Safeguarding Survival: Older Persons with Multiple Chronic Conditions' Unplanned Readmission Experiences: A Mixed Methods Systematic Review

by

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Abstract

Background: As older persons (>60 years of age) live longer with more than one chronic condition they will experience more unplanned readmissions to hospital and will require more support from community and hospital health care services to reduce or prevent unplanned readmissions. Little is known about the experience of unplanned readmission from the perspectives of older persons with multiple chronic conditions.

Purpose: The purpose of this dissertation project was to construct knowledge about older persons with multiple chronic conditions' experiences with unplanned readmission to hospital within 30 days of discharge. Older persons' perspectives about unplanned readmission and what hospital and community services and resources they need is essential for the development of strategies to reduce unplanned readmission.

Method: Several strategies were used to investigate unplanned readmission. First an integrative review method was used to explore older persons with multiple chronic conditions' unplanned readmission experiences. Next, Walker and Avant's method was used to analyze the concept of unplanned readmission. Combined, these studies provided the foundation for conducting a mixed methods systematic review. A paper outlining in detail the adapted Harden and Thomas's approach and procedure is part of this dissertation. The mixed methods systematic review was conducted to understand the psychosocial processes of and factors that influence unplanned readmission for older persons with multiple chronic conditions.

Data Analysis: In the mixed method systematic review qualitative data (n=5 studies) were analyzed using a meta-synthesis approach and an applied thematic analysis to construct themes and factors about the psychosocial processes of unplanned readmission. Quantitative data (n=5 studies) were analyzed using vote counting. Qualitative and quantitative data were integrated

using a cross-study matrix to identify factors that matched, did not match, and gaps. Quantitative data informed the qualitative data.

Findings: Unplanned readmission was a process, experience, and sequel of complex interconnected events that included previous hospital experiences, intrinsic and extrinsic challenges at home, and unpleasant emotions. Older persons needed acute care unplanned readmission health services to resolve their urgent or emergent health crisis that occurred after a previous hospital stay. “Safeguarding survival” described how older persons experienced unplanned readmission by identifying missing pieces of care, reaching for lifelines, and feeling unsafe. The factors that older persons identified as influencing these processes included older persons’ chronic conditions and discharge diagnosis, increased need for help with functional needs, lack of discharge planning, lack of support, increased intensity of symptoms and previous hospital readmission experiences.

Conclusion: A holistic model of unplanned readmission using the voices and experiences of older persons with multiple chronic conditions was constructed. These findings are foundational for future testing, research, and the development of a middle range theory about unplanned readmission. Improving or maintaining older persons’ functioning is a safety priority that may reduce unplanned readmission. Future research should focus on developing and evaluating strategies to understand older persons’ previous hospital readmission experiences, unpleasant emotions, and how to support and include family caregivers in care planning.

Preface

This thesis is an original work by Robin Coatsworth-Puspoky. This research project of which this thesis is a part, did not require ethics approval.

Chapter 2 of this thesis has been submitted for publication as R. Coatsworth-Puspoky, S. Dahlke, W. Duggleby, and K. F. Hunter, "Older Persons with Multiple Chronic Conditions' Experiences of Unplanned Readmission: An Integrative Review," *International Journal of Older People Nursing*.

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Chapter 5 of this thesis has been prepared for submission as R. Cotasworth-Puspoky, W. Duggleby, S. Dahlke, K. F. Hunter, "Mixed Methods Systematic Review Prioritizing Qualitative Meta-Synthesis Findings: Challenges and Learnings**"** for submission to the *Journal of Mixed Methods Research* or *International Journal of Qualitative Methods.*

I was responsible for the study conceptualization, data collection and analysis as well as the manuscript composition. W. Duggleby and S. Dahlke were my supervisors and contributed to the study conceptualization and manuscript editing. K. F. Hunter was a member of my thesis committee and contributed to the editing and refining of the manuscripts.

Dedication

It is with great delight and pride that I dedicate this thesis to my family, friends, and husband. I am eternally grateful for the experience and privilege that you all collectively made possible for me. Without your love, support and encouragement, this journey and dissertation would not have been possible. This thesis is dedicated to celebrating the unconditional support you have given me. Mom, thank you for infusing and role modeling your values around the importance of women pursuing their education, having faith in my abilities that this dream was a possibility, and reassuring me that I would reach the end of the tunnel, sometimes with detours and at a slower speed. Thank you for assuming childcare responsibilities of picking up and dropping off grandchildren, kindergarten teaching while schools were closed, care of the boxers (Sydney, Sadie, and Sasha), and all your help around the house. To my children Robbie-Lynn, Rae-Anna, and Rylee-Jean-thank you for the inspiration to keep moving forward, the detours of laughs and tears, and for helping me think differently or reframe my progress. Robbie-Lynn and Rae-Anna, I am grateful for your balancing abilities with your schoolwork, skating demands, and support for my educational achievements, goals, and deadlines. I am also grateful for your help with your little sister Rylee-Jean, who is our wish come true and became part of this experience and journey. I am very indebted to my family for the sacrifices and understanding that you demonstrated to me when I was selective in attending events with you. To my brother Dickson, your supportive telephone calls grounded me and your extraordinary wit about my need to always learn more helped me to laugh. To Dad in heaven, this is dedicated to you. You are part of the reason that I had this wish, began this journey, and are part of the celebration in completing this work. Thank you for watching over all of us through this process and for helping me heal. And lastly to Grandma Bowyer, although not with us physically, thank you for sharing

your experiences around aging, your strong values around education, and for always believing in the possibilities.

I would also like to take this time to thank my friends for their support through this past six years. I am grateful for the unconditional support and inspiration that you have shared with me. Thank you for your supportive phone calls in which your words of support and requests for help are carefully balanced within timeframes and understanding about my unavailability. Thank you to my friend and colleague Pat, for motivating me to begin looking at PhD programs. Your firmness in my need to apply was the both the inspiration and courage I needed to begin and to heal through this journey. Your encouragement and support through this process has been invaluable. You have been my metronome and strength through to completion. I am indebted to you for all the afternoons of lunch, laughter, support, and sharing. I am looking forward to our future breakfasts.

To Randy, my husband, friend, and partner. I am so appreciative of what you have given me through the past six years of this journey. Without your love, emotional and childcare support, and sacrifices, this PhD experience and thesis would not have been possible. I am not sure when you committed to marriage 25 years ago, you had any inkling that we would be on a journey of completing a PhD. Nor am I sure that you fully understood the impact this would have on us over the past six years, our children and family, or where this journey would lead us as a family. This thesis is also dedicated to you. I am grateful for your love, encouragement, support, questions, and belief in my growth to be a better person. Thank you for your commitment to helping me make this PhD wish and journey come true; I love you.

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Chapter One: Introduction

Since the largest demographic accessing healthcare services is older persons (Bahler et al., 2015; Boyd & Fortin, 2010; Denton & Spencer, 2010; Ofori-Asenso et al., 2019; Steffler et al., 2021), understanding their experiences with discharge from hospital to home and unplanned readmission is essential. Yet, unplanned readmission of older persons is intensified by our lack of understanding about older persons with multiple chronic conditions' (MCC) experiences and their physical and emotional needs during their unplanned readmission to hospital from home (Beach et al., 2020; Blakey et al., 2017; Coatsworth-Puspoky et al., 2022; Coatsworth-Puspoky, et al., 2021). Components of the current transitional care frameworks are primarily focused on integrating health care systems, services, and personnel between hospital and community (Allen et al., 2017; Naylor et al., 2017) with little focus on the older persons' experiences of unplanned readmissions or the impact of factors affecting readmission. During a health crisis, health care providers tend to focus on symptoms to restore the older persons' health (Lilleheie et al., 2020), yet there is little information about how health care providers could address older persons' emotional needs associated with fear, mistrust, disappointment, loss, and anxiousness (Coatsworth-Puspoky et al., 2022; Lilleheie et al., 2020).

A better understanding about the complexity and the interrelationships between what causes unplanned readmission (for example-lack of symptom stability, support, knowledge, and safety) is needed (Coatsworth-Puspoky et al., 2021; Lilleheie et al., 2020). Examining and understanding what the lack of symptom stability, support, knowledge, and safety is like for older persons with multiple chronic conditions and how it influences unplanned readmission, older persons' emotions, and emotional and social needs is necessary to inform theory, research, and the development of practice interventions.

Researcher's Background and Position within the Research Context

Throughout my PhD studies, I have focused my studies on my passion related to transitions in health care and the risks that illness transitions pose to older persons' safety, well-being, and health (Meleis, 2010). Health care transitions are complex phenomenon and influenced by many complex interrelated factors that include but are not limited to the changes in the older person's health, family support, and the context of and health care providers within these transitions (Meleis, 2010). My personal and professional experiences with transitions, critical examination and analysis of the literature to understand transitions and transitional models in health care, in addition to guidance from my supervisors helped me to focus on unplanned readmission which may be considered a transition between two settings, home and the acute care setting.

From the inception of my PhD studies, I was passionate about focusing on transitions in health care to not only understand how these transitions impact older persons, but to also develop knowledge that could be used and applied to make a difference in nursing practices with older persons. As a nurse with experience in both hospital and community settings, I have witnessed the negative impact of care transitions on older persons who have chronic mental and physical health challenges. These negative outcomes impact older persons' well-being and health. As a research assistant, I was honored and privileged that consumers of mental health shared details of both their positive and negative experiences about their transitions between hospital and community living and how these transitions impacted their health. If they were part of the intervention group, I was able to understand the benefits they experienced from receiving the transitional care intervention. From their experiences, I learned the importance of support interventions to facilitate the health and wellness of person experiencing transitions. When my

father experienced multiple care transitions, I wished I had access to the support transitions that I helped evaluate as a research assistant. There was little if any assessment completed by health care providers to assess the impact these transitions had on our family member. Health care providers, including myself before this experience, did not understand the emotional, psychological, and physical distress that is experienced individually and as a family from being a part of the dynamic interplay between my father's changing health status, changes in care providers, and changing health care settings.

Being a part of my father's transition in health and between acute care facilities made me realize the impact this had on an older persons' emotions, finances, health, and resources and how quickly human resources, such as caregivers, become strained and burdened. My father was transported to a city for care that was three hours away from our home. My mother stayed in a hotel for a short time and then found accommodations with a friend of a relative for four months. She was at the hospital daily for hours and home at maximum once a week. Clearly, burden and strain are not solely related to the addition of caring for the older person during their acute illness. Geography, accommodations, finances, and lack of close support influenced and added to my mother's high levels of emotional strain and exhaustion which were compounded by her constant fears and reality of my father's changing health status and possible death. Our family had many strengths in how we adapted to my father's changing health status, locations of and providers of care, changes in geography, and how we supported each other. My father's journey into acute care made me realize what little knowledge and understanding I had about the strengths of older persons that I had worked with, specifically older persons who had experienced unplanned readmission.

My desire to learn about and understand older peoples' unplanned readmission experiences were influenced by personal family experience. I am curious to explore and learn from older persons' descriptions and understandings about unplanned readmission in the published literature. My perspective of observing and experiencing transitions of care with my father combined with the empirical knowledge I have gained about unplanned readmission and my clinical practice knowledge about transitions and transitional care, places me in a unique position. I am strategically positioned to uncover knowledge with older persons as a nurse researcher in this context. I believe that it important to hear the voices and experiences of older persons. These experiences will assist health care providers to understand how older persons understand and describe unplanned readmission. Additionally, identifying and understanding unplanned readmission is foundational to future research. Future research should focus on discovering what older persons identify as needing during unplanned readmission and assisting researchers to develop hospital and/or community interventions that reflect the needs of and promote health with older persons and family caregivers. The knowledge, in addition to future knowledge, may be mobilized to inform practices to potentially prevent unplanned readmission.

Background

Worldwide the number of older people – those who are over the age of 60 - are growing older, living longer, and are predicted to double from 12% to 22% by 2050 (World Health Organization [WHO], 2021). As more people live longer, their likelihood of experiencing more than one chronic condition (noncommunicable diseases) and resulting disability increases (Beard et al., 2016; Hajat & Stein, 2018; Roberts et al., 2015; WHO, 2018). In high-income countries, 66.1% (IQR 54.4-76.6) of older persons experience multimorbidity (Ofori-Asenso et al., 2019). In Ontario, 45.6% of the population experience multimorbidity and 69.1% of the population

experience more than one chronic condition (Steffler et al., 2021); supporting Broemeling et al. (2008) who reported that 71% of older Ontarians had more than one chronic condition. Even more concerning are the increasing severity of chronic physical and mental health conditions and the increasing number of older persons who have eight or more chronic conditions (Steffler et al., 2021), placing additional stress on the current health care system. Hospital interventions and practices (Boyd & Fortin, 2010) and community or home-based interventions (Northwood et al., 2018) are needed to assist older persons to manage the challenges and "burden" created by co-existing MCCs, multimorbidity (CIHI, 2021, p. 1; Denton & Fortin, 2010) and hospitalizations (Boyd & Fortin, 2010). Understanding older persons' experiences and perspectives is critical to inform the development of interventions in hospital and community settings.

The quality and efficiency of hospital and community health care services and practices are determined by costs that measure the amount and frequency of services (Chambers & Clarke, 1990; Fischer et al., 2014; Scott et al., 2014). Researchers identified that older persons with MCCs required four times more hospital services (Bahler et al., 2015; Broemeling et al., 2008; Roberts et al., 2008; Steffler et al., 2021; WHO, 2011) and community health care services (Broemeling et al., 2008) for three times longer than their first hospital admission (Denton & Spencer, 2010). This reported amount and frequency of services does not adequately reflect or address social or subjective aspects about older persons' needs, their experience with the service, or an evaluation about whether their unmet needs were addressed by the services. Measures of costs in excess of 2.1 billion dollars (CIHI, 2018) and rates of readmission around 13% (CIHI, 2012; WHO, 2002, 2018) are used by governments and health care organizaitons and systems to substantiate health care efficiencies and quality of health care. Older pesons' perspectives about the health care efficiency and quality of health care they experience are lacking. Efficiencies and

quality measures could be developed from an understanding of older persons' experiences. This perspective could help explain why older persons' unplanned readmission ware labelled as a "failed discharge" (Antony et al., 2018). Utilizing older persons with MCCs' experiences is needed to understand the hospital and community services and resources that older persons require to be able to remain home after discharge.

Nurses and health care providers require knowledge and understanding about older persons with MCCs' feelings, concerns, struggles, challenges, and unpleasant emotions across the continuum of unplanned readmission (Coatsworth-Puspoky et al., 2022). Understanding older persons' feelings about and the meaning they assign to their discharge, experiences of being at home, and returning to the hospital is important for nurses to understand. It is also important for nurses to be knowledgeable about and understand older persons' expectations of discharge, being at home, and unplanned readmission services and resources they require or have used, the challenges they have experienced and how they had adapted, gaps they have experienced, and experiences with success. This knowledge is critical to inform practices and policies about how nurses respond to and assess older persons with MCCs' needs, the development of interventions to address the factors associated with unplanned readmission, and older persons' physical, emotional, and social care needs at home and in the hospital (Beard et al., 2016; Boeckxstaens & Petrovic, 2020; Boyd & Fortin, 2010; Marengoni et al., 2011; Roberts et al., 2015). It could also aide in the development of theories and models of care. Theories and models of care that utilize the voices of older persons (Blakey et al., 2017) with MCCs are needed to influence health care practices and interventions that facilitate older persons' confidence and security in managing their care to remain at home, thereby reducing the risk of harm to them that results from unplanned readmission (Boyd & Fortin, 2010). Examining the

psychosocial processes of the experiences and perspectives of older persons with two or more chronic diseases (Boyd & Fortin, 2010; WHO, 2015) and the factors associated with unplanned readmission will generate new knowledge about the needs of older persons with MCCs during unplanned readmission, nationally and globally (Boyd & Fortin, 2010; Marengoni et al., 2011; UNDP, 2017; WHO, 2015). Thus, the purpose of this doctoral study was to understand: What are the unplanned readmission experiences of older persons with MCCs?

Sub-Questions

The following sub-questions were also used to guide this study:

1. What is known about the unplanned readmission experiences of older persons with MCCs?
2. How is the concept of unplanned readmission defined? What are the antecedents, attributes, and consequences of unplanned readmission for older persons?
3. What are the psychosocial processes of unplanned readmission for older persons with MCCs?
4. What are the factors that influence older persons with MCCs' unplanned readmission?

Dissertation Papers

This dissertation consists of three papers that directly relate to addressing the sub-questions of increasing understanding about older persons with MCCs' unplanned readmission experiences and one paper that describes the methodology used to answer the overarching research question. These papers are followed by a concluding chapter. The first paper, "Older Persons with Multiple Chronic Conditions' Unplanned Readmission Experiences: An Integrative Review," helps to answer the first research sub-question. Relevant literature integrated the voices

of older persons with MCCs and identified themes about the feelings, unpleasant emotions, and events that occur before and influence older persons' need for unplanned readmission. This paper identifies nurses as important to assess and respond to older persons' unpleasant emotions associated with past unplanned readmission. Specifically, exploring older persons' experiences to understand past experiences, reduce challenges of their current experience, and increase their success in maintaining their health and reduce the need for future unplanned readmissions. Intrinsic and extrinsic challenges may guide the development of interventions. This paper offers recommendations for future research to analyze the concept of unplanned readmission and examine the psychosocial processes and factors associated with unplanned readmission. This paper has been submitted for publication to the *International Journal of Older People*.

The second paper, "Unplanned Readmission for Older Persons: A Concept Analysis," assists to answer the second sub-question and part of the overarching question. This work utilizes a concept analysis approach to identify attributes, antecedents, and consequences of unplanned readmission from older persons experiences. It provides a definition of unplanned readmission, that differentiates the concept from other similar concepts and expands the concept to include older persons' experiences. Overall, the findings from the concept analysis support older persons' need for unplanned readmission as they were unable to prevent or avoid their health crisis or emergent health problem. This work explains unplanned readmission with a conceptual framework and establishes it as a theoretical concept for theory and research development. This paper has been published in the *Journal of Advanced Nursing*. Combined, the first two studies identify the need for a holistic understanding of unplanned readmission and recommends integrating synthesized understandings of older persons' psychosocial processes and factors that influence unplanned readmission.

The third paper, *"*Safeguarding Survival: Older Persons with Multiple Chronic Conditions Unplanned Readmission Experiences: A Mixed Methods Systematic Review," answers the third and fourth sub-question and primary research question. It reinforces and extends theoretical knowledge related to the older persons' need for unplanned readmission, definition, antecedents, attributes, and consequences of unplanned readmission, using older persons' experiences. Consistent with the findings from the first paper, older persons' experiences of unpleasant or negative emotions may influence unplanned readmission and emotional harm. This paper supports older persons' need for unplanned readmission for safety and recovery and recommends future research focus on exploring causal relationships between increased need with functional needs, support needs, lack of discharge planning, increasing intensity of symptoms and older persons' emotional needs. The model of unplanned readmission may be used by health care providers to develop health care interventions and address health care needs across the continuum of unplanned readmission. This paper will be submitted to *The Gerontologist*.

The fourth paper, "Mixed Methods Systematic Review Prioritizing Qualitative Meta-Synthesis Findings: Learnings and Challenges," facilitates the answers for the third and fourth sub-questions and overarching question. This work outlines the systematic steps of the mixed methods systematic review procedure used to synthesize and integrate qualitative and quantitative data. Harden and Thomas' (2010) mixed methods systematic review of prioritizing quantitative data findings was used as an example to describe and illustrate prioritizing qualitative data analysis findings. This paper shares the challenges of completing this procedure and the lessons used to overcome these challenges. These findings are important as they offer important findings about the method for future research and exploration. It will be submitted to

the *International Journal of Qualitative Methods or Journal of Mixed Methods Research.* This approach is important for answering the final question.

