Exploring orthopaedic patients’ experiences of hospital discharge: Implications for nursing care

Rosemary Saunders\textsuperscript{a},\textsuperscript{∗}, David Dineen\textsuperscript{b}, Karen Gullick\textsuperscript{b}, Karla Seaman\textsuperscript{a}, Renée Graham\textsuperscript{a}, Sandra Finlay\textsuperscript{a}

\textsuperscript{a}Centre for Research in Aged Care, School of Nursing & Midwifery, Edith Cowan University, Joondalup, Western Australia, Australia
\textsuperscript{b}Hollywood Private Hospital, Monash Avenue, Nedlands, Western Australia 6009, Australia

\begin{abstract}
\textbf{Background:} Nurses play a key role in providing discharge education. With the increased demand for orthopaedic surgery and subsequent fast-track surgical programmes resulting in reduction in hospital length of stay, obtaining patient feedback about discharge is important to inform nursing practice of discharge.

\textbf{Aim:} To explore patients’ experiences of discharge from hospital following orthopaedic surgery.

\textbf{Methods:} A descriptive qualitative study was undertaken with a sample of 34 patients discharged following orthopaedic surgery at a private acute Australian hospital. Individual semistructured telephone interviews were conducted and analysed using inductive thematic analysis.

\textbf{Findings:} From the analysis, patient experiences have been described in three themes: (1) experiences of hospital discharge, (2) perceptions of discharge information, and (3) limitations of discharge information. Although participants reported being informed when discharged from hospital, more information about medication management, constipation, and wound care would have better supported their recovery to assist in their self-care.

\textbf{Discussion:} Discharge experiences and perceptions varied between participants, highlighting the importance of nurses and other health professionals, in providing discharge information to meet individual patient needs. This included improved communication, information about the discharge process, management of medication, wound, and prevention of constipation as part of recovery.

\textbf{Conclusion:} Patient feedback has highlighted that nurses need to provide more tailored discharge information for orthopaedic patients to support recovery to prevent postdischarge problems and hospital readmission.

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Summary of relevance

Problem
Inadequate or inconsistent discharge education of orthopaedic patients may lead to hospital readmission.

What is already known
Discharge education is an important part of patient care and effective discharge education can enhance the patient experience and reduce hospital readmissions.

What this paper adds
An understanding of orthopaedic patients’ discharge experiences and discharge information needs which can inform best practice in discharge education.

1. Background

Nurses have a leading role in the discharge process as they prepare patients for discharge, develop the discharge plan, liaise with the multidisciplinary team, and educate patients and families about discharge (Hayajneh, Hweidi, & Abu Dieh, 2020). Nurses working in acute care orthopaedic services require knowledge and skills to prepare patients for discharge, particularly in view of new surgical techniques, rapid recovery protocols, and reduction in the average length of stay for orthopaedic surgery (den Hartog, Matthijsen, & Vehmeijer, 2013; Perry et al., 2012; Stambough et al., 2015). Additionally, the number of total hip arthroplasty and total knee arthroplasty procedures continues to grow, both globally and in Australia, and this has added to the drive for even shorter hospital admissions and the need for better discharge education (Ackerman et al., 2019; Kurtz, Ong, Lau, Mowat, & Halpern, 2007).

Recovery from orthopaedic surgery, particularly joint replacement, extends well beyond inpatient care discharge; prevention of complications and readmission requires effective discharge education for the transition to self-care after discharge (Sendir, Buyukyilmaz, & Musov, 2013). Discharge information for orthopaedic patients’ needs to be focused on wound care, pain and medication management, mobility, exercises, prevention of constipation and complications as research has shown that patients have experienced being underprepared for discharge (Sendir et al., 2013).

Orthopaedic patients’ perspectives of their discharge information needs have identified the importance of knowing about potential complications, exercise/rehabilitation, medication management, and limitations of activities of daily living (Ben-Morderchai, Herman, Kerzman, & Iony, 2010; Sendir et al., 2013). Other studies have explored patients’ discharge experiences following specific orthopaedic surgery such as post-total knee and hip replacement and found the importance of being supported at discharge home; having confidence to transition home; being able to overcoming obstacles as they arise and family support (Causesy-Upton & Howell, 2017; Changsuphan, Kongvattananon, & Somprasert, 2018; Reay, Horner, & Duggan, 2015). These and other studies suggest further research is required including post-discharge to enable patients to reflect on their discharge experiences and to utilise findings to inform discharge care. The aim of this study was to explore patients’ experiences of discharge from hospital following orthopaedic surgery. The concept of discharge referred to the experience on the day of discharge including the discharge process, interaction with staff and discharge information provided to the patient.

