A Literature Review: Readmission Of Older Patients To The Acute Care Setting

Sophie Dilworth
John Hunter Hospital, Hunter New England Area Health Service

Abstract

Objective: The review identifies current research, issues and gaps in knowledge of older people being readmitted to hospital. The review highlights the need for qualitative work that values the perspective of the older person employing a person-centred approach to the research.

Context: The literature review was conducted as part of a small qualitative descriptive study of the older person’s experience of readmission to the acute care setting. The study informs the work of a Bachelor of Nursing Honours project.

Conclusions and Recommendations: There is a lack of comparable data related to the reasons for readmission or the impact that it has on health services or patient outcomes. The paucity of research that considers the older person’s experience of this phenomenon indicates the need for further work in this area.

INTRODUCTION

In this literature review the issue of readmission of older patients to the acute care setting is explored. The aim is to identify the status of current research including the main themes, gaps, and implications for older patients. It demonstrates that the research question “What is the experience of older people who are readmitted to hospital following a recent admission to the Medical Assessment and Coordination Unit (MACU)?” contributes to this body of knowledge and that it has not previously been considered. The review argues that other researchers have considered this as an important issue. Furthermore, the problem of readmission is significant because it affects a large group of older people and costs health services substantial amounts of money. Consideration of this problem may have implications for better management of a particular group of older people.

Readmitted patients over 60 years old contributed over half of the occupied bed days at John Hunter Hospital (Miles & Lowe, 1999). Older patients admitted to the MACU have higher rates of readmission than elsewhere in John Hunter Hospital (Suthers, 2009). Understanding what is happening for these patients and identifying common experiences or factors may lead to an improvement in care of older people in the acute care setting.

Search Strategy

The search strategy was developed by first identifying key words related to aspects of the research question. Key words related to the older patient, patient experience, the acute care setting, and readmission. See Table 1 for detail of key words used.

In line with New South Wales (NSW) Health policy and the MACU operational guide which advocate a person-centred approach to care of the older person (New South Wales Health, 2007) this literature review incorporates a person-centred care approach by including the patients’ and staff perspectives and experiences. The patient perspective is also included in recognition of the identified knowledge gap of person-centred care that is related to the person’s perspective (National Ageing Research Institute, 2006).

This review first outlines the search strategy and search history then moves to a critical review of the literature. Questions that arose from themes in the literature form the structure of the review. Discussion includes a clarification of concepts, identification of factors that may increase the likelihood of readmission, consideration of the professional opinions related to reasons for readmission, the patient’s experience of being readmitted and the relevance of person-centred care to the readmission of older people.

Relevant sources were identified to ensure adequate coverage (O’Leary, 2004). The databases searched were Cumulative Index to Nursing and Allied Health Literature (CINAHL), Pro-

Table 1 – Topics and Related Key Words

<table>
<thead>
<tr>
<th>The elderly patient</th>
<th>Patient Experience</th>
<th>Acute care setting</th>
<th>Readmission</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aged</td>
<td>Patient experience</td>
<td>Acute care</td>
<td>Readmission</td>
</tr>
<tr>
<td>Aged care</td>
<td>Older patient experience</td>
<td>Medical assessment unit</td>
<td>Multiple admission</td>
</tr>
<tr>
<td>Elder</td>
<td>Acute care experience</td>
<td>Comprehensive assessment</td>
<td>Recurrent hospitalisation</td>
</tr>
<tr>
<td>Geriatric</td>
<td>Patient perspective</td>
<td>Geriatric assessment</td>
<td>Multiple presentation</td>
</tr>
<tr>
<td>Older</td>
<td>Elderly patient experience</td>
<td>Hospitalisation</td>
<td></td>
</tr>
<tr>
<td>Older person</td>
<td>Older person experience</td>
<td>Geriatric evaluation and management</td>
<td></td>
</tr>
<tr>
<td>Older people</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gerontology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elderly patient</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
quest Databases, Ovid Journals and the Cochrane Library. The search strategy which involved the use of key word searches in various combinations was applied to find current, relevant research articles, reviews and publications in journals.