Chapter Two:

Older Persons with Multiple Chronic Conditions' Experiences of Unplanned Readmission: An Integrative Review

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Abstract

Background: As persons, 60 years of age and older live longer, they are more likely to develop one or more chronic conditions. Rising numbers of older persons with multiple chronic conditions (MCC) will increase the need for home health care services and hospital services and unplanned readmissions will increase globally.
Aim: The aim of this integrative review was to explore the experiences of older persons with MCCs' unplanned readmission from home to hospital within 30 days of discharge using an integrative review.
Method: Whittemore and Knafl's method was followed to address the research aim. Four databases (Ovid MEDLINE, Scopus, CINAHL, and Embase) were searched between 2005 and 2020, suitability for inclusion was assessed, data was extracted and analyzed using content analysis.
Results: Thirteen articles (ten qualitative, one quantitative, and two mixed methods) were included in this review. Three themes emerged from the data that reflected older persons with MCCs' unplanned readmission experiences. These themes included: a) feelings of security, support and relief; b) undesirable challenges at home (struggling to manage care and balancing support needs); and c) unpleasant feelings and emotions (feelings of fear and mistrust, feelings of disappointment and loss, feelings of anxiousness and pressure).
Conclusion: Research about unplanned readmission to the hospital does not provide sufficient detail or understanding about older persons with MCCs' experiences or their psychosocial experiences. Addressing research gaps related to the psychosocial processes and factors associated with unplanned readmission is needed to expand the current understanding of the process and concept of unplanned readmission.

Keywords: unplanned readmission, older persons, multiple chronic conditions, experiences, nursing

What does this research add to existing knowledge in gerontology?

- Older persons with MCCs' unplanned readmission experience is not a single event, but an experience.
- Older persons with MCCs' unplanned readmission experience includes unpleasant feelings of struggling to manage care at home and balancing support needs in addition to pleasant feelings of security, support, and relief.

What are the implications of this new knowledge for nursing care with older people?

- Nurses need to learn about older persons with MCCs' current feelings about discharge, their home experiences, and returning to the hospital and what this means to them.
- Nurses need to discuss older persons with MCCs' health needs related to expectations, services, resources, past successes, adaptations and challenges through unplanned readmission, and gaps in their past discharge and home experiences.

How could the findings be used to influence policy or practice or research or education?

- These findings may be used to develop discharge plans that increase older persons' power, confidence, and security in their abilities to manage their care at home to avoid unplanned readmission.
- Older persons with MCCs' beliefs and understandings about their care and support needs are needed to inform the development of health care practices, interventions, models of care, research, and policies related to unplanned readmission.
- Analyzing the concept of unplanned readmission will assist in creating a definition inclusive of older persons experiences, which can be used consistently, and expand our current understanding of the attributes, antecedents, and consequences of unplanned readmission.

Older Persons with Multiple Chronic Conditions' Experiences of Unplanned Readmission: An Integrative Review

Introduction

According to Chambers and Clarke (1990), readmission is an umbrella term that may describe a planned or unplanned event, hours to years after discharge, for surgery, treatments or in the event of an emergency. This umbrella term, however, is problematic because terms such as rehospitalization, representation, re-admission, or care transition commonly occur thus obscuring our understanding of the experience. A recently published concept analysis of unplanned readmission defines it not only as a process or event, but as an experience that begins with a previous hospital admission (Coatsworth-Puspoky et al., 2021). It occurs for the purpose of resolving an urgent or emergent health crisis for which older persons require acute care services from the hospital within 30 days of being discharged (Coatsworth-Puspoky et al., 2021). Researchers have identified factors influencing unplanned readmission such as: a) as being male (Low et al., 2018; Toledo et al., 2018), b) increased age (>75 years) (Low et al., 2018; Marcantonio et al., 1999) c) requiring increased assistance with functioning (Low et al., Marcantonio et al., 1999; Toledo et al., 2018); d) having more than one chronic condition (Low et al., 2018; Marcantonio et al., 1999); e) higher Charlson comorbidity index scores (Low et al., 2018; Toledo et al., 2018), f) experiencing multiple hospital admissions (Low et al., 2018; Marcantonio et al., 1999); g) staying in hospital longer than four days (Low et al., 2018; Marcantonio et al., 1999), h) being discharged to a long term care home (nursing home) (Low et al., 2018; Marcantonio et al., 1999) or to home with home health care services (Toledo et al., 2018), i) being discharged between 1300-1700 (Low et al., 2018), and j) having diagnoses of

heart failure (Low et al., 2018; Marcantonio et al., 1999), chronic respiratory failure or chronic liver disease (Toledo et al., 2018).

As the number of people over 60 years old increase, there is a corresponding likelihood of older persons developing one or more chronic conditions or multimorbidity increases (Beard et al., 2016; Roberts et al., 2015; World Health Organization [WHO], 2015). These epidemiological changes will increase older persons with multiple chronic conditions' (MCCs) need for home health care services (Roberts et al., 2015), hospital services (Bahler et al., 2015; WHO, 2011), and potentially unplanned readmissions within 30 days of discharge (Canadian Institutes of Health Information [CIHI], 2012). Thus, there is an urgent need to understand the experiences of unplanned readmission particularly in older persons with MCCs.

This integrative review focused on developing knowledge about older persons with MCCs' unplanned readmission experiences. Developing knowledge about the perspectives of older persons with MCCs' unplanned readmission is necessary to raise national and global awareness about the needs of older persons with MCC in the current healthcare system (Boyd & Fortin, 2010; Marengoni et al., 2011; United Nations Development Council [UNDP], 2017; WHO, 2015). It is imperative that older persons with MCCs' beliefs and understandings about their needs are used to inform the development of health care practices, interventions (Boyd & Fortin, 2010), models of care, research, and policies related to unplanned readmission.

The aim of this integrative review is to explore the unplanned readmission experiences of older persons with MCCs. This analysis is significant as older persons with MCCs' experiences with unplanned readmission are unknown and may be contributing to health care expenditure.

Method

An integrative review was selected because it had "broad" latitude to integrate diverse research methodologies (Whittemore & Knafl, 2005). The integrative review was completed in five stages: problem identification, literature search, data evaluation, data analysis (data reduction and data comparison) and presentation (findings) (Whittemore & Knafl, 2005, p. 548).

Literature Search

Search Terms and Search Strategy

Key and relevant thesaurus terms (Table 2.1) and search strings (Appendix A: Online Supplemental Material) were developed with the assistance of a specialist librarian. To attain the greatest number of primary studies, four databases (Whittemore & Knafl, 2005) related to medicine, health sciences, and nursing (Ovid MEDLINE (R) Daily and Ovid MEDLINE (R) Scopus, CINAHL, and Embase) were searched between 2005 and 2020, as well as reference lists of included studies. The search was limited to the English language due to costs associated with translation and a timeframe was not applied to ensure a broad search over time. Reports and unpublished manuscripts (abstracts and dissertations) were excluded. Studies were purposefully selected based on the inclusion and exclusion criteria. After duplicates were removed, two independent reviewers screened titles and abstracts using the inclusion/exclusion criteria.

Inclusion and Exclusion Criteria

Included studies were a) primary research studies published in peer reviewed journals between 2005 and 2020; b) written in the English language; c) focused on experiences or perspectives of readmission; d) examined readmission occurring from home to hospital within 30 days; e) focused on "older" persons with an average age of 60 years or more (consistent with the global definition (WHO, 2018; United Nations, 2017)); and f) focused on older persons with MCCs.

The definition of MCCs for this review combined explanations from Boeckxstaens and Petrovic (2020) and Xu et al. (2017) to gain a comprehensive perspective of the physical health conditions, MCC or disabilities, and disease patterns or combinations. These definitions included polypharmacy (Xu et al., 2017), "symptom diagnoses," patients' daily functioning (physical and social) (Boeckxstaens & Petrovic, 2020, p. 455) as well as pain, falls, urinary problems (incontinence), (Boeckxstaens & Petrovic, 2020; Xu et al., 2017), and cognitive, hearing, and vision problems (Xu et al., 2017).

Studies were excluded if they a) were non-English studies; b) had a mean participant age of less than 60 (not focused on older persons); c) were not focused on participants' experiences and perspectives; or d) examined unplanned readmission after 30 days.

Data Evaluation

Whittemore and Knafl (2005) and the Mixed Methods Appraisal Tool (MMAT) (Version 2018) (Hong et al., 2018) were used to determine suitability for inclusion (n=13) (Table 2.2). All included studies were judged to be of adequate quality.

Data Extraction and Analysis

Data from primary sources were reviewed systematically, beginning with sub-groups (Whittemore & Knafl, 2005). Qualitative, quantitative, and then mixed methods were grouped. Qualitative and mixed methods studies were reviewed chronologically using a matrix of categories of author, year, country, title, journal, purpose, study design or framework, sample/setting, interview questions, instruments, data analysis, ethics, credibility, and findings (Garrard, 2014).

Whittemore and Knafl (2005) suggest analysing data with an approach similar to constant comparative analysis. Content analysis (Elo & Kyngas, 2008) was used in a constant

comparative manner to reduce, analyze, and synthesize data (Granheim & Lundman, 2004; Hsieh & Shannon, 2005). Manifest data were explored to understand how words or text were used within the context (Granheim et al., 2017, p. 32) before grouping similar words and sentences into categories. Next, categories were developed to interpret the text that is common and develop themes (Granheim et al., 2017; Hsieh & Shannon, 2005). Themes, comprised of latent data, reflected the underlying meaning of the categories (Granheim & Lundman, 2004) of unplanned readmission experiences.

Results

A total of 3,259 articles were obtained from search and were entered into the Covidence (Veritas Health Innovation, 2019) software. Thirty articles received full text screening. Of these, eleven met the inclusion criteria. From reference list screening n=2 were included, resulting in n=13 articles for inclusion in the integrative review (Figure 2.1).

Study Characteristics

Key findings from the ten qualitative, one quantitative and two mixed methods studies included for this review (n=13) are summarized in Table 2.3. Studies occurred in the following countries: Sweden (n=1), China (n=2), and Canada (n=1). The largest number of studies occurred in the United States (n=6) followed by Australia (n=5). Most research (n=8) occurred between 2015-2020.

Of the n=13 included studies, four studies focused exclusively older persons perspectives and experiences. Seven studies reported an average/median age of participants greater than 60. One study, with a reported median age of 57, was included as participants' ages were identified with supporting quotes, facilitating distinction between older persons' and younger persons' experiences (Considine et al., 2020). Sample sizes ranged from small (n=3) (Dilworth et al.,

2012) to large (n=520) (Dupre et al, 2018). Some of the studies did not state they included older persons with MCC, but additional participant characteristics and conditions were reported in demographic tables (n=9) and descriptions (n=4). The most frequently identified MCCs were pulmonary and cardiovascular conditions (n=12).

The complex and interrelated themes and sub-themes reflecting older persons unplanned readmission experiences included: feelings of security, support, and relief; undesirable challenges at home (struggling to manage care and balancing support needs); and unpleasant feelings and emotions (feelings of fear and mistrust, feelings of disappointment and loss, feelings of anxiousness and pressure). A diagram of the developed themes and sub-themes is presented in Table 2.4.

Feelings of Security, Support, and Relief

Feelings of security, support, and relief were identified by older persons in eleven studies. Patients reported feeling a sense of relief with unplanned readmission (Dilworth et al., 2012; Han et al., 2017; Howard-Anderson et al., 2016, p. 409; Slatyer et al., 2013). They identified feeling relief from the security and support with care within the hospital (Dilworth et al., 2012; Enguidanos et al., 2015; Jeffs et al., 2014; Slatyer et al., 2013) and the treatments to alleviate physical symptoms (Antony et al., 2018; Patel et al. 2007; Tang & Lee, 2017) which alleviated their fears of death and dying (Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017). Three studies identified that patients gained new information about how to support their self-care at home (Antony et al., 2018; Kirby et al., 2013; Tang & Lee, 2017). Older persons reported feeling secure and supported with their caregiver but acknowledged that their need for support created "stress" for their caregivers (Considine et al., 2020; Tang & Lee, 2017). It is unclear whether managing symptoms, respite or caregiving provided relief (Tang & Lee, 2017).

Undesirable Challenges at Home

Patients described concerns about caring for themselves at home that increased greatly at discharge. The theme of undesirable challenges at home reflected the older persons' feelings about not being prepared to return home and sub-themes of struggling to manage care and balancing support needs.

Struggling to Manage Care Needs

Across 12 studies, patients felt unprepared to manage their care at home because of lack of knowledge to care for themselves, poor access to community health care, and resources. Patients lacked knowledge to care for their symptoms, medications, and treatments. Ten studies identified that patients lacked health literacy and discharge information to recognize, manage, and differentiate symptoms (Antony et al., 2018; Considine et al., 2020; Dilworth et al., 2012; Enguidanos et al., 2015; Howard-Anderson et al., 2016; Jeffs et al., 2014; Kirby et al., 2013; Patel et al., 2007; Slatyer et al., 2013). Patients in five studies also lacked knowledge about monitoring new, ongoing, and worsening symptoms (Antony et al., 2018; Considine et al., 2020; Dilworth et al., 2012; Jeffs et al., 2014; Kirby et al., 2013), managing their care and treatments, and mitigating complications or exacerbations of the disease (Enguidanos et al., 2015; Slatyer et al., 2013; Tang & Lee, 2017). Implementing prescribed medication regimes at home challenged patients in three studies. Challenges ranged from lack of knowledge about medications (Antony et al., 2018), to not adhering to medications (Jeffs et al., 2014), to system issues (medications or care supplies) (Smeralgio et al., 2019). Lack of knowledge contributed to older persons' struggles of concurrently managing the complexity of MCCs, their potential complications, and numerous medications (Antony et al., 2018; Enguidanos et al., 2015; Jeffs et al., 2014).

Inadequate access to community home health care services and resources increased patients' struggles to manage care. In four studies patients reported unmet care needs as home health care services were poorly timed and coordinated (Antony et al., 2018; Dilworth et al., 2012; Jeffs et al., 2014; Slatyer et al., 2013). Older persons identified that they required more assistance at home with their activities of daily living (Enguidanos et al., 2015; Kirby et al., 2013; Smeralgio et al., 2019). Patients identified lacking information about accessing community services and equipment (crutches, wheelchair, walkers) (Howard-Anderson et al., 2016; Jeffs et al., 2014; Smeraglio et al., 2019) to assist with managing their care.

Patients struggled with accessing resources to manage their care. These resources involved a) costs (Antony et al., 2018; Considine et al., 2020; Dupre et al., 2018), b) reliance on family caregivers and access to transportation for appointments (Antony et al., 2018; Considine et al., 2020; Dupre et al., 2018), c) housing (Jeffs et al., 2014) or their home environment (Kirby et al., 2013), and d) reliance on family caregivers with help at home (Considine et al., 2020; Enguidanos et al., 2015; Jeffs et al., 2014; Kirby et al., 2013).

Balancing Support Needs

Across 10 studies, patients' descriptions of support often referred to assistance from caregivers, family with whom the older persons lived. They also described support from health care providers. In seven studies, older persons identified support from their primary care provider and community providers as supportive (Antony et al., 2018; Considine et al., 2020; Dilworth et al., 2012; Enguidanos et al., 2015; Kirby et al., 2013; Slatyer et al., 2013). Explanations from patients who refused help from community care providers were not collected by the researchers (Jeffs et al., 2014; Kirby et al., 2013; Slatyer et al., 2013).

Caregivers supported patients' activities of daily living, transportation, and decision for readmission (Antony et al., 2018; Considine et al., 2020; Dilworth et al., 2012; Howard-Anderson et al., 2016; Jeffs et al., 2014; Kirby et al., 2013; Patel et al., 2007; Slatyer et al., 2013; Tang & Lee, 2017). Older persons described being mindful that their need for support with their symptoms/condition placed increased "stress" or "problems" on their caregiver (Considine et al., 2020, p. 6; Enguidanos et al., 2015; Patel et al., 2007; Tang & Lee, 2017). To alleviate this stress, patients reported not contacting their caregiver until morning about problematic symptoms (Patel et al., 2007) or requesting that caregivers not visit them in the hospital (Tang & Lee, 2017). Patients in three other studies reported that their need for unplanned readmission was validated by the support from family caregivers (Antony et al., 2018; Patel et al., 2007; Slatyer et al., 2013). In contrast, patients in three studies identified having a lack of or no caregiver support at home (Enguidanos et al., 2015; Jeffs et al., 2014; Tang & Lee, 2017). Patients who reported being unable to manage and "care for themselves" (Enguidanos et al., 2015, p. 539; Kirby et al., 2013) or find a caregiver to support them in their own home (Enguidanos et al., 2015) experienced unplanned readmission. It is unknown whether all older persons' identified socializing with family and friends at home was "treasured time" or whether it assisted with coping during unplanned readmission (Tang & Lee, 2017, p. 1119). The type of or sustainability of support provided and needed by older persons during their unplanned readmission was not reported.

Unpleasant Feelings and Emotions

The unplanned readmission experience contained unpleasant feelings and emotions of fear and mistrust, disappointment and loss, and anxiousness and pressure (n=13). Unresolved questions and severe symptoms prompted older persons in 12 studies to return to the hospital to

gain answers, receive "better care" (Antony et al., 2018; Considine et al., 2020; Dilworth et al., 2012; Enguidanos et al., 2105; Han et al., 2017; Howard-Anderson et al., 2016; Jeffs et al., 2014; Patel et al., 2007; Slatyer et al., 2013), and regain control (Dilworth et al., 2012; Han et al., 2017; Jeffs et al., 2014; Slatyer et al. 2013). Older persons' unmet psychosocial needs of substance use (drug and alcohol problems) (Jeffs et al., 2014), social isolation (Dupre et al., 2018; Slatyer et al., 2013) and caregiver strain (Considine et al., 2020; Dilworth et al., 2012; Jeffs et al., 2014; Slatyer et al., 2013) influenced unplanned readmission (n=10).

Feelings of fear and mistrust

Older persons' fears included "going through" (Considine et al., 2020, p. 5) another negative hospital encounter (Han et al., 2017; Patel et al., 2007). Patients feared that the severity of their symptoms would be discounted or "rejected by" by health care services or personnel (Han et al., 2017; Patel et al., 2007, p. 705). Lack of resolution of symptoms after receiving acute hospital services increased patients' fears (Considine et al., 2020; Howard-Anderson et al., 2016; Kirby et al., 2013; Slatyer et al., 2013). They worried about the possible fatality of their symptoms (Han et al., 2017; Jeffs et al., 2014; Patel et al., 2007; Slatyer et al., 2013; Tang & Lee, 2017). Discharge, returning home (Han et al., 2017; Jeffs et al., 2014; Slatyer et al., 2013; Tang & Lee, 2017), and living alone or with a caregiver who was unable to provide care also increased patients' fear (Jeffs et al., 2014; Slatyer et al., 2013).

Patients in three studies described the outcomes of fear. Fear of not having a cure resulted in patients postponing unplanned readmission (Patel et al., 2007), returning often to the Emergency Department (Han et al., 2017), or dying (Enguidanos et al., 2015). Patients tried to delay or avoid readmission but feared dying from respiratory distress because they tried to control and manage their breathlessness too long (Patel et al., 2007; Tang & Lee, 2017).

Mistrust with unplanned readmission was identified by patients in six studies. No improvement in symptoms from the first admission (Antony et al., 2018; Considine et al., 2020; Dilworth et al., 2012; Han et al., 2017; Jeffs et al., 2014) resulted in patients' distrusting the physicians' diagnosis (first admission) and feeling "tricked" about being discharged (Dilworth et al., 2012; Han et al., 2017, p. 306; Jeffs et al., 2014; Slatyer et al., 2013). Older persons with MCC experienced mistrust in their plans of care when multiple health care providers were involved and care plans changed (Antony et al., 2018; Considine et al., 2020; Dilworth et al., 2012). Multiple unplanned readmissions were used to attain a diagnosis that fit better with what patients' felt was wrong with them (Han et al., 2017). In three studies, participants discharged themselves against medical advice (Considine et al., 2020; Dilworth et al., 2012; Jeffs et al., 2014).