2. Methods

2.1. Design

This study utilised a descriptive qualitative design that is a research approach that explores events experienced from the perspective of individuals or groups (Kim, Sefik, & Bradway, 2017). The Consolidated Criteria for Reporting Qualitative research (COREQ) guidelines were followed (Tong, Sainsbury, & Craig, 2007).

2.2. Study Setting

The study was undertaken at an acute private hospital in Western Australia that performs more than 9,000 orthopaedic procedures annually, including total hip (THR), total knee (TKR), and total shoulder (TSR) replacements, elbow arthroscopy, ankle and foot procedures, with the length of stay ranging between one and four days (THR 2 days; THR 3 days; TKR 4 days).

Registered nurses lead the discharge process, guided by the hospital ‘Discharge of a Patient’ policy endorsed by the Patient Care Committee with nursing representation. Discharge planning is discussed as part of the admission process (including the preadmission phone call) and is discussed daily with the patient by nursing staff and other members of the multidisciplinary team including doctors, physiotherapists, occupational therapists, and pharmacists and recorded on the clinical pathway. On the day of discharge, a registered nurse communicates with the patient and/or family member about the information that is required as part of self-care following discharge such as physical activity, pain management, medication management, wound care, follow-up appointments, and information about potential complications. Both the registered nurse and patient sign the ‘Home Discharge Checklist’ as a record confirming the discharge information was provided and a copy is given to the patient.

2.3. Participants

A convenience sample of patients who were admitted to one ward for orthopaedic surgery was invited to participate in a post-discharge telephone interview. The eligibility criteria for the study were: (1) patients aged over 18 years of age; (2) English speaking; (3) able to provide informed verbal consent; and (4) not a participant in the concurrent study at the same hospital study site (utilising an e-health programme for patients undergoing a hip arthroplasty as it provided additional information to the standard post-discharge information).

2.4. Recruitment

Between March and June 2019, ward staff identified eligible patients and using a recruitment script, informed patients about the study. Patients were given a Participant Information Form and asked if they would like to participate in the study and receive a telephone call from a member of the research team postdischarge. Ward staff recorded the names and contact details of those who verbally consented to being contacted and the nurse manager emailed those details to the research team. Patients who expressed an interest in participating in the study were contacted one to two weeks postdischarge by a member of the research team.

2.5. Data Collection

Of the 61 patients invited to participate, eight declined to participate and 53 patients verbally agreed to be contacted via telephone. Thirty-four interviews were undertaken at which point saturation was reached. Prior to the telephone interview, the in-
terviewer informed the participants about the study, the interview process, including the expected duration of the interview and audio-recording of the interview, the processes for ensuring confidentiality and security of the data (all detailed within the Participant Information Sheet). The researcher then obtained audio-recorded verbal consent from the participant and proceeded with the phone interview.

The telephone interviews followed a semi-structured question guide which was informed by a review of the literature, and was developed, reviewed, and refined by the research team. The interview guide consisted of eight questions related to the discharge process, verbal and written information provided on the day of discharge and if the information supported recovery. At the start of the interview, demographic data related to the patient’s characteristics (including age, gender, procedure type and length of stay) was collected. Interviews lasted up to 30 minutes in duration.

2.6. Ethical Considerations

Ethical approval for this study was granted by the Hospital Research Ethics Committee (HPHS30) and the University Human Research Ethics Committee (2020-01077-SAUNDERS).

2.7. Data Analysis

The interview recordings were transcribed by a member of the research team (S.F) and independently analysed by two researchers (R.S. and K.S.). A qualitative inductive thematic analysis approach guided by the six-step approach of Braun and Clarke (2013) was utilised. Descriptive statistics were calculated using SPSS (Version 26).

The rigour of the study was achieved through credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). Two independent researchers carried out coding of the transcribed interviews, contributing to the credibility. To ensure transferability, a detailed description of the research setting, environment, participants, and results were provided. Dependability was gained by following a comprehensive data collection procedure. Confirmability was conducted by the research team through an iterative process of developing themes and reviewing the audio-recordings.