The following inclusion and exclusion criteria were applied to the results of the search to refine and to ensure relevancy to the review.

- Related to older patients, including studies that identify themselves as being related to older patients irrespective of the age range used.
- Related to the acute care setting, given that the problem being considered is the readmission to hospital. Literature related to the community setting is not addressed in this review.
- Excluded articles specifically relating to conditions not accepted for admission in the MACU including surgical patients, acute stroke admission, intensive care, psychiatric or paediatric patients.
- Articles published prior to 1996 were excluded because of the amount of more recent work, and changes in national and international health care systems over the years limits the applicability of this older work.
- Each search was limited to peer reviewed content. Each search was also limited to full text availability and English language studies for convenience and time limitations.
- Work that related to the experiences of older patients and views related to entering, being involved in and leaving the acute care setting (Cheek, Ballantyne & Rodger-Allen, 2005; Coffey, 2006; Erfraimsson, Sandman & Rasmussen, 2006; Macmillan, 1994; Tierney, Closs & Macmillan, 1993). The author notes that there are possible links between what occurs when deciding to enter or being discharged from the acute care setting and the experience of readmission. However, they have not been included in the current review because the experience of readmission specifically has not previously been addressed.

In total 14 papers were identified through this process relating to readmission of older people with medical problems to the acute care setting. This included 12 primary research articles, one literature review, and one conceptual framework. The results are presented in the following section. The results of the literature search will be discussed in relation to questions raised from ideas and issues identified by the literature.

Readmission of Older Medical Patients to Hospital

There is a lack of consistency in the literature related to the definition of “readmission”, age-related criteria for who is an “older person”, why readmission rates are important and what they mean in terms of their usefulness to evaluate interventions or the quality of care being provided. For the purposes of this review all definitions and criteria are included.

The inconsistencies in the literature are widely recognised (Chu & Pei, 1999; Dobrzanska, 2004; Gray, 2001; McLean, Mendis & Canalese, 2008) and lack of comparable data is accepted as a limitation by authors. The differences in health care systems internationally is a further limitation to comparative research (Dobrzanska, 2004).

Reasons for Readmission

Seven of the 14 papers aim to identify risk factors and draw correlations between patient condition, situation and readmission to hospital (Arbaje et al., 2008; Chu & Pei, 1999; Dobrzanska & Newell, 2006; Lago, Noetscher & Murphy, 2001; Lee, MacKenzie, Lee & Chan, 1999; Munshi et al., 2002; Schwarz, 2000). Many of the studies identify chronic illnesses and exacerbation of existing conditions as a reason for readmission (Almagro et al., 2006; Brand et al., 2004; Brand, Sundararajan, Jones, Hutchinson & Campbell, 2005; Chu & Pei, 1999; Dobrzanska & Newell, 2006; Lago, Noetscher & Murphy, 2001; McLean, Mendis & Canalese, 2008; Munshi et al., 2002).

A range of variables and their definitions, methods and populations included in the studies makes it difficult to ascertain a given set of situations that might be identified as risk factors for readmission. Further, differences in social services and cultural factors stated in overseas studies make it difficult to compare them to the Australian situation, and to generalise from their findings in order to make use of it in practice. In attempting to understand the situation more fully the literature has concentrated around the following critical questions.

Is there a relationship between length of stay (LOS) and readmission?

The effect of LOS on rates of readmission is far from straightforward in the literature. Increasing readmission rates may be related to the move towards decreased LOS (Gray, 2001). This is supported by McLean, Mendis & Canalese (2008) who illustrated a steady decrease in LOS and steady increase in the readmission rate over a ten year study of trends for unplanned readmissions to a regional Australian hospital between 1996 and 2005. This is significant in relation to the MACU setting as one goal of admission is a 48-hour stay (NSW Health, 2007). Dobrzanska and Newell (2006) undertook a year-long study examining the reasons for emergency readmission of older people (aged over 77 years) to hospital. The study was conducted in Bradford in the United Kingdom (UK) using a 28 day readmission period. Data were extracted from patient records and administrative databases.