Feelings of disappointment and loss

In 11 studies, patients expressed disappointment with health care services. These disappointments were related to hospital wait times (Considine et al., 2020) and gaps or barriers in and between hospital and community health care services (Antony et al., 2018; Dilworth et al., 2012; Smeralgio et al., 2019). Patients also reported disappointment with experiencing the same symptoms/problem without explanations (Antony et al., 2018; Dilworth et al., 2012; Enguidanos et al., 2015; Han et al., 2017; Jeffs et al., 2014) or a cure for their symptoms (Patel et al., 2007; Tang & Lee, 2017). The "failed discharge" label was reinforced when patients returned multiple times to the hospital and internalized their concern about increased stress and dependency they imparted on their family caregivers (Considine et al., 2020; Dilworth et al., 2012; Patel et al., 2007). Patients in two studies refrained from asking their families for help returning to the hospital (Patel et al., 2007; Tang & Lee, 2017). It is unclear whether these actions were related to

older persons' feelings of disappointment about unplanned readmission, delays in seeking treatment, or not burdening their family.

Participants' emotions of loss were related to decreasing independence, functioning, managing symptoms (Antony et al., 2018; Considine et al., 2020; Dilworth et al., 2012; Enguidanos et al., 2015; Kirby et al., 2013; Slatyer et al., 2013; Smeralgio et al., 2019; Tang & Lee, 2017), and purpose in life (Enguidanos et al., 2015). Loss of time and place to recover was also experienced when older persons described discharge as being "pushed out" (Enguidanos et al., 2015; Han et al., 2017) or identifying they were being discharged because they were not a "serious case" (Slatyer et al., 2013, p. 451). It is unknown how older persons coped with multiple losses, what supports older persons needed to remain at home, or how older persons' feelings of disappointment and loss were influenced multiple unplanned readmissions.

Feelings of anxiousness and pressure

Patients' feelings of anxiety were reported in seven studies. Patients reported feeling stressed and anxious about symptoms (Dupre et al., 2018; Han et al., 2017; Jeffs et al., 2014; Patel et al., 2007; Slatyer et al., 2013; Tang & Lee, 2017), depression and mental health, finances, and purpose in life at home (Enguidanos et al., 2015), with feelings of being "pushed out" of hospital (Enguidnanos et al., 2015; Han et al., 2017) because they identified themselves as being the label of "not a serious case" (Slatyer et al., 2013, p. 451). Older persons summed responses to three questions about their stress related to home, health, and finances suggests that stress was low (Dupre et al., 2018).

In seven studies, patients reported that they felt pressure during unplanned readmission to trust the health care providers (Dilworth et al., 2012; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017), accept treatment (Dilworth et al., 2012; Han et al., 2017; Tang & Lee, 2017),

handle their symptoms at home (Antony et al., 2018), and limit the support from family caregivers (Considine et al., 2020). The extent to which older persons felt pressured to accept offers for unwanted increased living support (Enguidanos et al., 2015; Slatyer et al., 2013) or how unplanned readmission influenced older persons' decision or movement to long term care was not described. Older persons' unplanned readmission experiences included positive and unpleasant emotions.

Discussion

The findings from the integrated review identified that older persons' unplanned readmission was not an isolated event. It was however an experience that encompassed past experiences with undesirable challenges at home (struggling to manage care and balancing support needs), unpleasant feelings and emotions (feelings of fear and mistrust, feelings of disappointment and loss, feelings of anxiousness and pressure), and feelings of security, support, and relief.

Older persons with MCCs' experienced intrinsic and extrinsic challenges. Intrinsic challenges were within older persons with MCCs' control and included balancing their support needs. The extrinsic challenges were outside of older persons with MCCs' control. Identified extrinsic challenges with managing care included a lack of information about symptoms, diseases, medications, community health care services, and resources.

The intrinsic challenges identified were balancing the support that older persons with MCCs needed or asked of from their family and health care providers or services. This support was related to increased assistance with activities of daily living, transportation, symptoms, and the decision to return. For example, older persons may have delayed contacting their caregiver (Patel et al., 2007) or requested that family caregivers only call them while in hospital (Tang &

Lee, 2017) to balance support needs. These intrinsic challenges may also be considered extrinsic challenges in the absence of caregiver support.

Extrinsic challenges related to managing their care at home included lack of preparation to return home. The lack of preparation was related to inadequate information about taking care of themselves at home (complexity of conditions, symptoms, medications, and treatments) and access to community health care resources, services, and providers. Reed et al. (2015) identified similar extrinsic findings in their root cause analysis. Older persons with MCCs' reasons for seeking unplanned readmission included "minimal care, progression of disease, delayed care seeking by patients, medical error, home care accessibility, and high complexity" as reasons for seeking admission (Reed et al., 2015, p. 4). These authors identified the causes of unplanned readmission but did not capture the emotions associated with the challenges older persons experienced at home.

Unplanned readmission supported older persons' need for care of an urgent or emergent crisis from a previous hospitalization (Coatsworth-Puspoky et al., 2021). At times unplanned readmissions were associated with positive feelings of security, support, and relief. For example, older persons' decision to return to hospital for acute care treatment of symptoms provided a sense of relief and security from their fears of dying and alleviated their symptoms. This finding has not been previously reported in the reviewed literature and assists in understanding older persons' emotional experiences associated with unplanned readmission.

Unpleasant feelings and emotions of fear and mistrust, disappointment and loss, and anxiousness and pressure were the outcome of older persons with MCCs' extrinsic challenges with managing their care. Our findings reported that unpleasant feelings occurred during discharge, at home, and during unplanned readmission. Similar findings were reported in a

systematic review of the literature by Blakey et al. (2017) who explored the experiences of older persons' (65 years old) unplanned readmission (Blakey et al., 2017). However, in contrast to our systematic review, Blakey et al. (2017) described participants' feelings as being connected to the processes during the initial hospital admission, discharge, and returning home. The differences maybe that Blakey et al.'s (2017) review was not focused on older persons with MCC and included studies that defined readmission as beyond 30 days.

The current review findings support and reinforce that unplanned readmission is not a single, objective event, but is an experience that extends from the previous or first admission through the older persons with MCCs' discharge to home and to their return to hospital as an unplanned readmission (Coatsworth-Puspoky et al., 2021). Thus, older persons with MCCs' emotional needs must be addressed during unplanned readmission. Identifying older persons with MCCs' challenges as intrinsic and extrinsic has not been previously described. Intrinsic and extrinsic challenges during unplanned readmission may be helpful to expand our understanding of older persons' lack of symptom stability, knowledge, safety, and support (Coatsworth-Puspoky et al., 2021). Understanding intrinsic and extrinsic challenges may be helpful in guiding the development of interventions.

Strengths and Limitations

Several strengths to this review are related to the systematic methodology used in the search and in the analysis of the data. For example, a systematic search was conducted in consultation with an expert librarian. As well two reviewers determined what studies should be included to reduce bias. Then all authors were involved in discussions regarding the themes.

Some of the limitations of the review included limiting the search to English only studies. Additional relevant studies may have been identified by broadening the search to include other

languages or the grey literature. As well the studies included had a mean age of 60 years of age and older, so it is possible that some of the findings reflect those of a younger age. Future research focusing on older persons should have inclusion criteria of 60 years of age and older. This issue underscores the need for more research on unplanned readmission from the perspectives of older persons with MCC.

Conclusion

This integrative review increases our understanding of the experience of older persons with MCC. Older persons with MCCs' voices about their unplanned readmission experiences to the hospital is limited and does not provide sufficient detail or understanding about older persons with MCCs' experiences and about their challenges at home. Research is needed that addresses the gaps about the emotional and psychosocial processes and factors associated with unplanned readmission. Further, nurses need to assess older persons with MCCs' past experiences with unplanned readmission experiences to understand and build on older persons' past successes, mitigate challenges, and address the negative emotions and feelings associated with unplanned readmission. By addressing older persons with MCCs' emotional and physical needs, older persons with MCCs' may be able to reduce the unpleasant emotions associated with and number of readmissions they require to maintain their health.

Implications

- Older persons with MCCs' emotional needs during unplanned readmission have not been sufficiently addressed (Blakey et al., 2017).
- Exploring older persons with MCCs' experiences and current feelings towards returning home is necessary for the development of interventions to address their intrinsic and extrinsic challenges and emotions to reduce unplanned readmission.
- The findings are useful in raising awareness among health care providers about these terms that older persons use to describe discharge such as "being pushed out" (Enguidanos et al., 2015, p. 539), "being tricked" (Han et al., 2017, p. 306) or not being "a serious case" (Slatyer et al., 2013, p. 451) or readmission as a "failed discharge" (Considine et al. 2020, p. 5)
- Information obtained from this review provides an opportunity for health professionals and policymakers to better understand and address older persons with MCCs' concerns about discharge and unplanned readmission.
- Asking older persons about their feelings and addressing older persons' emotional and mental health needs may reduce the unpleasant emotions associated with unplanned readmission and help them to increase their comfort in asking questions when they are unclear about information.
- These findings identify the need for health care providers to listen to and develop a range of interventions (interconnected, separate, and fluctuating levels of severity) with older persons that address the "huge heterogeneity" of their individual experiences, conditions, and symptoms (Boeckxstaens & Petrovic, 2020, p. 456).

- These findings may expand current knowledge related to transitional care or models (Goegiadis & Corrigan, 2017; Naylor, 2000; Naylor et al., 2007), transitional health care (Foust et al., 2012), and care transitions (Fuji et al., 2012).

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Table 2.1

Database Search Terms

Databases	Search Terms
Ovid MEDLINE (R) Daily and Ovid MEDLINE (R) from 1946 to present	*Patient Readmission, readmit*, readmission, re-admit, re-admission, rehospitali*, re-hospitali*, re-present, patient*, elder*, seniors, geriatric*, old*, caregiver*, carer*, son or sons, daughter*, wife or wives, husband*, spouse*, family, adult child*, perceive*, perception*, view*, belief*, report*, feedback, perspective, patients/px, interview, questionnaire*, self report*, experience*, “Aged, 80 and over", Aged, Frail Elderly, person*, persons, adult*, men, women, *Home Nursing, *Adult Children
Scopus	
CINAHL	
Embase (1974 to 2020)	

Note: Key words and thesaurus search terms applied to the databases are identified.

Table 2.2

Methodological Appraisal of Reviewed Studies (n=24) Using the Mixed Methods Appraisal Tool (MMAT)

Table 2: MMAT Table	SCREENING QUESTIONS		1. QUALITATIVE STUDIES				
Citation	**S1. Are there clear research questions?**	**S2. Do the collected data allow to address the research questions?**	**1.1. Is the qualitative approach appropriate to answer the research question?**	**1.2. Are the qualitative data collection methods adequate to address the research question?**	**1.3. Are the findings adequately derived from the data?**	**1.4. Is the interpretation of results sufficiently substantiated by data?**	**1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation?**
Annema, C., Luttik, M. L., & Jaarsma, T. (2009).	Yes	Yes	Yes	Yes	Yes	No	Yes
Antony, S. M., Grau, L. E., & Brienza, R. S. (2018).	Yes	Yes	Yes	Yes	Yes	Yes	No
Cakir, B., Kaltsounis, S., D'Jernes, K., Kopf, S., & Steiner, J. (2017).	Yes	Yes	Yes	Yes	Yes	No	Yes
Considine, J., Berry, D., Sprogis, S. K., Newnham, E., Fox, K., Darzins, P., Rawson, H., & Street, M. (2020).	Yes	Yes	Yes	Yes	Yes	No	Yes
Dilworth, S., Higgins, I., & Parker, V. (2012).	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Donaghy, E., Salisbury, L., Lone, N. I., Lee, R., Ramsey, P., Rattray, J. E., & Simon, T. (2018).	Yes	Yes	Yes	Yes	Yes	Yes	No
Han, C-Y., Lin, C-C., Goopy, S., Hsiao, Y-C., & Barnard, A. (2017).	Yes	Yes	Yes	Yes	Yes	No	Yes

Jeffs, L., Dhalla, I., Cardoso, R., & Bell, C. M. (2014).	Yes	Yes	Yes	Yes	Yes	No	Yes
Kirby, S. E., Dennis, S. M., Bazeley, P., & Harris, M. F. (2012).	Yes	Yes	Yes	Yes	No	Yes	Yes
Lee, J. I., Cutugno, C., Pickering, S. P., Press, M. J., Richardson, J. E., Unterbrink, M., Kelser, M. E., & Evans, A. T. (2013).	Yes	Yes	Yes	Yes	Yes	Yes	No
Patel, H., Shafazand, M., Schaufelberger, M., & Ekman, I. (2006).	Yes	Yes	Yes	Yes	No	Yes	Yes
Pedersen, M. K., Mark, E., & Uhrenfeldt, L. (2018).	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Slatyer, S., Toye, C., Popescu, A., Young, J., Matthews, A., Hill, A., & Williamson, D. J. (2013).	Yes	Yes	Yes	Yes	Yes	No	Yes
Smeraglio, A., Heidenreich, P. A., Krishnan, G., Hopkins, J., Chen, J., & Shieh, L. (2019).	Yes	Yes	Yes	Yes	Yes	Yes	No
Stein, J., Ossman, P., Viera, A., Moore, C., Brubacker, B. A., French, J., & Liles, E. A. (2016).	Yes	Yes	Yes	Yes	No	Yes	Yes
Tang, F. W-K. & Lee, D. T-F. (2017).	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Verhaegh, K. J. M., Jepma, P., Geerlings, E. E., De Rooij, S. E., & Buurman, B. M. (2019).	Yes	Yes	No	Yes	Yes	Yes	Yes

Yu, D. S. F., Lee, D. R. F., & Woo, J. (2007).	Yes	Yes	Yes	Yes	No	No	No

SCREENING QUESTIONS			**4. QUANTITATIVE DESCRIPTIVE STUDIES**				
Citation	**S1. Are there clear research questions?**	**S2. Do the collected data allow to address the research questions?**	**4.1. Is the sampling strategy relevant to address the research question?**	**4.2. Is the sample representative of the target population?**	**4.3. Are the measurements appropriate?**	**4.4. Is the risk of nonresponse bias low?**	**4.5. Is the statistical analysis appropriate to answer the research question?**
Howard-Anderson, J., Busuttil, A., Lonowski, S., Vangala, S., & Afsar-manesh, N. (2016).	Yes	Yes	Yes	No	Yes	No	Yes
Hutchinson, A., Rasekaba, T. M., Graco, M., Berlowitz, D. J., Hawthorne, G., & Lim, W. K. (2013).	Yes	Yes	Yes	Yes	Yes	No	Yes
Longman, J. M., Rolfe, M. I., Passey, M. D., Heathcote, K. E., Ewald, D. P., Dunn, T., Barclay, L. M., & Morgan, G. G. (2012).	Yes	Yes	Yes	Yes	Yes	No	Yes
Madigan, E. A., Schott, D., & Matthews, C. R. (2001).	Yes	Yes	Yes	Yes	Yes	No	Yes

SCREENING QUESTIONS			**4. MIXED METHODS STUDIES**				
Citation	**S1. Are there clear research questions?**	**S2. Do the collected data allow us to address the**	**5.1. Is there an adequate rationale for using a mixed methods design to**	**5.2. Are the different components of the study effectively integrated to answer the**	**5.3. Are the results adequately brought together into overall interpretations?**	**5.4. Are divergences and inconsistencies between quantitative and**	**5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?**

		research questions?	address the research question?	research question?		qualitative results adequately addressed?	
Dupre, M. E., Xu, H., Granger, B. B., Lynch, S. M., Nelson, S., Churchill, E., Willis, J. M., Curtis, L. H., & Peterson, E. D. (2018).	Yes	Yes	Yes	Yes	Yes	Yes	No
Xu, J., Gallo, J. J., Wenzel, J., Nolan, M. T., Budhathoki, C., Abshire, M., Bower, K., Arruda, S., Flowers, D., Szanton, S. L., Himmelfarb, C. D., Fonzalez, K., & Han, H-R. (2019).	Yes	Yes	Yes	Yes	Yes	Yes	No

Table 2.3

Study Characteristics, Key Findings, and Outcomes of Unplanned Readmission Studies (n=24)

Study	Aims	Design	Country, Setting	Sample Size, Age, Gender, Race/Ethnicity, Chronic Condition, Multiple Chronic Conditions (MCC)	Key Findings and Implications
Annema, C., Luttik, M. L., & Jaarsma, T. (2009).	To describe and compare the reasons that heart failure (HF) patients from three groups were readmitted from the perspectives of patients, caregivers, cardiologists, and HF nurses	Qualitative; Interview and questionnaire	The Netherlands Sub-study of larger study of 17 centers	Sub-study group-n=134 Age 71 (SD +/-12 years) 65% men Race not identified Heart Failure patients NYHA Class II- 37% NYHA Class III/IV-53% Chronic Condition-yes HF MCC-not identified Caregivers-n=76; cardiologists n=94; heart failure nurses n=103	-Health care providers (HF nurses and cardiologists) and HF patients and caregivers agreed 34% of the time about unplanned readmission reason -4% of patients could not identify reason for readmission -Primary reason of readmission worsening HF (35-55%) -Patients and caregivers experienced trouble adhering to diet, fluid intake, and medication regime (25%-26%) - "Miscellaneous" factors included emotional and mental health, environmental, and health care system problems (16-26%) -72% of patients and caregivers agreed readmission was possibly preventable -Patients and caregivers suggested interventions: improved adherence (18%-33%), "adequate professional help" (13%-35%) and "adequate discharge planning" (6%-13%) -Understanding symptoms associated with comorbid conditions may be critical underlying cause of readmission for patients and caregivers to seek help sooner -37% of patients lived alone
Antony, S. M., Grau, L. E., &	To explore patients' perspectives about factors	Qualitative; Semi-structured interviews	United States In-patient medicine units at a 216-bed hospital	n=18 Average age 71.6 Age range 59-90 94% men	-Older male veterans identified the barriers that contributed to unplanned readmission as lack of timely access to primary care provider and community services, discharged before

Brienza, R. S. (2018).	influencing readmission and what interventions would help to reduce or prevent readmissions			94% white Chronic condition: HF "Pre-existing chronic conditions or serious medical conditions"-yes MCC- not identified	ready, lack of primary care provider involvement in readmission decision, and distance and transportation to services before and after discharge -Readmission was inevitable -Strategies to reduce unplanned readmission: outreach to high-risk patients after discharge, increased communication between health care providers and patients and families, education about primary care provider's role, increased local before and after-hours care in clinics (including transportation) -Researchers recommended that patients' (and caregivers') perceptions and understanding about discharge instructions, discharge readiness, where they will be living, and social support be assessed from admission to discharge
Cakir, B., Kaltsounis, S., D'Jernes, K., Kopf, S., & Steiner, J. (2017).	To identify patient's perceptions of factors that increase their risk of hospital readmission	Descriptive study, chart review and interviews using worksheet (State Action on Avoidable Rehospitalization (STAAR))	United States Large 874-bed community hospital	n=122 Average age 50.8 Age range 19-98 41% men 41% black Chronic conditions-some identified (only diagnosis) MCC-not identified	-9.5% of patients did not know symptoms of disease that caused unplanned readmission; 30% were unable to identify how to self-manage symptoms -Patients identified resources as possible factors to prevent unplanned readmission as lack transportation, money (for bills, food, medications, and transportation), social support, and professional help (home health care), pain management, follow-up support (home health care, follow-up appointments) -Researchers suggested that discharge planning be "tailored" to support patient needs and the need for partnerships between hospital and community healthcare services -Differences between health care providers' documentation and patients' perceptions of readmission suggested that patients and providers lacked a common and shared understanding about home health care, discharge plans, and purpose of social support