2.8. Findings

Of the 34 participants, 14 (41%) were female and 20 (59%) were male with a mean age of 65.3 years (±13.2) (range 24-87 years). Knee and hip surgeries (including TKR & THR) were the most common type of surgery (n = 14; 41% and n = 12; 35%), and other surgery types included shoulder, elbow, ankle, and foot surgery (n = 8; 24%). The mean length of stay was 3.3 (±2.2) days and ranged between 1 and 8 days.

From the analysis, patient experiences of discharge were described in three themes and these related to their experiences of the discharge processes on the day of discharge; their experience of hospital discharge, perceptions of information that was provided at discharge and the limitations of discharge information that was identified after they returned home (Fig. 1).

2.9. Experiences of hospital discharge

The first theme described participants’ experiences of the discharge process including how information was provided to them, time for preparation on the day of discharge and family support during discharge. Participants experienced being provided written information that was verified by nurses, physiotherapists, and/or pharmacists during the discharge process which participants also reported helping them with their recovery as they were able to refer to it.

‘Received info from physio and info on medications, wound care and constipation.’ (Participant 33)

In contrast, other participants’ recollection of their experiences were different.

‘Just discharge forms.’ (Participant 2)

‘Information about medication and that is basically all.’ (Participant 3)

Most participants had a family member or friend with them at discharge and felt it was helpful to have a support person present at discharge as another person to ‘remember’ the information provided.

‘Yes, was good to have a second person because you’re on painkillers and nervous and they are able to retain more information than you.’ (Participant 26)

Other patients felt the support person was unnecessary as they felt okay at discharge and understood their discharge needs due to a previous similar admission.

‘….been through it before.’ (Participant 11)

Some participants commented that they felt the discharge process was ‘rushed’ on the day of discharge, with everyone coming at once to provide information, but no single person overseeing the process.

‘…there were several people popping in asking have you got this, have you got that. There was no one person doing the whole discharge thing.’ (Participant 9)

Another participant commented that the patient should be given more time to prepare on the day of discharge and be advised about the estimated discharge time in advance, as the short notice period was problematic.

‘A longer notice of when you should be discharged.’ (Participant 34)
Participants stated that they experienced a lack of communication on how and when they would be transferred off the ward to go home. It was suggested by one participant that the hospital introduce a policy of patients being provided a wheelchair to get to their vehicle when discharged.

‘The hospital should make it a policy that a patient of this type of surgery be taken by wheelchair to their car.’ (Participant 34)

2.10. Perceptions of discharge information

This theme described patients’ experiences of the written and verbal information provided and discharge and how information supported their self-care following discharge and in their recovery. Patients were able to clearly recall receiving the written discharge information and the verbal explanation of it provided by the nurse. Many participants commented that the written discharge information was a useful reminder and reinforcement of the verbal instructions they had received.

‘…followed it every day.’ (Participant 2)

Others perceived that the written discharge information was a useful resource and that having hospital contact details was reassuring as it provided a sense of security. One participant said:

‘It gave a sense of support knowing someone to call if anything went wrong.’ (Participant 26)

Some participants found the booklet they received prior to surgery was a useful resource.

‘I was given a booklet before I went into hospital and I read all that first.’ (Participant 11)

Many participants’ experiences of the verbal discharge information provided by the physiotherapists, nurses, and pharmacists, was useful additional information.

‘The nurse was very clear and explained things well.’ (Participant 21)

The discharge information enabled participants to utilise the information for safe, health-recovery actions at home.

‘The physio going through the exercises and noting which ones to do was very helpful.’ (Participant 8)

In contrast, not everyone found the information helpful and not all participants read the information provided. Some felt there was too much information, whilst others felt there was not enough information.

However, the amount and type of information received varied and seemed inconsistent between patients’ experiences, with some participants saying they received a range of information.

3. Limitations of discharge information

The third theme encompassed areas patients experienced where they perceived some information provided to them lacked detail and they provided suggestions for improvement. Several participants found the discharge information pertaining to post-operative recovery, particularly prevention of constipation, medication management, and wound care was inadequate. Participants shared that avoiding constipation was reinforced by nursing staff. Some participants commented that they received information about constipation and how to treat it. Others felt they were not provided with information on how to prevent constipation, and they would have found it helpful to have this information.

‘Information on constipation, this specified what to do if constipated but not how to prevent it.’ (Participant 28)

In relation to managing pain, most participants felt enough information on pain management was provided; however, some wanted more information on how to manage the prescribed pain medication as their pain levels reduced post-discharge.