Descriptive statistical analysis was used to identify positive and negative correlations. They argue that patients with admission times up to 72 hours had higher rates of readmission. A retrospective cohort study in the United State of America (USA) conversely suggests longer LOS; seven to 14 days and over 15 days, were associated with early readmission (Arbaje et al., 2008).

Ashton and Wray (1996) devised a conceptual framework for the study of early readmission as an indicator of the quality of care. LOS is excluded from the conceptual framework as a reason for readmission. They consider LOS as a moderator for many things including the severity of illness, in-hospital complications, the availability of an appropriate in hospital setting and discharge location, and the efficiency of hospital staff making LOS meaningless in the context of readmission. Although LOS is discounted as a risk factor it is premature discharge that is the centrepiece of the conceptual framework (Ashton & Wray, 1996). One interpretation of this is that the move toward shorter LOS equates to premature discharge in some cases. This suggests that a shorter length of stay or a premature discharge is a factor that may increase the risk of unplanned readmission.

Does antecedent care affect readmission rates?

Munshi et. al. (2002) examined individual case notes and computer databases over a period of three months for three con-
secutive years in three Leicestershire teaching hospitals. Their retrospective review of readmissions to a medical unit measured readmission rates, reasons for readmission and time to readmission as outcome measures. They indicate 16% of readmissions were due to “unsorted” medical or social problems and 7% were due to complication of treatment. They suggest that the time to readmission was shorter for these patients. The study does not define the reason for readmission categories used so it is unclear what are complications, social problems, and treatment-related issues. However in their discussion they surmise that poor communication within the multidisciplinary team and between the team and general practitioner accounted for a significant number of readmissions. They also observe that that those discharged on a Friday accounted for 26% of all readmissions. Another study (Dobrzanska & Newell, 2006) suggest patients discharged on a weekend or public holiday, or who became ill out of hours had increased risk for readmission. In their brief study of an administrative data set and record review at John Hunter Hospital, Newcastle, Australia, Miles and Lowe (1999) revealed 5.5% of readmissions resulted from an adverse event. They do not indicate the types of adverse events, only their severity and preventability. Most were considered to be of minor severity and highly preventable. Based on the number of bed days these readmissions used and the cost per day they calculated that preventable readmissions would cost over 2 million dollars (AUD) in a year. Munshi et. al. (2002) demonstrated a much higher preventable readmission rate of up to 47%. There is a possibility that the patients who are readmitted to the MACU have been readmitted due to adverse or preventable causes. In consideration of the preventability and the potential cost this is a problem worthy of further investigation.

Are there socio-economic factors that increase readmission?

The literature presents a myriad of social and economic issues that may contribute to readmission. A retrospective cohort study demonstrates an association between the post-discharge environment, socio-economic factors and early readmission (Arbaje et al., 2008). Living alone, having unmet functional needs, lacking self-management skills and having limited education are suggested as reasons for increased readmission rates. Chu and Pei (1999) suggest that the level of education, marital status and employment status were not risk factors for readmission and that living alone was in fact a protective factor. Living alone is a factor that predicts readmission in some studies (Arbaje et al., 2008; Dobrzanska & Newell, 2006) and not in other studies (Chu & Pei, 1999). In a control study of risk factors for early readmission Chu and Pei (1999) show that those living alone or living in a private home had a lower risk of early emergency readmission. They also argue as does Lee, MacKenzie, Lee & Chan (1999) that institutional care increased the risk of readmission. Dobrzanska and Newell (2006) argue that those who lived alone were more likely to be readmitted overall, however, those living with someone and those living in care were likely to be readmitted sooner. Arbaje et. al. (2008) state that living alone increased the chance of readmission by 50%. Post-discharge care is a common issue considered as a possible risk for readmission. It is difficult to make comparison with international studies, as the range and type of services and funding for services vary greatly. However, Dobrzanska and Newell (2006) suggest there is no difference between readmission time for those with social services in place or not, prior to admission, but patients who refused increased services were readmitted sooner. Schwarz (2000) proposed that higher levels of tangible support for the caregiver, which included shopping and transport, and integration or reaching out were associated with lower numbers of readmission (Schwarz, 2000). However, a number of studies did not find a significant relationship between the number of home health care visits received (Chu & Pei, 1999; Schwarz, 2000). Lack of income is a risk factor identified by Chu and Pei (1999), however low income was not a risk factor identified by Arbaje et. al. (2008). This is a case where social policy may influence the results. The first study is a Honk Kong study and the second an American.