Considine, J., Berry, D., Sprogis, S. K., Newnham, E., Fox, K., Darzins, P., Rawson, H., & Street, M. (2020).	To identify the features that could be improved during discharge to prevent or avoid readmission and to identify discharge planning elements that could improve the discharge experience.	Qualitative descriptive; Semi-structured interviews Patient characteristics and admission data from chart (electronic medical record)	Australia 3 acute care hospitals (600-bed tertiary care, 250 and 155 metropolitan hospitals)	n=30 (19 tertiary, 7 mid-sized, and 4 from small hospital) Median age 57 Average age 45 to >65 (9 were 18-44, 9 were 45-64, and 12 were >65) 53% men Country of Birth 73% Australian 90% readmitted with diagnosis related to admission diagnosis Chronic condition- NI MCC-NI	-Patients and caregivers' experiences of the discharge process that contributed to unplanned readmission included themes of "experiences of care (through admission, discharge, and readmission), hearing and being heard (communication and exchange of information about discharge planning and post-discharge care), "what's wrong with me" (lack of answers about a clear diagnosis and treatment), "not just about me" (but also about the increased work and stress the patient realises that discharge places on caregivers) and "it's all about going home"(regardless of who initiates discharge) (p. 4) -Patients labelled unplanned readmissions "failed discharge" -Discharge was started by clinicians, patients (desired it or left too soon), and patients (frustrated with-against medical advice) -To avoid unplanned readmission, patients and caregivers suggested better communication and coordination between them and the health care team about discharge readiness, discharge planning (goals), and discharge decisions (transportation) -Researchers supported communication improvements as a method of improving patient experiences and safety
Dilworth, S., Higgins, I., & Parker, V. (2012).	To explore the experiences, circumstances, reasons, and incidences of and ways to improve person-centered care with older persons were readmitted to hospital after discharge home.	Qualitative descriptive Semi-structured interviews	Australia Large tertiary care hospital	n=3 Age of participants>65 66% men Race-NI Chronic condition-yes MCC-probable but not measured 1 caregiver participated with older person	-Patients who experienced unplanned readmission felt frustrated with receiving mixed messages and little explanation or information related to health care treatments, unanswered health care questions, little attention to their values and preferences, resulting in harm (one patient received wrong medication resulting in kidney damage, another discharged themselves against medical advice) -Being cared for during first hospital stay created the circumstances at home (medication

					side effects that resulted in a fall) for unplanned readmission and increased care needs at home, characterized by "oversights and errors" in care (p. 285) -Patients felt disappointed with the lack of discharge planning, continued feelings of being sick, return to pre-hospital functioning, and readiness to go home -Unplanned readmission inevitable -Quality of care of first hospital stay linked to unplanned readmission through communication, consultation, and management of discharge planning to the community -Researchers suggested that the context of patient-centered care is created by assessing patient needs and expectations on admission and working with patients to make decisions about their care in discharge plans
Donaghy, E., Salisbury, L., Lone, N. I., Lee, R., Ramsey, P., Rattray, J. E., & Simon, T. (2018).	To understand what contributes to unplanned readmission based on the perspectives of ICU survivors and their caregivers.	Qualitative, Semi-structured interviews and focus groups	United Kingdom Part of a larger program of research Participants recruited from searching 3 Scottish Health Board hospital discharges	Interviews n=29 (1 who was 18-24; 2 who were 25-34; 3 who were 35-44; 8 who were 46-54; 5 who were 55-59; 2 who were 60-64; 8 who were 65+) 62% men Race-NI Chronic Condition-NI MCC-62% Not MCC-38% n=29 relatives/ caregivers Focus Group n=20 (0 who were 18-24; 1 who was 25-34; 1 who was 35-44; 6 who were	-Researchers identified 10 themes from ICU patients and caregivers' experiences of unplanned readmission that fit into categories of patient and system themes. Patient themes included: "multimorbidity and polypharmacy, problems with specialist equipment, psychological problems and alcohol or drug dependency, poor mobility, and fragile social support" (p. 919). System themes included: "poor preparation for hospital discharge, poor communication between acute care and community-based care, inadequate psychological care, inadequate medication support, lack of goal setting" (p. 920). These themes fit with the patients' readmission experience contexts. Two contexts identified: -1. Complex health and psychosocial needs context: Patients experienced a medical event where multiple complex interrelated circumstances (patient and system factors) contributed to unplanned readmission (ie.

				46-54; 5 who were 55-59; 4 who were 60-64; 3 who were 65+) 45% men Race-NI Multimorbid 75% Not MCC-25% n=20 caregivers/relatives	patients who have multiple chronic conditions, lack of social support, and lack of information about recovery from health care team in hospital and community). Caregivers experienced increased stress and strain and patients experienced coping difficulties and multiple readmissions. -2. Medically unavoidable readmission: Patients were different from the above group as they had better health, social and caregiver support, low dependency on health or social service care, and experienced one readmission. -Researchers suggested that interventions to support patients who have experienced critical illness should include social support, information about what to expect during recovery, and communication between physicians in hospital and community.
Dupre, M. E., Xu, H., Granger, B. B., Lynch, S. M., Nelson, S., Churchill, E., Willis, J. M., Curtis, L. H., & Peterson, E. D. (2018).	To determine how often patients with CVD experience problems accessing routine care and whether these problems are clinical in nature or non-clinical and whether readmission is related to the difficulty in accessing routine care.	Logistic regression Electronic records and survey, interviews	United States Large medical center	n=520 median age 65 (IQR 19) 61.5% men Race-64.62 white Chronic Conditions: HTN-49%, DM-27.5%, Acute MI-11.39%; HF-33.99%; AF-30.26%, ADL Disability 57%, MCC-NI	-15.7% of patients reported difficulties (some to extreme) with accessing regularly scheduled medical care -Care access where difficulty reported was with transportation (20%) and arranging appointments (27%) and increased their risks for unplanned readmission -Participants who had problems accessing routine care were those participants who identified having more issues resulting in stress, identified having symptoms of depression and heart failure, and travelled further to receive care -If patients were unable to access their regularly scheduled medical care appointments, were significantly more likely to experience an unplanned readmission within 30 days than those who did not (33.3% vs 17%, p=0.001) -Risks for readmission were higher for patients who had difficulty with transportation

					(low SES, decreased social support and ADL functioning) than accessing care (41.2% vs 17.8%) -Researchers recommended additional research to understand underlying factors in the patients' access to routine care and unplanned readmission
Han, C-Y., Lin, C-C., Goopy, S., Hsiao, Y-C., & Barnard, A. (2017).	To explore older persons' concerns, experiences, and factors during ED return visits and readmission.	Semi structured interviews	Taiwan Large medical center-treats 150,000 persons per year	n=30 Mean age 70.1 (18 were 65-70; 8 were 71-75; 4 were over 76) 60% men Race-Mandarin or Taiwanese Chronic Conditions-GI (43.3%), Resp (30%), CV (13%) MCC-NI	-Older Taiwanese patients felt "tricked" into leaving the hospital by ED health care providers because they were not ready, and their medical symptoms were not resolved -Readmission represented older persons shopping for a physician who would address and solve the "real" problem and that by returning to the ED they would receive a diagnosis and be able to recover -Each readmission reinforced their "fears of death and dying" (p. 307) and their perceptions of being sick -Participants were distrustful of proposed treatments, but felt obligated to be obedient to maintain their self-control and have their illness cured -Readmission is also a form of social behavior, problem-solving, and regaining trust to avoid unplanned readmissions -ED unplanned readmission linked admission physiologically, psychologically, and socially for older Taiwanese persons
Howard-Anderson, J., Busuttil, A., Lonowski, S., Vangala, S., & Afsar-manesh, N. (2016).	To explore patients' reasons for and attitudes about being readmitted to the hospital and identify ways to reduce readmissions.	24-question interview survey	United States Academic medical center and community hospital with services for general medicine and cardiology	n=230 (115 at both sites) mean age 63 (4 people <60) 45% men 63% white, 21% black, 8% Asian, 8% other Chronic Conditions-NI (pain) MCC-NI	-32% (1 in 3) of patients who felt unready for discharge reported symptoms unresolved and uncontrolled (ie pain (43% vs 7%, P<0.01)) -8% of patients ready for discharge felt symptoms were unresolved (P<0.01) -Caregiver presence (reported by 80% in both groups) did not alleviate patient self-care concerns or not being strong enough for home (54% vs 25%, P<0.001) -35% received no discharge paperwork, 23% unable to identify contact phone numbers,

				Caregivers allowed to answer questions for patients with permission	22% unable to identify symptoms requiring medical attention -Only 56% of patients contacted a physician about worsening symptoms before returning to ED compared to 85% who expressed comfort in doing this -When patients experienced unplanned readmission, their sense of relief was 1.8 points higher than their sense of burden (7.7 [SD 2.8] vs 5.9 [SD 3.4], P<0.001) and in 79% of cases it was equal -Redesigning care to reduce readmissions starts and ends with the patient (p. 411)
Hutchinson, A., Rasekaba, T. M., Graco, M., Berlowitz, D. J., Hawthorne, G., & Lim, W. K. (2013).	To describe older persons with complex needs' HRQoL and to explore how this is related to 12 month readmission rates to acute care and 5 year survival.	Prospective longitudinal cohort design Surveys either mailed or hand delivered after first assessment	Australia (metropolitan) 2 services from Northern Alliance Hospital Admission Program RAC (Rapid assessment and care coordination service) and CCM (community case-management and support service)	n=210 Mean age 78 years (SD 7.8 years) Age range (60-80+ years) 33% men Race-NI Chronic Conditions-43% (0-1) MCC-56% (2-6+ conditions)	-Health related Quality of Life reported by older adults with complex needs (56% had 2 or more comorbidities) was significantly worse (1/2) when compared to older adults in the population (AQoL 0.30)(SD 0.27) -Participants >80 years of age had AQoL scores that revealed loss of "seeing, hearing, and communication ability" (p. 4) -Younger participants (60-69 years of age) revealed problems with anxiety, quality of sleep, and pain negatively impacted their mental health and psychological well-being -38% experienced between 1-15 unplanned readmission over one year -The odds of readmission were five times higher for older persons with Charlson scores of 6-15 as compared to older persons with Charlson scores of <5 (OR=5.33 (95% CI: 2.64-10.76)), older persons with low AQoL scores (<0.37) two times likely to experience readmission compared to those who had higher AQoL scores (p. 5)
Jeffs, L., Dhalla, I., Cardoso, R., & Bell, C. M. (2014).	To explore and compare the perceptions of readmission related to reasons	Exploratory case design Semi-structured interview	Canada Large, inner city, academic hospital, 70-bed	n=16 patients (7 family members, 13 RNs, 3 CM, 4 resident Dr., 2 discharge planners, 4 family Dr)	-Unplanned readmissions either preventable or inevitable -Patients identified preventable readmissions as receiving the wrong diagnosis and treatment, discharged early and not ready

	for and preventability of from an interprofessional lens (patients, family members, health care professions)		internal medicine unit	Average age 61 Range 43-77 50% men Race-NI Chronic Condition-COPD (7) or HF (5) MCC-NI	(physically or psychologically) to manage symptoms or changes in condition at home -Health care providers described preventable readmission as non adherence to discharge plan (medications, fluid or diet; indulging in drinking or smoking), refusing post-discharge services or programs, inability to access community health care services, lack of social support (living alone) or living in unsafe or inappropriate housing conditions, accessing follow-up in a timely fashion -Inevitable unplanned readmission occurred due to disease progression, interaction of comorbid conditions, or inability of patient to cope with deterioration of health, and regardless of quality of care -Complexity of unplanned readmission increased with complexity medical problems and patients' abilities to self-manage, and health care providers' abilities to communicate and exchange information not only among themselves, but with patients and family caregivers
Kirby, S. E., Dennis, S. M., Bazeley, P., & Harris, M. F. (2012).	To identify factors that differentiate persons who are frequently readmitted (FRP) and those who are self-managing (SMP) related to relationship with clinician, threat of chronic disease, stronger agency or self-efficacy, greater sense of identity.	Mixed methods Semi-structured interview	Australia Public hospital with 150 bed in NSW Australia (coastal regional urban area)	n=33 mean 72 (FRP-72 (SMP-70) Age range (47-89) (41-91) Men 43%; 58.8% Race-NI Chronic conditions-yes MCC-6.6 and 6.2	-Patients who experienced frequent unplanned readmissions were different from patients who self-managed in the areas of trust with a health care provider, peer support, acceptance and ownership for symptoms, acceptance of the disease, change of identity, and responsibility for their symptoms and lifestyle -Development of trust with a care provider and knowledge about self-management was a significant step in changing the behavior of frequent unplanned readmissions -Being a part of a support group (n=7) transferred to support between sessions -Acceptance and ownership included the physical symptoms and the emotions of not being able to do certain activities (like lifting)

					as well as their new identity of acknowledging the difficulties they experience with activities -SMP followed discharge plans, supported each other with managing smoking, diet, exercise, and controlling their weight, as well as maintaining their network of support with family and friends, whereas FRP came to ED for assistance from clinicians
Lee, J. I., Cutugno, C., Pickering, S. P., Press, M. J., Richardson, J. E., Unterbrink, M., Kelser, M. E., & Evans, A. T. (2013).	To develop a framework to describe and illustrate the interconnection between patient, provider and caregiver roles and reasons for readmission and barriers to improvement	Multimethod qualitative study Focus groups and semi-structured interviews	United States Academic medical center	n= 12 (interviews) 90% men Age range 31-72 Race-66.7% white, 16.7% black, 16.7% other CC-some MCC-yes some patients had "complex conditions" Interviews with health care providers n=31 Focus groups (n=4) with 28 health care providers	-Patient care circle is a necessary and foundational support system to "implement and execute comprehensive patient-centered plans to ensure safe and effective transitions across all settings" (p. 625) -Care circle held together by communication and comprehensive planning of teamwork -Patient-centered themes challenged transitions and required support of teamwork (health systems navigation and management, illness severity and health needs, psychosocial stability, and medications (p. 621) -Modifiable reasons for admission identified by all participants: inadequate communication and collaboration -Structure of system required improvement before interventions can be developed (p. 626), specifically the ability of the PCC to function as a team that can ensure safety of the patient
Longman, J. M., Rolfe, M. I., Passey, M. D., Heathcote, K. E., Ewald, D. P., Dunn, T., Barclay, L. M., &	To describe the characteristics and perspectives of older persons who experience frequent readmissions and live in rural areas with chronic ambulatory care sensitive conditions.	Postal survey questionnaire and telephone follow-up interviews	Australia North Coast NSW Connecting Program	n=102 Average age 77.1 Age range 65 to >80 Male 62% Race-NI CC-NI MCC-56% had 2+chronic conditions N=96 follow-up phone call	-Factors associated with frequent (4+) unplanned readmissions diagnosis of CHF, lower social network score, higher Charlson Comorbidity Index -Social isolation was a key factor that contributed to unplanned readmission, but no clear understanding about how this occurred -22% of patients reported they needed regular help with their care, but did not have anyone who could help them -53% of participants experienced high levels of psychological distress which may

Morgan, G. G. (2012).					contribute to unplanned readmission resulting from low incentive and energy to manage their chronic disease, despite reports from patients that their self-management was good (p. 10) -Most patients reported that unplanned readmission was unavoidable, but after having some time to reflect, a small number of older persons identified that longer-term readmissions may be able to be avoided
Madigan, E. A., Schott, D., & Matthews, C. R. (2001).	To examine the events that lead to readmission for patients with CHR, identify patients at risk for readmission, and whether readmission was necessary or preventable for patients who have home health care.	Chart review Hospital readmission Inventory, Health care Financing Administration OASIS B1 caregiver items	United States 3 home care agencies in midwestern urban area	n=117 (40 patients from 3 home care agencies) Mean age 77.4 Range 43-95 Male 54% Race-NI CC-HF, MCC-DM, HTN, CAD, COPD, dehydration, pneumonia, AF	-Unplanned readmission caused by new problem (48%), worsening primary (35.5%) or secondary (29%) diagnosis -Other causes: cardiac symptoms worsening (35.5%), other symptoms (25.8%) and changing vital signs (12.9%) -Unplanned readmission initiated by family (32.3%), HC nurse (19%), patient (23%) and physician 16% -87.1% of unplanned readmissions necessary (infections, shortness of breath, pain, retention of urine, heart problems) -73.3% unplanned readmissions not preventable (caregiver unable to cope, required invasive treatment) -Unplanned readmission impacts multiple settings (hospital, subacute and home healthcare) -Monitoring patients at home for warning symptoms of new or past conditions is important -The first three weeks of admission to home health care is the most critical period for patients to experience unplanned readmission to the hospital
Patel, H., Shafazand, M., Schaufelberger, M., & Ekman, I. (2006).	To explore the factors/reasons related to patients with HF who have deteriorating CHF give about obtaining acute	Qualitative Semi-structured interviews	Sweden Shalgrenska University Hospital serving 250 000 people	n=88 Mean age 77.7 years Range 46-95 years 61% men Race-NI	-In 58% ED visits, patients had more than one symptom -50% of older persons did not associate symptoms with their deterioration of their heart or lungs and 27% did not think symptoms required ED treatment

	services at the emergency department (ED).			CC-IHD, Valvular, cardiomyopathy, HTN, other MCC-NI Comorbidity-IHD, Post MI, Asthma, COPD, HTN, AF, DM	-Primary reasons for seeking attention were dyspnea, fatigue and chest pain -Breathlessness had both physical and emotional symptoms (anxiety, fear, depression, hopelessness of no cure, and confusion) -Patients had experienced symptoms for 10+days and did not want to bother their relatives, thought symptoms would go away, or had nobody to go with them to the ED -15% were sent to the hospital by their caregiver (spouse, children, or home care providers) -10% avoided going to the hospital because of prior negative experiences (long waits, multiple invasive tests, and fear of being "rejected") (p. 705) -Researchers suggested that older persons "may lack confidence to identify, slow emerging and overlapping symptoms in common multiple illnesses" (p. 707)
Pedersen, M. K., Mark, E., & Uhrenfeldt, L. (2018).	To explore the life conditions and critical incidents over time and care settings that impact care and hospital readmissions from the perspective of older men.	Qualitative exploratory and interpretive design Semi-structured interviews	Denmark Danish university hospital	n=4 Mean age 73 years Age range 72-74 100% men Race-NI CC-Exacerbation of COPD, infection, renal insufficiency MCC-breathlessness, insomnia, constipation, fatigue, hypoglycemia, chronic pain	-Unplanned readmission experiences resulted in positive and negative impact on older persons-"ambiguity of aging, living with the physical and emotional burden of illness," realizing the implications of increased dependence on others (family, friends and neighbors), feelings of vulnerability and mortality, attempting to regain control, and being grateful to be alive (p. 1384) -Critical incidents perceived as supportive or demanding on unplanned readmission included: "balancing demands and resources in everyday life" by themselves while trying to limit turmoil or burden to others, discharged with unresolved problems, risk, and greater vulnerability, and unknowns about recovery, peer support source of "encouragement" and being back home, was distraction from the disease and illness; care

					interaction (lack of communication and interaction) between the participants and health care providers about symptoms, medication side effects, or navigating the continuity of care with many providers between hospital and community, living with multimorbidity and chronic conditions with symptoms without resources, best options or treatment (p. 1386) -Patients negotiated whether they were ill enough for treatment -Dependent on "emotional as well as physical and practical support from spouse and adult children" (p. 1386) -Peer support and resuming personal care tasks and daily routines were supportive." (p. 1386) -Relationships with health care providers were important to care needs -"Dynamics and complexity of life conditions and critical incidents over time and across patient contexts and care settings affect the course of care" including readmission (p. 1387) -To change readmissions to hospital, caregivers and older persons must be involved in making decisions about their care so their care needs are not only supported, but also met (p. 1388)
Slatyer, S., Toye, C., Popescu, A., Young, J., Matthews, A., Hill, A., & Williamson, D. J. (2013).	To describe factors that contributed to the readmission of the older person from the perspectives of older patients, family caregivers, and health care providers.	Qualitative descriptive Semi-structured interview and demographic questionnaire	Australia Acute medical unit within a 600-bed public teaching hospital	n=12 Mean age-81.6 Age range 72-91 50% men Race-NI CC-yes MCC-9.8 (range 5-17) Caregivers n=15 HCP n=35	-context of patients' health trajectory (recurring symptoms, decreasing functional abilities, increased awareness of needs, anxiety and fear associated with breathing problems) different than the health care providers. -Independence balanced with family support providing increased levels of care; readmission like a wakeup call for families to increase support, patients afraid of losing dependence.