‘I was advised you should not be in pain at any time and to take all your medicines, but no one said you might not need them after a few days, so the information could be clearer.’ (Participant 36)

In contrast, other participants found the information provided about medications was adequate and that having a verbal explanation and written information supported the management of their medications post-discharge.

‘They (the nurse and physiotherapist) described the tablets and everything. It was well covered. The nurse went out of her way to write down the times and dosage etc. Having it written down (a visual aid) was great.’ (Participant 21)

Patients received verbal and written information about wound care and the importance of being alert to the signs and symptoms of infection and how to manage wound dressings. However, some participants reported experiencing a lack of understanding regarding wound healing and they suggested further written information on wound care would have been beneficial and helpful to allay anxiety.

‘I didn’t know when to take the dressing off, I have still got it on.’ (Participant 29)

‘Information on what’s normal because it’s quite swollen.’ (Participant 26)

A couple of participants commented that they went to their general practitioner to obtain further information, or to get wounds checked after coming home from surgery.

4. Discussion

Patient feedback can inform nursing practice to improve discharge from hospital. The findings highlight the need for the use of a standardised discharge form that includes information about medication, wound care, and communication and can be individualised to all patients (Whitehorn, 2019). Inadequate discharge education may result in unplanned readmission to hospital, medication errors and incorrect wound care by the patient, lack of information for follow-up care with health professionals, and feelings of being unprepared to return home (Braet et al., 2016; Cain, Neuwirth, Bellows, Zuber, & Green, 2012).

The results of this study are consistent with other studies that have found nurses have need to provide both written and verbal discharge information; however, verbal instructions have been reported to be ineffective, as they are often forgotten by patients post-discharge (Horstman et al., 2017; Kang et al., 2018). Research and national standards identify the importance of discharge planning being a continuous process which commences from the point of admission (Australian Commission on Safety and Quality in Health Care, 2017; Whitehorn, 2019). As this study identified differences in patient recollection of discharge information, it also suggests the importance of nurses communicating with patients and families about planning for discharge and the day of discharge process (Soong et al., 2013). Despite positive feedback about the discharge information, some participants commented on limitations of the discharge instructions, specifically those related to medication for pain management, constipation, and wound care, all of which are important areas for orthopaedic surgical patients to understand in order to optimise their recovery. This concurs with other studies where patients have identified the need for improvements to discharge education (Considine et al.,

This study found some participants experienced issues with medication use for pain management following discharge due to uncertainty about discharge instructions for medications. This is an important finding as pain has been found to be a key factor in recovery from orthopaedic surgery and effective discharge information related to pain medication can assist with less pain-related issues. Other research has also found medication-related problems post-discharge, and this has been identified as an important area for nurses to address during the discharge process (Daliri et al., 2019). Factors contributing to uncertainty around medications have related to patients being overloaded with information, being rushed during the discharge process, a lack of consideration for the patient's literacy level, and confusion with generic and brand (trade) names of medications (Daliri et al., 2019; Eibergen, Janssen, Blom, & Karapinar-Carkit, 2018).

In this study, some patients reported that receiving both verbal and written information about discharge medications was a positive experience. This finding is reinforced in other studies and in evidence-based best practice guidelines which state the need for discharge information that includes clear instructions for medications (Daliri et al., 2019; Whitehorn, 2019).

For surgical patients, discharge information on wound care contributes to successful post-operative recovery. It is particularly important, since any uncertainty regarding recognition of normal wound healing versus wound complications can be stressful for the patient, and may result in hospital readmission due to recognised wound complications (Horstman et al., 2017; Kang et al., 2019; Merkow et al., 2015). This study found some patients felt uncertainty regarding wound healing and this reinforces the need for orthopaedic surgical patients to have adequate discharge information specific to potential wound issues.

Even though education about constipation is a key part of surgical patient education, patients commonly report constipation as an issue during recovery and patients in this study identified the need for clearer information related to the prevention of constipation. In a study of hip fracture patients, over 62% reported they had not returned to their usual defecation pattern at 30 days postsurgery (Trads & Pedersen, 2015). These findings suggest education about the prevention and management of constipation is necessary, both during hospitalisation and as part of discharge education.