Are chronic disease and co-morbidity reasons for readmission?

Several chronic diseases are commonly associated with higher rates of readmission or multiple admissions for older people. Congestive heart failure (CHF) and chronic obstructive pulmonary disease (COPD) are identified in many studies as increasing the likelihood of readmission (Brand et al., 2005; Chu & Pei, 1999; Yu, Lee & Wu, 2007). High rates of co-morbidities have also been associated with higher risk of readmission (Brand, Sundararajan, Jones, Hutchinson & Campbell, 2005; Chu & Pei, 1999). Almagro et. al. (2006) state that COPD readmissions are one of the leading causes of healthcare expenditure in the world. They conclude that COPD patients who had previous hospitalisations, lower quality of life and hypercapnia on discharge were more likely to be readmitted (Almagro et al., 2006). Lagoe, Noetscher & Murphy (2001) used an administrative data set to demonstrate that patients with CHF and the co-morbidities of chronic renal failure or diabetes mellitus are at increased risk for readmission. Disease progression or recurrences of a problem appear to be commonly accepted reasons for readmission of older people to hospital (Chu & Pei, 1999; Dobrzanska & Newell, 2006; McLean et al., 2008; Munshi et al., 2002; Pearson, Skelly, Wileman & Masud, 2002; Yu, Lee & Wu, 2007). Munshi et. al. (2002) concur that recurrence of a chronic medical problem was the most common reason for readmission, accounting for 34% of readmissions of older people. Consideration of chronic disease is pertinent to the proposed study as the medical diagnosis is reflective of the MACU patient population. The MACU targets older people with complex and chronic illness. Issues raised may be indicative of better management options for this group of older patients.

Is carer burden a reason for readmission?

Only two of the papers explored carer burden or strain in relation to readmission (Schwarz, 2000; Yu, Lee & Wu, 2007). Yu, Lee and Wu (2007) describe the older person’s feelings of guilt as they see their families struggling with their care. Schwarz (2000) uses descriptive correlation to assess whether low informal social support, low satisfaction with informal social support, high depressive symptoms of the caregiver and minimal use of home health care predict early readmission of functionally impaired older people with chronic illness. The study determined that the number of readmissions was related to greater depressive symptomology of the caregiver. However, from the analysis it is not possible to determine if
increased depressive symptoms resulted in increased readmissions or vice versa.

What are the views of professionals in relation to reasons for readmission?

The views of professionals in relation to readmission of older people were surveyed by Pearson, Skelly, Wileman and Masud (2002). Specifically they compare the opinions of general practitioners (GPs) with hospital staff concerning the reasons older people are readmitted to hospital (Pearson, Skelly, Wileman & Masud, 2002). The authors illustrate agreement between both groups that relapse and complication of the initial illness were the most common reasons for readmission. Carer problems were also agreed to be the second most common reason for readmission. There was also agreement between the two groups that new problems, avoidable readmissions and problems with social services were all factors that contributed to readmission to lesser degrees. However, GPs thought that inadequate preparation for discharge, poor health at discharge and inadequate provision of information to the GP contributed to readmission whereas hospital staff did not. The researchers suggest that flaws in processing discharge summaries may account for this difference in opinion and suggest that a phone call or fax to the GP on the day of discharge might address this problem. Hospital staff saw medication problems as a contributing factor whereas GPs did not. Contributing factors for readmission were not defined this limited interpretation of the results. A further limitation is that the methods used to develop and validate the survey tool were not discussed.

What is the patient experience of readmission?

Understanding the experience or patient journey in relation to readmission of older patients is difficult to find in the literature. This search revealed only one article that specifically addresses the experience of readmission. The findings of this study are indicative of the complexity of the experience of readmission.