					-Patients identified discharge was frustrating due to lack of knowledge, understanding, community resources, access to timely care, inconsistent care providers, and communication problems -Patients withheld telling anyone about symptoms because they felt guilty about needing treatment -Unplanned readmission a "default option to manage patient's clinical deterioration" (p. 450), gaps in the system, patient's changing complexity, and community's lack of resources and knowledge to manage chronic diseases (p. 450) -Lack of communication across the continuum of care (admission to readmission) -Emotional and physical vulnerability about returning home and having another episode at home and the result being death (p. 451) issues of safety and "security" in their own environment. Other patients were eager to return home—in a caregiver role at home and felt "secure" at home. -Trusted health care providers with their discharge decisions -Patients and caregivers were confident in hospital about returning home and managing their acute illness, but this changed when they left the supportive health care environment with symptoms -Unplanned readmission was a difficult decision which was made based on unresolved symptoms or deterioration in their illness that elicited feelings of fear and loss sometimes identified by caregivers -Unplanned readmission resulted in physical and emotional anxiety, misunderstandings, confusion for families and the older person which undermined their confidence (p. 452)

					-Researchers caution that "findings may underestimate the extent of the critical problem identified regarding discharge communication" (p. 452) -Researchers advocated that communication and a team approach are needed to improve transitions, and one form of communication is by using individual discharge plans where patients (and family caregivers) can learn about how to address their symptoms, comorbidities, community and residential services
Smeraglio, A., Heidenreich, P. A., Krishnan, G., Hopkins, J., Chen, J., & Shieh, L. (2019).	To examine patients' perspectives about causes of readmission and compare it with the physicians' and RN case managers' perspectives	Qualitative interview survey	United States Academic tertiary care hospital	n=164 Mean age 60 Age range 46-69 Race-50% white, 30% other, 11% Asian, 9% black CC-19% pain, 19% edema/short of breath, 15% other, 9% weakness/poor intake, 6% altered mental status, 5% wound, 3% anemia/bleeding, acute kidney injury MCC-NI (included surgical, medical, and transplant patients) Providers-30% hospitalists, 70% specialists	-Patients, providers, and RN CMs had different perspectives about (gaps between perspectives and communication) the factors that contributed to 30-day readmission ie 21% of patients identified discharge could have been done differently, providers identified nothing could have prevented, and 31% of RN-Case managers identified many hospital issues that could have prevented that were in agreement with patient views -31% of health care providers identified that adherence (treatment plan, medication) and psychosocial issues were the primary reasons patients were readmitted -Patients identified opportunities to improve the timing of discharge follow-up, and home health care services by addressing these issues prior to discharge as their primary reason was "lack of readiness" (21%). -Patients perceived the hospital as contributing to their readmission if their functional status was poor when they were discharged limiting their ability to stay at home (p. 6)
Stein, J., Ossman, P., Viera, A., Moore, C., Brubacker,	To explore the factors that patients and providers believe constituted to or	Qualitative descriptive Chart reviews and interviews	United States UNC hospital	n=23 interviews Age-53 52% men	-Providers identified that 45% of readmission were the result of complex medical problems, pain or secondary problems, substance use or returning to substance to cope with chronic problems or misdiagnosis of physical with

B. A., French, J., & Liles, E. A. (2016).	could have prevented their unplanned readmission.			Race-39% white, 48% African American, 9% Hispanic n=213 chart reviews by physicians and specialists Age 53 50% men Race-57% white, 34% African American, 5% Hispanic	emotional problems, frustration related to burnout and helplessness and mental illness and substance abuse, or nonadherence -13% of patients felt their unplanned readmission could be prevented, but remainder not preventable due to problems with follow-up (40%), time to follow-up (26%), incomplete information and no improvement in symptoms, so returning to hospital for same problem as reported no issues with medication (87%), clear discharge instructions (91%), good support on discharge (83%) with someone to contact (96%), and follow-up appointments (60%). -Patient and provider perspectives about unplanned readmission and solutions are different
Tang, F. W-K. & Lee, D. T-F. (2017).	To explore and understand older Chinese persons with COPDs' lived experience of hospital readmission	Descriptive phenomenology Unstructured interviews	Hong Kong 3 pulmonary wards in a rehab hospital	n=22 Age 62-89 82% men Race-Chinese CC-COPD MCC-NI	-Hospital care (unplanned readmission) is the "last resort in relieving breathlessness" (p. 1116) and was sought as a way to relieve the urgency and to survive the distress. -Readmission is "unavoidable" and "inevitable" and is composed of "Refraining from unnecessary readmissions" (by trying to manage the symptoms), "Craving for survival" (by needing unplanned readmission to relieve breathlessness and survive), "Feeling disregarded and powerless" (by physicians who questioned their need for hospital care), "being conscious of relieving burden to families" (relieving the burden to their family of needing to return to the hospital and the experience between hospital and home), "Resigning to hospital readmissions" (how understand readmission) and "living in the moment" (how live with experiences) -Readmissions are complex experiences "framed by" the sociocultural environment and older persons' values and beliefs ie trying

					to maintain the harmony/homeostasis between the mind, body, social groups, spiritual self and the environment, but discovered that they were unable to delay the next readmission and were unable to not feel guilty about needing the hospital readmission to relieve and survive their breathlessness
Verhaegh, K. J. M., Jepma, P., Geerlings, E. E., De Rooij, S. E., & Buurman, B. M. (2019).	To explore the experiences and perceptions of patients who are chronically ill, discharged, and then readmitted to the hospital	Exploratory qualitative	Netherlands 4 medical wars of a University teaching hospital	n=23 Age 57 Age range 18-78 65.2% men Race-NI CC-NI MCC-87%	-Lack of being ready for hospital discharge prevented a safe transition through care transitions, resulting in unplanned readmission -Fear associated with returning to ED and starting again with new provider -Lack of knowledge and confusion about how medical specialists were making decisions and lack of inclusion of and information sharing with the patient -Patients wanted clear discharge instructions to understand how to self-manage illness and medications at home, whereas other patients requested verbal instructions but understanding the information was influenced by illness and medical language -Patients expected to feel better during their recovery at home, but symptoms persisted and could not function normally and were not cured or ready for discharge, and as a result had difficulty returning to their normal routines and trying not to be a burden to informal caregivers -Patients' readiness for discharge, influenced by the organization of hospital care, impacted patients' feelings of "trust, recognition, self-confidence and power" (p. 130)
Xu, J., Gallo, J. J., Wenzel, J., Nolan, M. T., Budhathoki, C., Abshire,	To explore how HF self-care decision making process influenced readmission in HF patients who were	Cross-sectional exploratory sequential mixed methods Survey and interviews	United States Urban east coast teaching hospital	n=127 survey with n=15 interviewed Age 58.1 +/- 13.6 years 83% men Race-37% Caucasian, 58% African American, 4% other	-Patients who experienced unplanned readmission tried to self-manage symptoms based on their past symptom experience and advice from others -Patients with high self-care scores sought out medical attention early and did not experience unplanned readmission within 30 days

M., Bower, K., Arruda, S., Flowers, D., Szanton, S. L., Himmelfarb, C. D., Fonzalez, K., & Han, H-R. (2019).	readmitted beyond 30 days of last hospitalization			CC-yes MCC-2.7 +/- 1.7	-Caregivers may play a role in self-management -When participants experienced symptoms of depression they delayed getting treatment when they had the symptoms and this increased their feelings of hopelessness about their future and current situation (p. 7) -Symptoms of SOB influence patients' behaviors of seeking medical care sooner in comparison to patients who do not experience SOB
Yu, D. S. F., Lee, D. R. F., & Woo, J. (2007).	To explore the perspectives of older Chinese COPD patients about recurrent hospital readmission	Exploratory qualitative Unstructured interviews	Hong Kong Regional hospital	n=5 Age range 70-81 years 100% men Race-Chinese CC-COPD MCC-NI but long-term oxygen therapy and limited functional abilities (p. 1758)	-Older Chinese patients identified feelings of powerlessness in self-management of the disease after discharge home; lack of confidence in community-based healthcare services to cure and help manage their symptoms, tension relationships with their caregiver; and being satisfied with the social support they received when they returned to the hospital. -COPD interfered with their relationships with their family and their ability to maintain relationships with friends at home -Described recurrent unplanned readmission experiences as a "revolving door" (p. 1758) -Researchers argued the need for psychosocial treatment in community health care models to not only manage the anxiety of the older person and enhance their social support, but to concurrently assist caregivers with managing the burden of caregiving

Note: The following short forms were used: NI-not included, HCP-health care provider, CC-chronic conditions, and MCC-multiple chronic conditions. The following short forms were used for chronic illnesses: COPD-Chronic Obstructive Pulmonary Disorder, HTN-hypertension, MI-myocardial infarction, HF-heart failure, DM-diabetes mellitus, ADL-activities of daily living, CV-cardiovascular, CAD-coronary artery disease, AF-atrial fibrillation, IHD-ischemic heart disease.

Table 2.4

Themes, Sub-Themes, and References of Articles

Themes	Sub-Themes
Feelings of security, support, and relief (Antony et al., 2018; Considine et al., 2020; Dilworth et al., 2012; Enguidanos et al., 2015; Han et al., 2017; Howard-Anderson et al., 2016; Jeffs et al., 2014; Kirby et al., 2013; Patel et al., 2007; Slatyer et al., 2013; Tang & Lee, 2017)	
Undesirable challenges at home (Antony et al., 2018; Considine et al., 2020; Dilworth et al., 2012; Dupre et al., 2018; Enguidanos et al., 2015; Howard-Anderson et al., 2016; Jeffs et al., 2014; Kirby et al., 2013; Patel et al., 2007; Slatyer et al., 2013; Smeralgio et al., 2019; Tang & Lee, 2017)	**Struggling to manage care** (Antony et al., 2018; Considine et al., 2020; Dilworth et al., 2012; Dupre et al., 2018; Enguidanos et al. 2015; Jeffs et al., 2014; Howard-Anderson et al., 2016; Kirby et al., 2013; Patel et al., 2007; Slatyer et al., 2013; Smeralgio et al., 2019; Tang & Lee, 2017) **Balancing support needs** (Antony et al., 2018; Considine et al., 2020; Dilworth et al., 2012; Enguidanos et al., 2015; Howard-Anderson et al., 2016; Jeffs et al., 2014; Kirby et al., 2013; Patel et al., 2007; Slatyer et al., 2013; Tang & Lee, 2017)
Unpleasant feelings and emotions (Antony et al., 2018; Considine et al., 2020; Dilworth et al., 2012; Dupre et al., 2018; Enguidanos et al., 2015; Han et al., 2017; Howard-Anderson et al., 2016; Jeffs et al., 2014; Kirby et al., 2013; Patel et al., 2007; Slatyer et al., 2013; Smeralgio et al., 2019; Tang & Lee, 2017)	**Feelings of fear and mistrust** (Antony et al., 2018; Considine et al., 2020; Dilworth et al., 2012; Enguidanos et al., 2015; Han et al., 2017; Howard-Anderson et al., 2016; Jeffs et al., 2014; Kirby et al., 2013; Patel et al., 2007; Slatyer et al., 2013; Tang & Lee, 2017) **Feelings of disappointment and loss** (Antony et al., 2018; Considine et al., 2020; Dilworth et al., 2012; Enguidanos et al., 2015; Han et al., 2017; Jeffs et al., 2014; Kirby et al., 2013; Patel et al., 2007; Slatyer et al., 2013; Smeralgio et al., 2019; Tang & Lee, 2017) **Feelings of anxiousness and pressure** (Antony et al., 2018; Considine et al., 2020; Dilworth et al., 2012; Dupre et al., 2018; Enguidanos et al., 2015; Han et al., 2017; Jeffs et al., 2014; Patel et al., 2007; Slatyer et al., 2013; Tang & Lee, 2017)

Figure 2.1

PRISMA Diagram: Unplanned Readmission for Older Persons with Multiple Comorbid Conditions

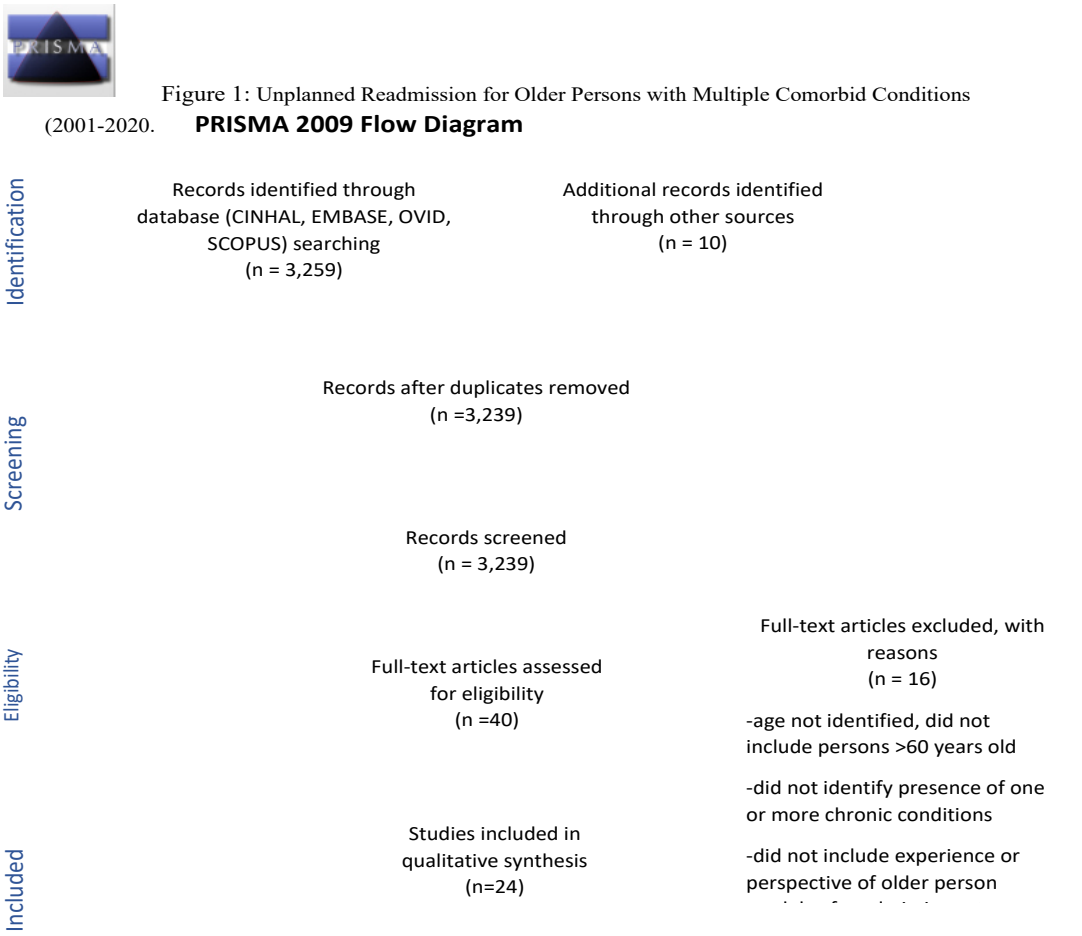

Figure 1. Prisma diagram from searching the databases of Ovid MEDLINE(R) Daily and Ovid MEDLINE (R) from 1946 to Present, CINHAL, Scopus, and Embase from 1974 to 2018. *From:* Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). *P*referred *R*eporting *I*tems for *S*ystematic Reviews and *M*eta-*A*nalyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

Chapter Three:

Unplanned Readmission for Older Persons: A Concept Analysis

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Abstract

Aim: The purpose of this concept analysis is to define and analyze the concept of unplanned readmission to hospital for older persons.

Design: Review the literature and analyze the concept of unplanned readmission.

Method: Guided by Walker and Avant's eight-stage method of concept analysis, four databases (Ovid MEDLINE, Scopus, CINAHL, and Embase) were searched between 1946-2020 for empirical studies focused on older persons with multiple chronic conditions experiences or perspectives and unplanned readmission. A total of 34 articles (10 quantitative, 17 qualitative, three mixed methods), one concept analysis, and three historical articles were included.

Results: An unplanned readmission is an experience, process, and event. The proposed definition of unplanned readmission is an older persons' need for acute care treatment for an urgent or emergent health crisis that has occurred after a previous hospitalization(s). Unplanned readmission is characterized by the attributes of older persons' previous hospitalization(s), the urgent or emergent nature of the older persons' health, and the older persons' need for acute care hospital services to resolve their health crisis.

Conclusion: Unplanned readmission is a complex concept that is different from planned and emergency visits/admissions and readiness for discharge. These findings provide a link for understanding unplanned readmission as a consequence of discharge readiness. Analyzing this concept supports the need for older persons to seek unplanned readmission for acute care treatment of urgent and emergent health crisis, reduces the blame that older persons may feel from questions related to preventability, and stresses the need to include older persons' experiences in the development and expansion of nursing theory, interventions and current understandings of unplanned readmission.

Key Words: Unplanned readmission, older persons, multiple chronic conditions, concept analysis, nurse, nursing, discharge planning, previous hospitalization(s), health crisis, experiences

Impact Section

Why is this research needed?

- The literature about unplanned readmission for older persons lacks consistent terminology and a definition.
- Clarity about the concept of unplanned readmission is needed to influence interventions to prevent or reduce unplanned readmission in older persons.
- A definition that includes the perspectives and experiences of older persons is needed.

What are the key findings?

- Current definitions of unplanned readmission expanded to view unplanned readmission holistically as an experience that occurs over time, from the previous hospitalization through the urgent/emergent health crisis and need for acute care
- Attributes of previous hospitalization through the urgent/emergent health crisis and need for acute care differentiate the concept of unplanned readmission from planned admission, emergency admission/visit, and the concept of readiness for hospital discharge.
- Older persons need for acute care services for treatment of their urgent and emergent health crisis supports their reports of unplanned readmission being necessary and not preventable.

How should the findings be used to influence policy/practice/research/education?

- Older persons should not feel guilty or blame for seeking unplanned readmission.
- The proposed definition of unplanned readmission addresses the reality of older persons' experiences at home managing multiple chronic conditions.
- Lack of symptom stability suggests that more support to older persons in the home may prevent unplanned readmission in the future**.**

Introduction

Unplanned readmission to the hospital from home for persons older than 60 is a complex phenomenon (White et al., 2015), with researchers interchanging terms such as recidivism, rehospitalization, re-presentation, or care transition for unplanned readmission. These terms share common elements of events leading up to, characteristics, time, patient factors, and hospital processes. Lack of consistent definitions, terminology, and details describing unplanned readmission complicates understanding unplanned readmission (Rodgers & Knafl, 2000). Research focusing on factors, risks, and predictors of unplanned readmission with older persons (Arbaje et al., 2008; Lum et al., 2012) has expanded our knowledge, but has not provided clarity of the concept (Gray, 2001). A concept analysis approach (Walker & Avant, 2011) was used to clarify, define, and understand unplanned readmission in older persons (defined as 60 years of age and older).