The findings from this study also suggest that discharge processes should ideally be individualised to meet patients’ varying knowledge and experiences. The study has also highlighted the value of having a support person present as part of the discharge process. This finding is similar to other studies which have identified discharge information needs to be tailored to the individual, with consideration of their reason for admission and functional and cognitive abilities, and ideally, with the involvement of both the patient and their family where agreed upon (Daliri et al., 2019; Whitehorn, 2019).

Only a small number of participants reported having discussions about discharge information with their primary health care providers after discharge, yet the transfer of care from hospital to the community setting is another key part of discharge planning, and community-based health professionals can support patients in their recovery, reinforce discharge advice and address patient concerns, and requires further research (Newnham et al., 2017).

These findings have several implications for nursing practice. Nurses not only need to provide discharge information throughout the patient’s stay to prepare them for discharge, but also need to evaluate the patient's understanding of discharge information throughout their hospitalisation and on the day of discharge. This requires nurses to have sound knowledge and practice of discharge planning and education specific to the patient needs, in this case orthopaedic surgery. This was also identified in a systematic review that found nurses’ knowledge varied and it could impact the patient discharge experience (Hayajneh et al., 2020). The study findings can also contribute to the development of discharge education plans for orthopaedic patients and can be used to further educate nurses and other health professionals on patient experiences and how gaps in discharge information impacted on patient recovery. The other important implication for nursing practice is the value of patient feedback to improve quality and safety and in providing patient- and family-centred care. Due to the specific needs of surgical orthopaedic patients both during hospitalisation and post-discharge, future research could investigate effective discharge planning from the perspectives of health professionals, and the congruence between discharge information disseminated to patients and their primary health care providers.

Nurses' knowledge of discharge education also needs to be considered when providing discharge education to orthopaedic patients, as structured discharge education focused on post-operative requirements for orthopaedic and other patients has shown to improve patient outcomes (Ben-Morderchai et al., 2010; Kang et al., 2018). Other studies have also found that discharge education tailored to patients’ specific needs enabled them to be more prepared for discharge (Ben-Morderchai et al., 2010; Kang et al., 2018; Şendir et al., 2013).

4.1. Limitations

As these findings are based on the experiences of orthopaedic participants from one ward within one private hospital site, the findings are limited. However, the findings do provide recommendations that are relevant not only to orthopaedic patients, but also more broadly to all patients. As participation in this study was voluntary, self-selection bias may also have limited the generalisability of findings. Specifically, individuals with either very positive or very negative experiences may have been more motivated to participate, whereas those who had an average experience may have been less inclined to participate. Furthermore, another limitation is, since the interviews were conducted by telephone, there were no visual aids to assist in verifying the discharge documents being referred to. Also, patients’ recollections of discharge instructions may have declined since discharge. Finally, this study did not seek to differentiate the experiences of patients by age group, gender, comorbidities, prior hospitalisations, or orthopaedic surgical type, and these factors could have impacted upon individual experiences of discharge.

5. Conclusion

This study highlights that nurses have an important role in providing discharge information for orthopaedic patients as part of overall discharge education. The findings from this qualitative study demonstrated orthopaedic patients generally felt well supported and informed, though it identified issues with verbal and written discharge information. These insights indicate the consideration of a standardised approach to discharge planning for orthopaedic patients which can be subsequently individualised according to patients’ unique needs. Patient feedback about discharge can contribute to changes nurses can make to improve discharge education and discharge processes.

Ethical statement

This submitted manuscript involved human research. Ethical approval was granted for the study as a scientific research study. The submitted manuscript is based on a research study which was
subjected to a full review by Hollywood Private Hospital Research Ethics Committee, approval number HPH530, dated on 8 February 2019. Reciprocal ethical approval was obtained from Edith Cowan University Human Research Ethics Committee, approval reference 2020-01077-SAUNDERS, dated on 31 January 2020.

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Authorship contribution statement

Rosemary Saunders: Conceptualisation, Methodology, Formal analysis, Writing original draft preparation, Writing review & editing. David Dineen: Conceptualisation, Methodology, Formal analysis, Writing original draft preparation. Karen Gulick: Conceptualisation, Methodology, Writing review & editing. Karla Seaman: Conceptualisation, Methodology, Formal analysis, Writing original draft preparation, Writing review & editing. Renée Graham: Formal analysis, Writing original draft preparation, Writing review & editing. Sandra Finlay: Formal analysis.

Conflict of interest

None.

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