Yu, Lee and Wu (2007) report on a qualitative exploration of COPD patient multiple readmissions to hospital in Hong Kong. Interviews with COPD patients aged 70 to 81 years old highlighted four major themes. These included perceived powerlessness to manage disease after discharge, no confidence in community services, tension in relationships between care giver and care recipient, and enjoyment of the social atmosphere in hospital. Reasons for readmission include social and emotional factors as well as disease exacerbation and lack of self management. The research uncovered deeper understanding of the experience, identifying feelings of loneliness, of being a burden, guilt, insecurity and fear.

Yu, Lee and Wu (2007) suggest that the unequal power relationship between patient and doctor may impact upon the discharge planning process. A person-centred approach that aims to form a partnership between professional and patient may lead to improvements in practice through an increased understanding of patient attitudes and needs.

How does person-centeredness relate to readmission?

In recent years at an area health service, state, national and international level the philosophy of care known as person-centred care has become recognised as best practice in relation to older person care (ARCHI, 2001; NSW Health, 2007; Peek, Higgins, Milson-Hawke, McMillan & Harper, 2007). Person-centred care respects the patient and their context and proposes care that meets their perceived needs (Parkinson, 2004).

The body of work related to person-centred care is beyond the scope of this review. However this approach is widely supported and promoted by the Australian health sector (National Ageing Research Institute, 2006) and gaps identified in the literature include work that considered the patient or families’ perspectives, in particular the older patients’ perspectives and evidence to support or refute the effectiveness of person-centred approaches (National Ageing Research Institute, 2006). In relation to exploring the patient experience of readmission to the Medical Assessment and Coordination Unit (MACU) the concept of person centeredness will shape the way the research is conducted and place the focus of the study on the person, respecting them as expert in their own health care.

Concluding Remarks and Recommendations

The breadth and diversity of variables measured, the lack of comparability and evidence to demonstrate the nature of the relationship between risk and readmission make it difficult to be clear about what increases the likelihood of readmission. However, it does appear that there are factors that may predict the possibility of readmission. These factors include chronic disease and the progression of a disease process, the presence of multiple co-morbidities, shorter length of stay, and premature or inappropriate discharge. The impact of socio-economic factors is less clear. This may be due to the variety of services and support available in different settings.

The literature review highlights the fact that there is very little known about the patient experience of readmission. To understand this experience requires a qualitative approach and this is a notable gap in the literature (Dobrzsanska, 2004). There is very limited research that reports the patient view of, or experience with readmission and considers the patient as expert in relation to their own health (Themessl-Huber, Hubbard & Munro, 2007). At the same time the ethos of care is one of person-centeredness. Thus, in an approach that places the person at the centre of their health care experience, respecting their perspective would be a valuable contribution to evidence in relation to readmission and person-centred health care research (National Ageing Research Institute, 2006).

Importantly other researchers have considered this problem and see the benefit of taking a similar approach to that proposed. Dobrzsanska and Newell (2006) point out the benefit of patient involvement and the potential benefit of a study that includes patient and carer opinions regarding reasons for readmission and if they felt anything could have been done to prevent the readmission. The potential links between the person’s experience of readmission and aspects of person-centred care, including partnership, empowerment and valuing strengths suggest a person-centred approach may present avenues for improvements (Yu, Lee & Wu, 2007).

The problem of readmission affects many people in a particularly unfortunate way and is socially and financially costly. This review discovered readmission rates of between 5.4% (McLean, Mendis & Canalese, 2008) and 33% (Schwarz, 2000), with preventable readmission of between 5.5% (Miles & Lowe, 1999) and 47% (Munshi et al., 2002) for older people. The monetary costs involved are reported as over 2 million dollars (AUD) a year based on a 5.5% readmission rate (Miles & Lowe, 1999). Understanding the complexity and possible motivations for readmission may enable the development
of strategies to address this problem (McLean, Mendis & Canalese, 2008). In addition, such an exploration may have implications for problems related to discharge planning and community services.

References