Background

Almost 65% of older Canadian persons with chronic medical problems required unplanned readmission (Canadian Institutes of Health Information [CIHI], 2012). Moreover, within a month of being discharged from a hospital, older persons on medicine units experience a four percent higher rate of readmission (CIHI, 2012) than other cohorts (CIHI, 2018). Over the past 25 years, readmission for older persons has stayed relatively constant at 13%.

Readmission rates are an important measurement of health care efficiency, quality improvement, and can be calculated in increments of days, months, or even years from the index hospitalization (Chambers & Clarke, 1990; Fischer et al., 2014; Gorina et al., 2015). Readmission rates aide in examining quality of care (Chambers & Clarke, 1990; Fischer et al., 2014; Scott et al., 2014), calculating and controlling hospital costs (Fischer et al., 2014).

Organizational costs associated with readmission are in excess of 2.1 billion dollars for Canadian hospitals (CIHI, 2018), explaining why readmission receives attention from researchers, health care organizations and governments (CIHI, 2012; Gorina et al., 2015; WHO, 2002, 2018). Varying criteria used to define readmission makes cost comparison difficult. Some health care providers question the preventability of unplanned readmissions (Dilworth et al., 2012; Jeffs et al., 2014; Madigan et al., 2001; Patel et al., 2007; Slatyer et al., 2013; Tang & Lee, 2013), with older persons reporting unplanned readmissions as necessary (Dilworth et al., 2012; Donaghy et al., 2018; Jeffs et al., 2014; Stein et al., 2016; Tang & Lee, 2017). Literature on unplanned readmissions and older persons suggests that the complexity of readmission is influenced by multiple interconnected factors (Berges et al., 2015; DeCoster et al., 2012; Gorina et al., 2015; Madigan et al., 2001). The lack of understanding about readmission as a concept contributes to lack of clarity about risks and causes.

Aims

The aim of this study is to analyze the concept of unplanned readmission for the purpose of developing a definition of unplanned readmission from home to hospital for persons over 60 years old. Analyzing the concept of unplanned readmission will assist researchers and clinicians to clarify, define, and understand unplanned readmission for older persons (Gray, 2001).

Design

Walker and Avant's (2011) eight-step method was used to identify attributes, consequences, and antecedents of readmission. Model, related, and limited cases were developed to discern empirical referents and construct an operational definition (Walker and Avant, 2011).

Search Methods

Data sources included a systematic search of the empirical literature, historical published articles and a concept analysis. The systematic search of the empirical literature involved searching Ovid MEDLINE (R) Daily and Ovid MEDLINE (R), Scopus, CINAHL, and Embase databases from 1946 to 2020 for empirical literature written in English. Key words and thesaurus terms used are in Table 3.1. The inclusion criteria were primary research articles, focused on a timeframe of readmission within 30 days of discharge from home to hospital, and included older persons (over the age of 60). Studies were excluded if they included primarily persons less than 60 years of age, planned readmissions, or discharge from or emergency room visits, and examined readmissions beyond 30 days or from a place other than home (long-term care, skilled nursing facility, psychiatric hospitals, or between units of a hospital).

Search Outcomes

A total of 407 articles met the criteria after duplicates were removed. Titles were screened using the inclusion criteria (n=382). The abstracts of 170 articles were screened resulting in full review of 30 articles. No additional articles from the reference lists of reviewed articles were included. Three historical published articles were added to provide background. One was a related concept analysis of readiness for hospital discharge (Galvin et al., 2017). The final number of articles that were read in full and included in the concept analysis is 34 articles. A PRISMA flow chart is included in Figure 3.1.

Quality Appraisal

Examined articles were appraised using the Mixed Methods Appraisal Tool (MMAT) (Version 2018) (Hong et al., 2018) (Table 3.2) and included in the concept analysis.

Data Abstraction and Synthesis

Selected studies were organized in a data extraction table (matrix) (Gerrard, 2014) according by dates, study type, journal title, and country. Table 3.3 outlines the process of extracting and synthesizing data using Walker and Avant's (2011) steps/categories of definitions, uses of the concept, attributes, antecedents, and maintaining rigor.

Results

The 34 included articles from five countries with the majority of research from the United States and Australia. Other countries included Canada, Denmark, United Kingdom, the Netherlands, Sweden, and Hong Kong. Of these, 10 quantitative, 17 qualitative, three mixed methods studies, one concept analysis and three historical articles were included. Findings are presented using Walker and Avant's (2011) method to describe uses of the concept, attributes, antecedents, and consequences. A definition of empirical referents and the proposed operational definition conclude the findings. Table 3.4 provides definitions of unplanned readmission from the reviewed articles (n=30).

The Concept

Reductions in unplanned readmission for older persons was identified as an outcome of the concept of readiness for hospital discharge (Galvin et al., 2017). The concept of unplanned readmission has not been examined, but was defined as an event or visit to the "emergency" department (ED), to meet "immediate" or "emergency" needs (Chambers & Clarke, 1990). Researchers acknowledged that admission, readmission, and discharge may occur at different facilities (Chambers & Clarke, 1990; White et al., 2015) and expanded the timeframes of readmission beyond 30 days to include 60 or 90 days (Arbaje et al., 2008; Fischer et al., 2014; Hodges, 2009; Stephens et al., 2013). Although these sources provided data about unplanned

readmissions, they also confounded the attempt to analyze or define the concept of readmission. The concept will be discussed as an event, act or process, and rate.

Event

Readmission, defined 90 years ago as a hospital event, involved patients being "discharged and readmitted several times" after their first admission (Fuller, 1930, p. 648; Fuller, 1931). Accession, admittance, and entrance a subsequent time were synonymous with hospital readmission as an event, while the antonyms such as discharge, dismissal, or removal denoted the opposite to readmission (Merriam-Webster, 2018). Fuller (1931) also identified the use of readmission as a person being readmitted or re-presented (Slatyer et al., 2013, p. 446).

Act or Process

Fuller (1930, 1931) and Merriam-Webster's (2018) online dictionary identified readmission as a process of a second or subsequent admission and act of someone being readmitted, without defining a timeframe. Adding 're' to the word admission inferred that the act was a process of accepting someone into a health care facility for a second or subsequent time; differentiated from the persons' experiences (Fuller, 1930, 1931; Merriam-Webster, 2018). This may explain why researchers labelled participants' experience of unplanned readmission with a different term such as re-presentation (Slayter et al., 2013, p. 446), differentiating readmission (the process) from rehospitalization (the participants' experience) (Stephens et al., 2013), or used undefined terms related to hospital processes (index admission, admission, discharge, and hospitalization) with a range of timeframes. As Fuller predicted (1930, 1931), evaluation measures of readmission rates or value (effectiveness or quality) (Dilworth et al., 2012, p. 281) led to confusion in differentiating the readmission event and person's readmission process.

Rate

Rate of readmission was defined as the number of readmissions in a specific time interval after the index discharge from hospital divided by the number of patients during the same interval of time who were discharged from the hospital alive (Chambers & Clarke, 1990, p. 301; Gorina et al., 2015). The use of readmission as a numeric rate does not capture the presence, absence, or older persons' understanding of a plan of care, the amount of or quality of care that was missing during the hospital stay, their interpretation of implementing the care plan at home, or what happens during the older persons' subsequent hospital return. The absence of this information may result in incomplete understanding (Fisher et al., 2014) as it negates the older person's experiences of their chronic conditions, being admitted, hospitalized, discharged, and returning home.

Attributes, Antecedents and Consequences

The attributes, antecedents and consequences of unplanned readmissions are summarized in Figure 3.2. These are discussed in the following section in more detail.

Attributes

Attributes are characteristics used by researchers to identify, understand, name, and differentiate the concept under analysis from other concepts (Walker & Avant, 2011, p. 162). Attributes of unplanned readmission include previous hospitalizations, urgent or emergent health crisis, and the need for acute care.

Previous Hospitalization(s). One or multiple previous hospitalizations (being admitted, hospitalized, and discharged) (Considine et al., 2020; Dilworth et al., 2012; Donaghy et al., 2018; Gorina et al., 2015; Greysen et al., 2015; Hutchison et al., 2013; Longman et al., 2012; Lum et al., 2012; Pedersen et al., 2018; Scott et al., 2014; Slatyer et al., 2013; Tang & Lee, 2017; Yu et al., 2007) occurred prior to, was required for, and influenced readmission. For example,

older persons' reasons for unplanned readmission included treatment for the same or related symptoms or conditions (Annema et al., 2009; Cakir et al., 2017; Considine et al., 2020; Gorina et al., 2015; Patel et al., 2007; Slatyer et al., 2013; Stein et al., 2016; Tang & Lee, 2017; White et al., 2015; Yu et al., 2007) and pre-existing chronic conditions (Antony et al., 2018; Berges et al., 2015; Donaghy et al., 2018; Madigan et al., 2001; Hodges, 2009; Hutchison et al., 2013; Longman et al., 2012).

Urgent or Emergent Health Crisis. Urgent or emergent health crises arose when older persons' symptoms increased in severity (breathlessness, swelling, pain) (Annema et al., 2009; Berges et al., 2015; Cakir et al., 2017; Considine et al., 2020; Donaghy et al., 2018; Howard-Anderson et al., 2016; Jeffs et al., 2014; Longman et al., 2012; Madigan et al., 2001; Patel et al., 2007; Pedersen et al., 2018; Slatyer et al., 2013; Verhaegh et al., 2019; Xu et al., 2017) or worsened gradually over 10 days (Patel et al., 2007, p. 705). Decreasing abilities to manage or regain control of worsening physical symptoms (Pedersen et al., 2018, p. 1384; Slatyer et al., 2013; Tang & Lee, 2017) signalled an urgent or emergent health crisis.

Need for Acute Care. Acute care was needed to alleviate older persons' urgent symptoms (Dilworth et al., 2012; Pedersen et al., 2018; Slatyer et al., 2013; Tang & Lee, 2017; Xu et al., 2017; Yu et al., 2007) after discharge home (Considine et al., 2020; DeCoster et al., 2013; Donaghy et al., 2018; Dupre et al., 2018; Jeffs et al., 2014; Pedersen et al., 2018; Stein et al., 2017; Slatyer et al., 2013; Stephens et al., 2013; Verhaegh et al., 2019; White et al., 2015). Indications for acute care included loss of control over symptoms (breathlessness, swelling, and pain) (Annema et al., 2009; Antony et al., 2018; Cakir et al., 2017; Considine et al., 2020; Dilworth et al., 2012; Longman et al., 2012; Patel et al., 2007; Pedersen et al., 2018; Scott et al., 2014; Slatyer et al., 2013, p. 451; Tang & Lee, 2017; Xu et al., 2019; Yu et al., 2007) and

increasing fear and anxiety about loss of control of symptoms and possible death (Annema et al., 2009; Antony et al., 2018; Berges et al., 2017; Cakir et al., 2017; Considine et al., 2020; Dilworth et al., 2012; Hodges, 2009; Howard-Andersen et al., 2016; Jeffs et al., 2016; Patel et al., 2007; Pedersen et al., 2019; Stein et al., 2016; Tang & Lee, 2017; Verhaegh et al., 2019; White et al., 2015; Xu et al., 2019; Yu et al., 2007).

Antecedents

Antecedents, requisite events or incidents, need to "be in place" before the concept happens, but do not define it (Walker & Avant, 2011, p. 167). Antecedents include lack of symptom stability, lack of support, lack of knowledge, and lack of safety.

Lack of Symptom Stability. Lack of symptom stability was related to: a) older persons' comorbid conditions (Antony et al., 2018; Berges et al., Dilworth et al., 2012; Donaghy et al., 2018; Greysen et al., 2015; Howard-Andersen et al., 2016; Hutchison et al., 2013; Longman et al., 2012; Lum et al., 2012; Patel et al., 2007; Pedersen et al., 2018; Scott et al., 2014; Slatyer et al., 2013; Stein et al., 2017; White et al., 2015; Xu et al., 2017). Instability of symptoms was intensified by: a) pain (Annema et al., 2009; Antony et al., 2018; Cakir et al., 2017; Howard-Andersen et al., 2016; Pedersen et al., 2018; Patel et al., 2007; Slatyer et al., 2013), b) diet (Antony et al., 2018; Lum et al., 2012; Patel et al., 2007), c) constipation and/or incontinence (Pedersen et al., 2018; Slatyer et al., 2013), d) changes in mobility (Annema et al., 2009; Cakir et al., 2017; Patel et al., 2007; Slatyer et al., 2013) and e) cognition (Dilworth et al., 2012; Lum et al., 2012; Patel et al., 2007; Scott et al., 2014; Xu et al., 2017). Older persons' abilities to self-manage their multiple chronic coexisting conditions and care needs ranged from being difficult and decreasing (Arabje et al., 2008; Donaghy et al., 2018; Pedersen et al., 2018; Stephens et al., 2013; White et al., 2015) to being unable to self-manage their conditions (Pedersen et al., 2018;

Slatyer et al., 2013). Decreasing abilities to self-manage their conditions increased dependence on family and friends for support and resources (Arabje et al., 2008; Dilworth et al., 2012; Slatyer et al., 2013; Stephens et al., 2013; Tang & Lee, 2017; White et al., 2015; Xu et al., 2017).

Older persons normalized reasons for readmission (Patel et al., 2007; Tang & Lee, 2017) and sometimes used readmissions to self-manage chronic conditions (Dilworth et al., 2012; Stephens et al., 2013; Tang & Lee, 2017; Verhaegh et al., 2019; Yu et al., 2007).

Lack of Support. Lack of support from caregivers and health care providers and services (hospital and community) influenced older persons' unplanned readmission (Arabje et al., 2008; DeCoster et al., 2013; Dilworth et al., 2012; Donaghy et al., 2018; Gorina et al., 2015; Hodges, 2009; Lum et al., 2012; Slayter et al., 2013; Stephens et al., 2013; Verhaegh et al., 2018; White et al., 2015). Shortfalls in hospital and community health care services (DeCoster et al., 2012; Dilworth et al., 2012; Slayter et al., 2013; Stephens et al., 2013; Tang & Lee, 2017; White et al., 2015; Verhaegh et al., 2019; Yu et al., 2007) such as delayed, late, or absent home or health care services, appointments, or providers (Antony et al., 2018; Dilworth et al., 2012; Dupre et al., 2018; Jeffs et al 2014; Stein et al., 2016; White et al., 2015), services that did not extend long enough to be of therapeutic value (Antony et al., 2018), or were refused by older persons (Jeffs et al., 2014; White et al., 2015) reduced older persons' support. Cakir et al. (2017) identified that 20% of older persons with reduced functional abilities required more help at home (Arbaje et al., 2008; Considine et al., 2020; Greysen et al., 2015; Jeffs et al., 2014), increasing demands placed on caregivers for support; support that may have resulted in older persons' care needs exceeding caregivers' expectations and abilities and reducing caregivers' support (Pedersen et al., 2017; Stephens et al., 2013; White et al., 2015; Yu et al., 2007). As a result, 79% of older persons reported that readmission was a relief (Howard-Anderson et al., 2016).

Lack of Knowledge. Older persons lacked knowledge about managing their chronic conditions, medication side effects or interactions with other medications, treatments, symptoms, and when, how to respond to and what medical attention would be needed (Cakir et al., 2017; Considine et al., 2020; Dilworth et al., 2012; Donaghy et al., 2018; Lee et al., 2013; Howard-Anderson et al., 2016; Jeffs et al., 2014; Patel et al., 2007; Slayter et al., 2013; Stein et al., 2016; White et al., 2015). Lack of readiness for discharge influenced older persons abilities to manage their care at home (Annema et al., 2009; DeCoster et al., 2013; Galvin et al., 2017; Jeffs et al., 2014; Slayter et al., 2013; Stein et al., 2016; Verhaegh et al., 2018; White et al., 2015; Yu et al., 2007). Lack of knowledge or information about chronic conditions, symptoms, medications and treatments, contributed to unstable symptoms (Cakir et al., 2017; Dilworth et al., 2012; White et al., 2015) and postponing treatment (Patel et al., 2007).

Lack of Safety. Older persons described "being let down" by gaps in hospital and community health care services and resources (Dilworth et al., 2012; Slatyer et al., 2013; Stephens et al., 2013; Tang & Lee, 2017; White et al., 2015; Yu et al., 2007). Being discharged without resolution of symptoms (Antony et al., 2018; Considine et al., 2020; Pedersen et al., 2018) increased vulnerability (Dilworth et al., 2012; p. 284; Tang & Lee, 2017), decreased confidence (Slayter et al., 2013; Yu et al., 2007), and increased dependence on others and risk for readmission (Arbaje et al., 2008; Considine et al., 2020; Dilworth et al., 2012; Greysen et al., 2015; Patel et al., 2007; Pedersen et al., 2018; Slatyer et al., 2013; Yu et al., 2007). Older persons were often afraid to return home because they had not regained their functioning (White et al., 2015; Verhaegh et al., 2019) or control over their home activities (Hodges et al., 2009; Patel et al., 2007; Pedersen et al., 2018; Slatyer et al., 2013) resulting in the belief that their health and safety could only be maintained in the hospital (Dilworth et al., 2012; Slatyer et al., 2013;

Verhaegh et al., 2019). They were also afraid of being in the hospital because of the impact on losing their independence and functional abilities (Greysen et al. 2015; Slayter et al., 2013, p. 451).

Consequences

Consequences or events caused by or occurring after (Walker & Avant, 2011) unplanned readmission involved: a) remaining in hospital longer (Dilworth et al., 2012; Tang & Lee, 2017), b) recurring readmissions (Longman et al., 2012; Hutchison et al., 2013; Tang & Lee, 2017; Yu et al., 2007), and c) returning home without regaining their functioning (White et al., 2015). These negative consequences decreased older persons' confidence in their abilities to be independent (Arabje et al., 2008; Greysen et al. 2015; Hodges, 2009; Scott et al., 2014; Slayter et al., 2013, p. 452; White et al., 2015) and increased their fears about being admitted to a nursing home (Stephens et al., 2013; White et al., 2015), and dying (Slatyer et al., 2013; Tang & Lee, 2017). The risk of one-year mortality increased by 38.7% (Lum et al., 2011), 33% of older persons died within 30 days of hospital discharge and when they were readmitted, 7.1% of older persons died during their hospitalization (Gorina et al., 2015, p. 12); which supported the consequence of older persons' fear of dying (Slayter et al., 2013; Tang & Lee, 2017). Unintended consequences of unplanned readmission included falls (Dilworth et al., 2012; Patel et al., 2007; Scott et al., 2014; Slatyer et al., 2013), dizziness or thinking problems (Patel et al., 2007; Scott et al., 2103; Xu et al., 2017) and infections (Annema et al., 2009; Howard-Anderson et al., 2016; Scott et al., 2014). Positive consequences included decreased loneliness (Tang & Lee, 2017; Yu et al., 2007), caregiving tensions/burden (Considine et al., 2020; Patel et al., 2007; Pedersen et al., 2018; Slatyer et al., 2013; Tang & Lee, 2017; Yu et al., 2007), regained control

over the symptoms (Pedersen et al., 2017; Tang & Lee, 2017; Yu et al., 2007), and surviving (Hodges, 2009; Tang & Lee, 2017, p. 1119; Pedersen et al., 2018).

Cases

Cases are designed to illustrate all of the attributes that define the concept (model case) and test the attributes that are identified through the borderline and related cases (Walker & Avant, 2011). Attributes of older persons' past hospitalization experiences, urgent or emergent health crisis, and the need for acute care hospital services will be presented in the following hypothetical cases.

