENT | |
| Lives alone | 12 |
| Lives with spouse/partner | 1 |
| MEDICATIONS | |
| Average | 8.5 |
| Range | 17-5 |

Caregiver Characteristics

| | |
|-------------------------------------|-------|
| Total | 9 |
| SEX | |
| Female | 9 |
| AGE | |
| Average | 63.1 |
| Range | 51-89 |
| RELATIONSHIP TO PATIENT | |
| Child | 7 |
| Spouse | 1 |
| Sibling | 1 |
| DURATION OF CAREGIVER ROLE IN YEARS | |
| Average | 6.25 |
| Range | 1-20 |

Healthcare Professional Characteristics

| | |
|------------------------------|---------|
| Total | 50 |
| Sex | |
| F (%) | 39 (78) |
| M | 11 (22) |
| PROFESSIONAL BACKGROUND N, % | |
| Nursing | 29 (58) |
| Pharmacy | 6 (12) |
| Physical Therapy | 8 (16) |
| Social Work | 3 (6) |
| Occupational therapy | 2 (4) |
| Medicine | 1 (2) |
| Management | 1 (2) |
| YEARS OF EXPERIENCE | |
| <1 Year (%) | 3 (6) |
| 2-5 years (%) | 14 (28) |
| 6-10 years (%) | 6 (12) |
| 11-15 years (%) | 12 (24) |
| >16 years (%) | 15 (30) |
| PLACE OF EMPLOYMENT N, % | |
| Acute Care | 26 (52) |
| Rehabilitation | 24 (48) |
| EMPLOYMENT STATUS N, % | |
| Full-time | 39 (78) |
| Part-time | 11 (22) |
| EDUCATIONAL BACKGROUND N, % | |
| College | 9 (18) |
| University | 24 (48) |
| Graduate school | 17 (34) |

Care Transitions Interventions Interview Guide—Patient and/or Caregiver

1. Can you describe for me your experience of the transition from x to x?
 - a. *Who was involved in coordinating the care?*
 - b. *How were they involved coordinating and maintaining continuity of care across the care spectrum?*
 - c. *How were you informed of the transition?*
 - d. *Did you experience any difficulties in care? If YES: Can you describe for me the challenges you experienced?*
 - e. *What information around your care and/or transfer over and admission to x did you receive?*
2. Tell me (describe for me) how you/or your family caregiver were involved in forming a care transition plan that reflected your transfer.
3. Did you want to be more or less involved in the planning? Describe.
4. Tell me (describe for me) how you were involved in implementing the care transition plan.
5. Tell me (describe for me) how your unique needs were addressed.
6. Tell me (describe for me) how you were made aware of any follow-up medical appointments, follow-up care, and a post-discharge plan.
7. Tell me (describe for me) how any physical, health related, and/or social barriers to attending follow-up appointments were addressed?
8. Tell me (describe for me) how follow-up care was arranged for you.
9. Tell me (describe for me) how the nurse and/or members of the interprofessional care team informed you and/or your caregivers around your care transition.
10. Tell me (describe for me) how communication strategies with a nurse and/or other members of the health care team prepared you for your care transition.
11. Tell me (describe for me) how communication strategies with a nurse and/or other members of the health care team were used during the transition from hospital to rehab setting.
12. Tell me (describe for me) what patient education have you and/or your family/informal caregiver received.
13. Tell me (describe for me) about relevant community resources, services and programs you were made aware of during the transition period.

Care Transitions Interventions Interview Guide—RN/Healthcare Disciplines

In addition to asking the following questions specific to the patient, study participants were also asked to describe their general practice.

1. Tell me (describe for me) the steps you are involved in relating to patient care transitions.
2. Tell me (describe for me) how patients and/or their caregiver were involved in developing a care transition plan of the transition from x to x.
3. Tell me (describe for me) how you were involved in implementing the care transition plan.
4. Tell me (describe for me) how patient and caregiver specific needs were addressed.
5. Tell me (describe for me) how you made the patient and caregiver aware of any follow-up medical appointments, follow-up care, and/or post-discharge plan.
6. Tell me how documentation tools are used during care transitions with accepting health care providers/care teams.
7. Tell me (describe for me) how you engage in communication strategies to prepare patients and caregivers for care transitions,
8. Tell me (describe for me) what patient and caregiver education and/or coaching you provided in the context of a transition in care.
9. Tell me (describe for me) how patient and caregiver education was delivered (mode of delivery).