Model Case

Mrs. Smith, a 67-year-old woman, experienced an unplanned admission to a medicine unit for symptoms of breathlessness related to her heart failure and chronic obstructive pulmonary disease. Mrs. Smith experienced two previous readmissions with the most recent being three weeks ago. With each readmission, Mrs. Smith is cognizant of the additional strain she is placing on her daughter related to her own changing abilities to manage co-existing conditions, symptoms, and health care resources. During the last admission, Mrs. Smith learned to manage shortness of breath using pursed lip breathing, the tripod position, and pacing of activities. These strategies worked until Mrs. Smith was unable to regain control over shortness of breath. Mrs. Smith called her daughter, who arrived to find Mrs. Smith with blue lips, appearing distressed, struggling to slow her breathing, and voicing chest pain. As Mrs. Smith waits for the ambulance, she becomes more distressed with intensifying chest pain and shortness of breath. She is afraid that she will die before she gets to the hospital. As suggested by Walker and Avant (2011), this model case contains all the attributes of previous hospitalization, urgent or emergent health crisis, and the need for acute care hospital services.

Related Case

A related case is defined as a case that is similar to and connected to the model case (Walker & Avant, 2011). A related case differs from the model case as the attributes that identify the concept and model case are not illustrated.

Mr. Roy, a 60-year-old man, experienced his first admission to the hospital, a planned admission to the skin clinic, for removal of a skin growth. The nurse reviewed the follow-up incision care Mr. Roy needed to follow at home and resources. Mr. Roy was readmitted to the hospital for additional planned follow-up treatment. Mr. Roy did not experience any symptoms or complications after the growth was removed that might have become urgent, such as infection, side effects or interactions from medications, or the need for acute care services. After completion of follow-up treatment, Mr. Roy was discharged from the hospital. The related case contained the attribute of previous hospitalization(s). However, the attributes of urgent or emergent health crisis and the need for acute care hospital services were absent.

Borderline Case

Walker and Avant (2011) defined a borderline case as one in which almost all of the defining attributes are present or one of the defining attributes is missing or is significantly different (Walker & Avant, 2011, p. 164).

Mrs. Mavis was discharged following her second admission to the medicine unit for recurrent persistent lower limb edema that did not reduce overnight night, and concurrent nocturnal shortness of breath. After her second discharge she understood the symptoms of heart failure, the purposes of and need to take her “fluid” medications as prescribed, the importance of weighing herself daily and reporting weight gains of more than five kilograms in one week.

Three weeks later, after self-managing her treatments and medications, Mrs. Mavis noted a seven-kilogram weight-gain, pitting edema that extended into her lower legs, and the need for three pillows to sleep comfortably. Mrs. Mavis doubled her night-time medication because it was effective during her last hospital stay. During the night she awoke with urinary urgency and in the process of getting up quickly, she became dizzy and fell. Unable to get up and in excruciating pain, she dialed 911. She was diagnosed with a broken hip and was treated with emergency surgery. Post operatively she was discharged to a nursing home to receive intensive physiotherapy.

In the borderline case, all of the model case attributes are present: previous hospitalizations for congestive heart failure, an emergent and urgent health crisis, and the need for acute care. However, the cause of the urgent and emergent health crisis and need for acute care is not related to heart failure, but a fall; an unintended consequence of the illness.

Definitions of Empirical Referents

Empirical referents refer to how a concept is demonstrated or how the defining attributes of the concept are measured or identified (Walker & Avant, 2011). The referents become the theoretical foundation of the concept and are used by researchers to develop the content and construct validity of new instruments to validate the presence of and measure concepts. The identified referents for unplanned readmission are previous hospitalizations and emergent health crisis and need for acute care. Determining whether an older person is experiencing an urgent or emergent health crisis and need for acute care is best determined by asking the person. Research focused on examining readmission factors is often aimed at identifying reasons that predict older persons' risk of and interventions to prevent readmission. However, no one factor consistently predicts or leads to readmission for older persons (DeCoster et al., 2013) and older persons argue

their unplanned readmission was necessary (Annema et al., 2007; Dilworth et al., 2012; Donaghy et al., 2018; Jeffs et al., 2014; Slatyer et al., 2103; Stein et al., 2016; Tang & Lee, 2017), and a relief (Howard-Anderson et al., 2016).

Proposed Operational Definition

An unplanned readmission is an experience, process, and event. Unplanned readmission is an older persons' need for acute care treatment for an urgent or emergent health crisis that has occurred after a previous hospitalization(s). Unplanned readmission is characterized by the attributes of older persons' previous hospitalization(s), the urgent or emergent nature of the older persons' health, and the older persons' need for acute care hospital services to resolve their health crisis.

Discussion

Using Walker and Avant's (2011) method of concept analysis, the attributes, antecedents, and consequences of unplanned readmission were identified, filling a gap in current literature. The proposed definition of unplanned readmission expands current definitions by identifying the core and unique attributes of unplanned readmission. Specifically, unplanned readmission is not one point in time, but an experience that includes previous hospitalization(s) (Weissman, 2001). Viewing unplanned readmission as an experience that occurs over time, from the previous hospitalization through the urgent/emergent health crisis and their need for acute care, provides a holistic understanding of how the identified antecedents influence unplanned readmission.

Previous hospitalizations, an emergent or urgent health crisis, and the need for acute care, attributes and antecedents of unplanned readmission, differentiate the concept of unplanned readmission from planned admission, emergency admission/visit, and the concept of readiness for discharge (Galvin et al., 2017, p. 2554). Readiness for discharge is "a process and state" of

patients' abilities and competencies to physically, functionally, knowledgeably, and emotionally cope with and respond to complications after leaving hospital (Galvin et al., 2017, p. 2554). Galvin et al. (2017) argued that "readiness" was the critical component of discharge that influenced readmission (Galvin et al., 2017). Similarly, older persons identified that lack of discharge readiness contributed to unplanned readmission (DeCoster et al., 2013; Dilworth et al., 2012; Slayter et al., 2013; Stephens et al., 2013; White et al., 2015; Verhaegh et al., 2018). Readiness for discharge was not identified as a concept antecedent of unplanned readmission as it reflects older persons' readiness prior to leaving the hospital and does not address the reality of older persons' experiences at home managing multiple chronic conditions. This may explain why the symptoms and diagnoses of older persons are similar on admission and readmission.

The proposed definition identifies older persons need acute care services for treatment of their urgent and emergent health crisis when they seek unplanned readmission. This definition supports older persons' reports of unplanned readmission being necessary and not preventable at that moment in time (Dilworth et al., 2012; Jeffs et al., 2014; Slatyer et al., 2103; Stein et al., 2016; Tang & Lee, 2017); thereby removing guilt or blame of older persons seeking unplanned readmission. However, the antecedents such as lack of symptom stability, suggest that more support to older persons in the home may prevent unplanned readmissions in the future.

Limitations

The purpose of this concept analysis was to clarify and define the concept of readmission to hospital from home from the perspectives of older persons by using literature from the health sciences databases. One of the limitations within the reviewed literature was that researchers defined readmission but neglected defining "unplanned" as it applied to readmissions, resulting in further confusion of the concept (Dilworth et al., 2012). Other limitations of this concept

analysis were related to the inclusion and exclusion criteria guiding the reviewed empirical literature, such as not including languages other than English. As well the literature from the perspectives of health care providers was not included.

Conclusion

Multiple definitions of readmission contributed to confusion in understanding unplanned readmission. These definitions reflected the complexity of the concept and researchers' efforts to clearly articulate and define the concept of readmission. Using a concept analysis approach to develop a proposed definition of unplanned readmission expands nursing and health care knowledge by identifying the unique attributes, antecedents, and consequences and differentiates it from other similar concepts such as planned admission, emergency admission, and discharge readiness. Clearer concept definition may contribute to the development of nursing theory and expansion of current understandings of readmission (Walker & Avant, 2011).

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Stein, J., Ossman, P., Viera, A., Moore, C., Brubaker, B. A., French, J., & Liles, E. A. (2016). Was this readmission preventable? Qualitative study of patient and provider perceptions of readmissions. *Southern Medical Journal*, 109(6), 383-389.

Stephens, Cl., Sackett, N., Pierce, R., Schopfer, D., Schmajuk, G., Moy, N., Bachhuber, M., Wallhagen, M. I., & Lee, S. J. (2013). Transitional care challenges of rehospitalized veterans: Listening to patients and providers. *Population Health Management,* 16(5), 326-331.

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World Health Organization [WHO]. (2018). *Health situation and trend assessment: Elderly population.* Retrieved from WHO website: http://www.searo.who.int/entity/health_situation_trends/data/chi/elderly-population/en/

Xu, J., Gallo, J. J., Wenzel, J., Nola, M. T., Budhathoki, C., Abshire, M., Bower, K., Arruda, S., Flowers, D., Szanton, S. L., Dennison Himmelfarb, C., Gonzalez, K., & Han, H-R. (2017). Heart failure rehospitalization and delayed decision making: The impact of self-care and depression. *Journal of Cardiovascular Nursing, 33*(1), 30-39.

Yu, D., Lee, D., & Woo, J. (2007). The revolving door syndrome: The Chinese COPD patients' perspectives. *Journal of Clinical Nursing,* 16(9), 1758-1760. http://www.learnersdictionary.com/definition/re

Table 3.1

Database Search Terms

Databases Searched	Search Terms
Ovid MEDLINE (R) Daily and Ovid MEDLINE (R) from 1946 to present	*Patient Readmission, readmit*, readmission, re-admit, re-admission, rehospitali*, re-hospitali*, re-present, patient*, elder*, seniors, geriatric*, old*, caregiver*, carer*, son or sons, daughter*, wife or wives, husband*, spouse*, family, adult child*, perceive*, perception*, view*, belief*, report*, feedback, perspective, patients/px, interview, questionnaire*, self report*, experience*, "Aged, 80 and over", Aged, Frail Elderly, person*, persons, adult*, men, women, *Home Nursing, *Adult Children
Scopus	
CINAHL	
Embase (1974 to 2020)	

Note: This table identifies the key words and thesaurus terms used to systematically search the health sciences databases for empirical literature written in English over the past 20 years, in addition to historical published articles and a concept analysis.

Table 3.2

Methodological Appraisal of Reviewed Studies (n=30) Using the Mixed Methods Appraisal Tool (MMAT)

Table 2: MMAT Table	SCREENING QUESTIONS		1. QUALITATIVE STUDIES				
Citation	**S1. Are there clear research questions?**	**S2. Do the collected data allow to address the research questions?**	**1.1. Is the qualitative approach appropriate to answer the research question?**	**1.2. Are the qualitative data collection methods adequate to address the research question?**	**1.3. Are the findings adequately derived from the data?**	**1.4. Is the interpretation of results sufficiently substantiated by data?**	**1.5. Is there coherence between qualitative data sources, collection, analysis and interpretation?**
Annema, C., Luttik, M. L., & Jaarsma, T. (2009).	Yes	Yes	Yes	Yes	Yes	No	Yes
Antony, S. M., Grau, L. E., & Brienza, R. S. (2018).	Yes	Yes	Yes	Yes	Yes	Yes	No
Cakir, B., Kaltsounis, S., D'Jernes, K., Kopf, S., & Steiner, J. (2017).	Yes	Yes	Yes	Yes	Yes	No	Yes
Considine, J., Berry, D., Sprogis, S. K., Newnham, E., Fox, K., Darzins, P., Rawson, H., & Street, M. (2020).	Yes	Yes	Yes	Yes	Yes	No	Yes
DeCoster, B., Ehlman, K., & Connors, C. (2013).	Yes	Yes	Yes	Yes	Yes	Yes	No
Dilworth, S., Higgins, I., & Parker, V. (2012).	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Donaghy, E., Salisbury, L., Lone, N. I., Lee, R.,	Yes	Yes	Yes	Yes	Yes	Yes	No

Ramsey, P., Rattray, J. E., & Simon, T. (2018).							
Jeffs, L., Dhalla, I., Cardoso, R., & Bell, C. M. (2014).	Yes	Yes	Yes	Yes	Yes	No	Yes
Patel, H., Shafazand, M., Schaufelberger, M., & Ekman, I. (2006).	Yes	Yes	Yes	Yes	No	Yes	Yes
Pedersen, M. K., Mark, E., & Uhrenfeldt, L. (2018).	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Slatyer, S., Toye, C., Popescu, A., Young, J., Matthews, A., Hill, A., & Williamson, D. J. (2013).	Yes	Yes	Yes	Yes	Yes	No	Yes
Stein, J., Ossman, P., Viera, A., Moore, C., Brubacker, B. A., French, J., & Liles, E. A. (2016).	Yes	Yes	Yes	Yes	No	Yes	Yes
Stephens, C., Sackett, N., Pierce, R., Schopher, D., Schmuajuk, G., Moy, N., … Lee, S. (2013)	Yes	Yes	Yes	Yes	Yes	No	No
Tang, F. W-K. & Lee, D. T-F. (2017).	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Verhaegh, K. J. M., Jepma, P., Geerlings, E. E., De Rooij, S. E., & Buurman, B. M. (2019).	Yes	Yes	No	Yes	Yes	Yes	Yes
White, C., Brady, T., Saucedo, L., Motz, D., Sharp, J., & Birnbaum, L. (2014).	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Yu, D. S. F., Lee, D. R. F., & Woo, J. (2007).	Yes	Yes	Yes	Yes	No	No	No

SCREENING QUESTIONS	**4. QUANTITATIVE DESCRIPTIVE STUDIES**

Citation	S1. Are there clear research questions?	S2. Do the collected data allow to address the research questions?	4.1. Is the sampling strategy relevant to address the research question?	4.2. Is the sample representative of the target population?	4.3. Are the measurements appropriate?	4.4. Is the risk of nonresponse bias low?	4.5. Is the statistical analysis appropriate to answer the research question?
Arbaje, A., Wolff, J., Yu, Q., Powe, N., Anderson, G., & Boult, C. (2008)	Yes	Yes	Yes	Yes	Yes	No	Yes
Berges, I., Amr, S., Abraham, D., Cannon, D., & Ostir G. (2015).	Yes	Yes	Yes	Yes	Yes	No	Yes
Gorina, Y., Pratt, L., Kramarow, E., & Elgaddal, N. (2015).	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Greysen, S., Cenzer, I., Auerbach, A., & Covinsky, K. (2015).	Yes	Yes	Yes	Yes	Yes	No	Yes
Howard-Anderson, J., Busuttil, A., Lonowski, S., Vangala, S., & Afsar-manesh, N. (2016).	Yes	Yes	Yes	No	Yes	No	Yes
Hutchinson, A., Rasekaba, T. M., Graco, M., Berlowitz, D. J., Hawthorne, G., & Lim, W. K. (2013).	Yes	Yes	Yes	Yes	Yes	No	Yes
Longman, J. M., Rolfe, M. I., Passey, M. D., Heathcote, K. E., Ewald, D. P., Dunn, T., Barclay, L. M., & Morgan, G. G. (2012).	Yes	Yes	Yes	Yes	Yes	No	Yes
Lum, H., Studenski, S., Degenholtz, H., & Hardy, S. (2012).	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Madigan, E. A., Schott, D., & Matthews, C. R. (2001).	Yes	Yes	Yes	Yes	Yes	No	Yes
Scott, I., Shohag, H., & Ahmed, M. (2014).	Yes	Yes	Yes	Yes	Yes	Yes	Yes

SCREENING QUESTIONS			**4. MIXED METHODS STUDIES**				
Citation	**S1. Are there clear research questions?**	**S2. Do the collected data allow us to address the research questions?**	**5.1. Is there an adequate rationale for using a mixed methods design to address the research question?**	**5.2. Are the different components of the study effectively integrated to answer the research question?**	**5.3. Are the results adequately brought together into overall interpretations?**	**5.4. Are divergences and inconsistencies between quantitative and qualitative results adequately addressed?**	**5.5. Do the different components of the study adhere to the quality criteria of each tradition of the methods involved?**
Dupre, M. E., Xu, H., Granger, B. B., Lynch, S. M., Nelson, S., Churchill, E., Willis, J. M., Curtis, L. H., & Peterson, E. D. (2018).	Yes	Yes	Yes	Yes	Yes	Yes	No
Hodges, P (2009).	Yes	Yes	Yes	Yes	Yes	No	Yes
Xu, J., Gallo, J. J., Wenzel, J., Nolan, M. T., Budhathoki, C., Abshire, M., Bower, K., Arruda, S., Flowers, D., Szanton, S. L., Himmelfarb, C. D., Fonzalez, K., & Han, H-R. (2019).	Yes	Yes	Yes	Yes	Yes	Yes	No

Table 3.3

Steps of the Concept Analysis Method (Walker & Avant, 2011)

Steps	Description of the Step and Explanation of Implementing the Step	Steps Taken and Steps Taken to Ensure Rigor
1. Select a Concept	Concept of unplanned readmission to hospital from home for older persons selected	Systematic search of empirical literature, historical published articles, and search for concept analysis about unplanned readmission to hospital for older persons Key words and thesaurus terms used to search four databases
2. Purpose	To clarify, define and understand unplanned readmission in older persons	Inclusion criteria and exclusion criteria used ensure reviewed articles met purpose of study (N=25) Historical published articles added for background and related concept analysis (readiness for hospital discharge) added to assist with definitions (n=4) Readiness for hospital discharge was not identified as the "real thing" (Walker & Avant, 2011, p. 162). Examined articles appraised using MMAT
3. Uses of Concept	The way in which the concept is used in the literature.	Uses of the concept from the dictionary, historical and current articles were identified and extracted Findings about the uses of the concept were shared and discussed with the team.
4. Attributes that Define Concept	Identifying the attributes or characteristics that "name" the concept, make it unique, and differentiate it from other concepts.	Articles were read and re-read. A matrix was used to extract data that fit the definition of an attribute, the characteristics of unplanned readmission that appeared repeatedly were extracted by the primary author. Rigorous conversations were held with members of the research team about the attributes identified from the literature. The three characteristics that were the most obvious to "name" and differentiate unplanned readmission for older persons were identified through team discussions. The fit

		of these attributes were confirmed through the development of the model case.
5. Develop Model Case	The model case exemplifies the attributes of the concept and is a "pure case" (Walker & Avant, 2011, p. 163).	The model case was developed after the attributes were identified. As suggested by Walker and Avant (2011) during the analysis, the researcher and research team engaged in "constant comparative reflection" and rigorous conversations about the model case and fit with the attributes to clarify the "meaning and context" of unplanned readmission (Walker & Avant, 2011, p. 164).
6. Develop Borderline and Related Case	Borderline and related cases were developed to clarify and determine the attributes that define and do not define the concept of unplanned readmission. The borderline case is a case that contains some of the attributes that define the concept, but not all of them or has one attribute that is significantly different. A related case was constructed to illustrate similarity to the model case but does not contain all of the attributes that define the concept.	The borderline case was developed, and discussions were held with the team to assist in clarifying the attributes defining unplanned readmission. The borderline case also assisted to confirm attributes of the model case, identify where the model case was inconsistent, and differentiate unplanned readmission from related concepts such as readiness for hospital discharge The related case was reviewed and reflected on by the team to accentuate the attributes that define the concept and attributes that do not define the concept. The related case and borderline cases were compared to the attributes that defined the concept to identify the areas where the attributes overlapped, were vague, or contradicted each other. The cases were discussed between team members and refined until there were "no contradictions between the defining attributes and the model case" (Walker & Avant, 2011, p. 167)
7. Antecedents and Consequences	Antecedents and consequences are identified from the reviewed literature. Antecedents either are in place or happen before the concept happen. Consequences are "events or incidents" that happen due to the concept happening (Walker & Avant, 2011, p. 167).	Antecedents and consequences were identified by reading the reviewed literature several times. Data that fit the definition of antecedent and consequence related to unplanned readmission was extracted by the primary author from the literature and placed in a matrix. Antecedents and consequences were compared to attributes to ensure that there was no overlap and were not related to the attributes. The research team reviewed the antecedents and consequences for overlap and similarity, and to ensure that they were not related to the attributes.