COREQ (COnsolidated criteria for REporting Qualitative research) Checklist

A checklist of items that should be included in reports of qualitative research. You must report the page number in your manuscript where you consider each of the items listed in this checklist. If you have not included this information, either revise your manuscript accordingly before submitting or note N/A.

| Topic | Item No. | Guide Questions/Description | Reported on Page No. |
|--|----------|--|----------------------|
| Domain 1: Research team and reflexivity | | | |
| <i>Personal characteristics</i> | | | |
| Interviewer/facilitator | 1 | Which author/s conducted the interview or focus group? | |
| Credentials | 2 | What were the researcher's credentials? E.g. PhD, MD | |
| Occupation | 3 | What was their occupation at the time of the study? | |
| Gender | 4 | Was the researcher male or female? | |
| Experience and training | 5 | What experience or training did the researcher have? | |
| <i>Relationship with participants</i> | | | |
| Relationship established | 6 | Was a relationship established prior to study commencement? | |
| Participant knowledge of the interviewer | 7 | What did the participants know about the researcher? e.g. personal goals, reasons for doing the research | |
| Interviewer characteristics | 8 | What characteristics were reported about the interviewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic | |
| Domain 2: Study design | | | |
| <i>Theoretical framework</i> | | | |
| Methodological orientation and Theory | 9 | What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis | |
| <i>Participant selection</i> | | | |
| Sampling | 10 | How were participants selected? e.g. purposive, convenience, consecutive, snowball | |
| Method of approach | 11 | How were participants approached? e.g. face-to-face, telephone, mail, email | |
| Sample size | 12 | How many participants were in the study? | |
| Non-participation | 13 | How many people refused to participate or dropped out? Reasons? | |
| <i>Setting</i> | | | |
| Setting of data collection | 14 | Where was the data collected? e.g. home, clinic, workplace | |
| Presence of non-participants | 15 | Was anyone else present besides the participants and researchers? | |
| Description of sample | 16 | What are the important characteristics of the sample? e.g. demographic data, date | |
| <i>Data collection</i> | | | |
| Interview guide | 17 | Were questions, prompts, guides provided by the authors? Was it pilot tested? | |
| Repeat interviews | 18 | Were repeat interviews carried out? If yes, how many? | |
| Audio/visual recording | 19 | Did the research use audio or visual recording to collect the data? | |
| Field notes | 20 | Were field notes made during and/or after the interview or focus group? | |
| Duration | 21 | What was the duration of the interviews or focus group? | |
| Data saturation | 22 | Was data saturation discussed? | |
| Transcripts returned | 23 | Were transcripts returned to participants for comment and/or | |

| Topic | Item No. | Guide Questions/Description | Reported on Page No. |
|--|----------|--|----------------------|
| | | correction? | |
| Domain 3: analysis and findings | | | |
| <i>Data analysis</i> | | | |
| Number of data coders | 24 | How many data coders coded the data? | |
| Description of the coding tree | 25 | Did authors provide a description of the coding tree? | |
| Derivation of themes | 26 | Were themes identified in advance or derived from the data? | |
| Software | 27 | What software, if applicable, was used to manage the data? | |
| Participant checking | 28 | Did participants provide feedback on the findings? | |
| <i>Reporting</i> | | | |
| Quotations presented | 29 | Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number | |
| Data and findings consistent | 30 | Was there consistency between the data presented and the findings? | |
| Clarity of major themes | 31 | Were major themes clearly presented in the findings? | |
| Clarity of minor themes | 32 | Is there a description of diverse cases or discussion of minor themes? | |

Developed from: Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 2007. Volume 19, Number 6: pp. 349 – 357

Once you have completed this checklist, please save a copy and upload it as part of your submission. DO NOT include this checklist as part of the main manuscript document. It must be uploaded as a separate file.