8. Determine Empirical Referents	Classes or categories developed to identify how to measure or recognize the attributes and characteristics that define the concept (Walker & Avant, 2011, p. 168).	Empirical referents are identified for the attributes that define the concept. This occurs as a final step or towards the end of analyzing the concept. After the empirical referents were identified, they were discussed within the research team to determine their similarity to the attributes. The referents are argued to be useful in providing clinicians with "clear observable phenomenon by which to determine the existence of the concept in particular clients" (Walker & Avant, 2011, p. 169).

Table 3.4

Definitions of Unplanned Readmission

Authors, Year, Country of Origin	Definition of Unplanned Readmission from the Dictionary
Merriam-Webster (2018)	Readmission is an act or process on a second or subsequent admission or the act of someone or something being readmitted. Additional meanings of admission were that it occurred a second or subsequent time (to include 're') and encompassed the act of accepting someone into a hospital, clinic, or other treatment facility. It also included the right or permission to join or enter a group or place; or an acknowledgement that a statement was true, or someone who is admitted (Merriam-Webster, 2018).
	Definition of Unplanned Readmission Traced back to Early Literature Sources
Fuller (1930) USA	Readmission is an event that is part of the hospital history of mental patients where "a single patient may be discharged and readmitted several times" (p. 648) after their first admission over specific timeframes (first three months, one and five years).
Fuller (1931) USA	Readmission is a "subsequent return to the hospital" (p. 54) of a patient. Fuller differentiated between people being readmitted and admitted from the event of admission and readmission. For example, "each patient is admitted three times represents one first admission and two readmissions to the hospital system" (p. 55). Also labelled as recidivism.
Chambers & Clarke (1990) UK	Readmission is defined as "the next subsequent admission of a patient as an immediate (emergency or unplanned" admission to any hospital within the same district within a defined interval of a previous (index) discharge taking place within a defined reference period" in a calendar year (p. 1134). Is not a planned readmission for surgery or treatment or a transfer between hospitals or hospital units (p. 1134) Readmission rate calculated by the number of readmissions in a given interval of time after the first discharge from the care area divided by the number of patients who were discharged during this timeframe alive.
	Definitions from Reviewed Health Care Literature
Annema et al. (2009) The Netherlands	Readmission occurs after the first hospitalization, within 6 months, and is costly to hospitals (p. 427)

Antony et al. (2018) USA	Rehospitalization occurs within 30 days of discharge (p. 1)
Arbaje et al., (2008) USA	Early return to hospital soon after the person is discharged.
Berges et al. (2016) USA	Readmissions occur within 30 days of the patient being discharged from acute care.
Cakir et al. (2017) USA	Unplanned readmission "to the hospitalist service within 30 days of discharge" (p. 353)
Considine et al. (2020) Australia	Early unplanned readmission occurs within 72 hours of discharge (p. 1) An unplanned readmission is the return of the patient to the hospital within 28 days or less (due to reduced length of hospital stays). Is a rate, indicator of both hospital care quality and safety, experience, and associated with risk factors.
DeCoster et al. (2013) USA	Readmission is "an admission to a hospital at a certain time point after an original admission and discharge" that is measured. This may occur 7-30 days after the first admission (p. 878)
Dilworth et al. (2012) Australia	An unplanned admission to the hospital where the person was discharged from that occurs within 28 days (p. 281).
Donaghy et al. (2018) UK	Unplanned rehospitalization was described as an event experienced by ICU survivors "within 90 days of hospital discharge" (p. 915). It is also a rate and quality indicator for healthcare.
Dupre et al. (2018) USA	A subsequent admission that occurs 30 days after the first admission. There is a risk for being readmitted to hospital within 30 days.
Gorina et al. (2015) USA	Readmission is a hospitalization with an inpatient stay. It has a "date of admission within 30 days of the day following discharge from another hospital" (p. 5). Readmission is also a calculation or measure that reflects the number of people that are discharged or the population with a specific condition that is served by the hospital for a specific period of time. A rate of readmission is calculated "by dividing the weighted number of readmissions by the weighted number of live discharges and multiplying the ration by 100" (p. 5). This calculation "does not represent the number of persons readmitted during the year," only measures readmissions per live discharges (p. 5).

Greysen et al. (2016) USA	An admission that occurs after being discharged 30 days of the index admission (p. 561).
Hodges (2009) USA	"A pair of consecutive hospital admission to the same hospital where the time between discharge from the first hospitalization and admission for the second hospitalization is less than or equal to 90 days" (p. 34).
Howard-Anderson et al. (2016) USA	Readmission occurred within 30-days
Hutchison et al. (2013)	"number of readmissions to acute care in 12 months after subjects were enrolled" (p. 3)
Jeffs et al. (2014) Canada	Suggested that being readmitted is something that happens to patients and may be preventable
Longman et al. (2012) Australia	Readmission linked to frequent admissions, may be potentially avoidable, but this does not mean that the individual admission is in reality avoidable.
Lum et al. (2012) USA	Early readmission occurs at least 30 days from discharge from the hospital. Readmission is experienced within 30 days of the index hospitalization.
Madigan et al. (2001) USA	Readmission "is a multidimensional concern that is influenced by patient, caregiver, health care provider, and health care factors" (p. 299). "the mean length of time between index hospital discharge and home health care admission" (p. 301)
Patel et al. (2007) Sweden	Rehospitalizations is the time in days since the last time the patient was hospitalized (p. 704)
Pedersen et al. (2018) Denmark	Readmission is the "course of care over time, transcending organizational boundaries within healthcare systems" and includes the patient being recently discharged from one setting and being placed in another setting" resulting in increased stress and risk (p. 1379)
Scott et al. (2014) Australia	Patients who were discharged are then readmitted within 30 days of being discharged from their index admission due to an unplanned reason which was related to a complication from an acute medical problem. Readmission may also be a rate and poses a risk to older persons.
Slatyer et al. (2013) Australia	An experience in which older persons represent to a hospital emergency department 28 days after being discharged from that hospital unit (p. 447).

Stephens et al. (2013) USA	Readmission as a process was different from rehospitalization where patients were "currently hospitalized after previously being admitted to SFVAMC within the prior 90 days" (p. 327).
Stein et al. (2016) USA	Readmission was defined as "a return to hospital" that occurred within 30 days of being discharged from the hospital (p. 383).
Tang & Lee (2017) China	Hospital readmission is an experience that can be defined as an "admission to a hospital within 28 days of previous discharge" (p. 1115).
Verhaegh et al. (2019) The Netherlands	Readmission defined as being admitted for an acute health care problem "for more than 48 hours, discharged to home and subsequently readmitted within 30 days" (p. 126).
White et al. (2015) USA	Readmission is defined as being "readmitted from home to one of the two participating hospital systems within six months of index stroke admission" (p. 1093).
Xu et al. (2018) USA	Rehospitalization occurs "within and beyond 30 days of their last hospitalization" (p. 31).
Yu et al. (2007) Hong Kong	Recurrent hospital readmission rate is defined as "three or more readmission in six months" (p. 1758).

Figure 3.1

PRISMA 2009 Flow Diagram

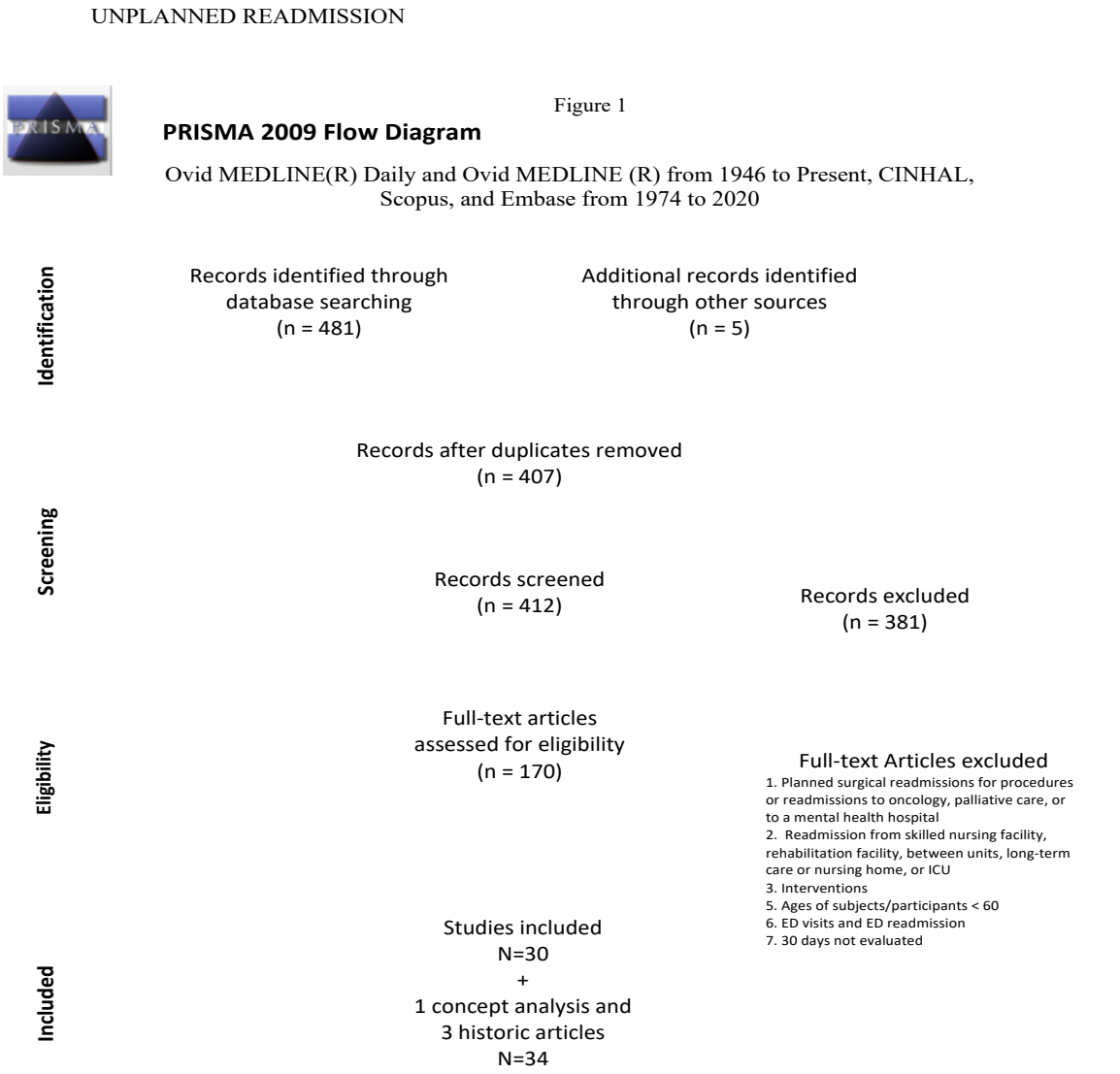
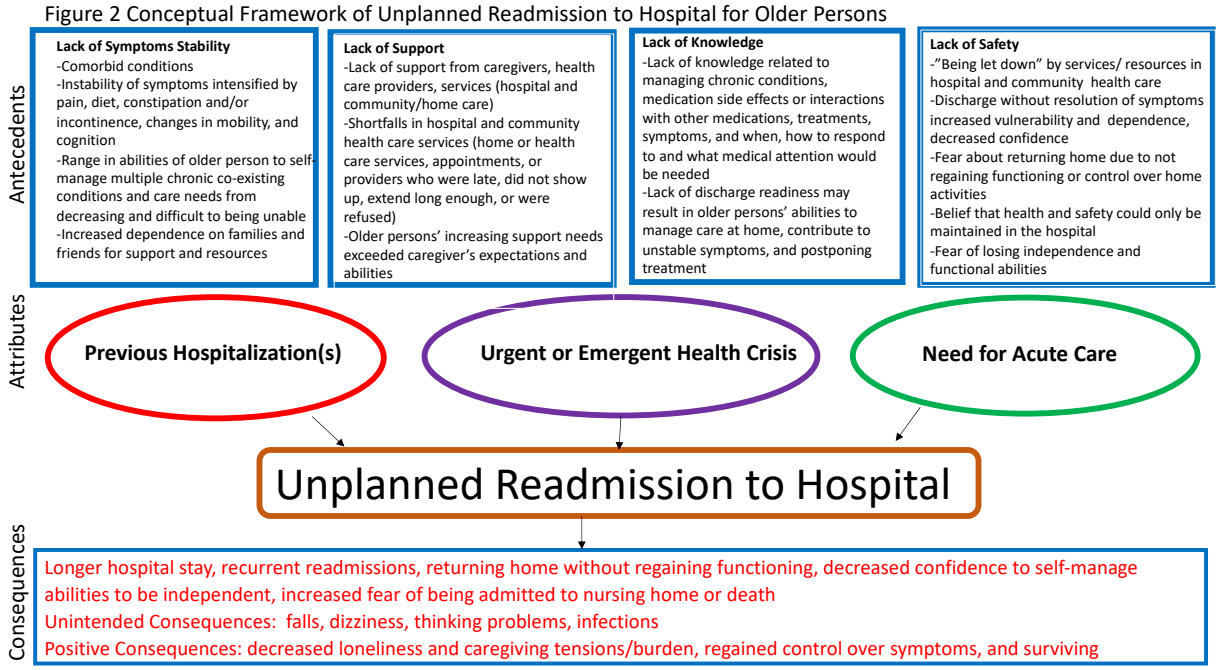


Figure 3.2

Conceptual Framework of Unplanned Readmission to Hospital for Older Persons



Chapter Four:

Safeguarding Survival: Older Persons with Multiple Chronic Conditions' Unplanned Readmission Experiences: A Mixed Methods Systematic Review

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Abstract

Background and Objectives: Very little is known about the experience of unplanned hospital readmission within 30 days of discharge to home and the purpose of this review was to explore that experience.
Research Design and Method: A mixed methods systematic review approach was used. A systematic search resulted in ten articles (N=5 Qualitative; n=5 Quantitative) that were: a) published between 2011-2021 in peer reviewed journals. The predominant design was qualitative, with quantitative findings informing the qualitative findings at the results stage. Applied thematic analysis, used to analyze the QUAL data, described the psychosocial processes of unplanned readmission and factors influencing unplanned admissions. From the quantitative data, factors influencing unplanned readmission were identified by vote counting. QUAL and quant data were integrated through aggregation and configuration. Validity of the findings were optimized with an audit trail, reflexive journal, regular team meetings, and peer experts.
Results: "Safeguarding survival" describes the processes of identifying missing pieces of care, reaching for lifelines, and feeling unsafe. Processes were influenced by older persons' chronic conditions and discharge diagnosis, increased need for help with functional needs, lack of discharge planning, lack of support, increased intensity of symptoms, and previous hospital readmission experiences.
Discussion and Implications: These findings will advance the development of practice interventions to reduce unplanned readmission, and understand older persons' community, home, and health care needs across the continuum of unplanned readmission.

Safeguarding Survival: Older Persons with Multiple Chronic Conditions' Unplanned Readmission Experiences: A Mixed Methods Systematic Review

Background

Worldwide the number of people who are defined as old, (60 and older), is growing rapidly (World Health Organization [WHO], 2021). In a systematic review of international literature (n=41 included articles), Margenoni et al. (2011) reported the prevalence of multimorbidity for older persons, ranges from 55-98%. Longevity and multiple chronic conditions (MCCs) increase the strain on the health care system in costs (Boyd & Fortin, 2010; Canadian Institute of Health Information [CIHI], 2012; Hajat & Stein, 2018), and in numbers of hospital (re) admissions (Bahler et al., 2015; Broemeling et al., 2008; Denton & Spencer, 2010). Readmissions are significant because of undesirable effects on quality-of-life issues and increased health care costs for older persons around the world (Beach et al., 2020; Hajat & Stein, 2018; WHO, 2017).

Measuring rates and costs of unplanned readmission provide insight into health care efficiencies, quality improvements, and the evaluation quality or shortfalls in care that occur between the first admission to 30 days after discharge (Chambers & Clarke, 1990, p. 1134; CIHI, 2012). Unfortunately, these measures do not adequately capture the costs of individual "burden" (CIHI, 2012, p.1) for older persons with MCCs (Lefevre et al., 2014), the impact of multimorbidity and hospitalization on older persons (Boyd & Fortin, 2010), or describe the health care needs of older persons resulting from multimorbidity (Roberts et al., 2015) during unplanned readmission. Older persons with MCCs use more hospital services (Bahler et al., 2015; Broemeling et al., 2008; Hajat & Stein, 2018; Roberts et al., 2008) including unplanned readmissions to hospital and home health care services (Hajat & Stein, 2018; Roberts et al.,

2008), resulting in higher costs (Hajat & Stein, 2018). Broemeling et al. (2008) calculated that when older persons experienced three or more chronic conditions, they used four times as many hospital and home care services, there was a 22% increase in likelihood that older persons with MCCs would be admitted to the hospital and have a hospital stay that was three times as long (Denton & Spencer, 2010). These costs do not capture the severity of the symptoms of the individual that an older person with MCCs experiences.

Older persons' unplanned readmission experiences are complex and created from their social relationships and interactions with health, chronic illness, health care providers, and services (Patel et al., 2007; Pedersen et al., 2018; White et al., 2015; Yu et al., 2007). Unplanned readmissions shape the older persons' values, beliefs (Patel et al., 2007), and illness experience (Yu et al., 2007). Older persons with MCCs may experience fragmented care and feel insecure, "excluded" from their care planning, and unprepared for their discharge from the hospital (Antony et al., 2018; Blakey et al., 2017, p. 701; Considine et al., 2020; Hestevik et al., 2019; Lilleheie et al., 2020; Yu et al., 2007). Knowledge and understanding about older persons with MCCs' experiences and what leads to unplanned readmission would expand current knowledge about older persons with MCCs' unplanned readmission.

Older persons with MCCs and family caregivers must be consulted about their health care perspectives, understanding, and needs (Boyd & Fortin, 2010; Ploeg et al., 2017) to inform social costs. These perspectives and understandings are needed to develop social care initiatives related to older persons' needs for community or home-based support and health care (Northwood et al., 2018). Practices and interventions such as social support (Kuluski et al., 2016; Northwood et al., 2018) can be developed for older persons (Beard et al., 2016) from their experiences.

Objectives

This study aimed to create a holistic perspective about the experience of older persons with MCCs' unplanned readmission. Research sub-questions included: a) What are the psychosocial processes that occur during older persons with MCCs' unplanned readmission experiences and; b) What are the factors associated with older persons with MCCs' unplanned readmission?

Research Design

A mixed methods systematic review (MMSR) (Creswell & Plano Clark, 2018; Harden & Thomas, 2010; Sandelowski et al., 2016; Tashakkori et al., 2021) approach was used to search the literature, appraise the identified studies, extract the data, integrate the study findings, and evaluate the validity of the findings (Harden & Thomas, 2010; Sandelowski & Barroso, 2007). A MMSR was indicated to construct a "complete" understanding and explanation using qualitative and quantitative findings (Creswell & Plano Clark, 2018, p. 8), develop a new awareness about (Creswell & Plano Clark, 2018), and address "unknown aspects of" (Tashakkori et al., 2021, p. 105) older persons with MCCs' unplanned readmission experiences, psychosocial processes, and factors influencing unplanned readmission (Coatsworth-Puspoky et al., 2022; Coatsworth-Puspoky et al., 2021). Following Harden and Thomas' (2010) model, the qualitative synthesis (QUAL) or meta-synthesis was prioritized as the first step and identified by the upper-case acronym. Older persons with MCCs' unplanned readmission experiences were explored to understand the psychosocial processes and determine influences at play during the pre-admission period. Factors associated with older persons with MCCs' unplanned readmission were examined in the quantitative synthesis (quant) or second step. The final step integrated the QUAL and quant findings.

Methods

Search Terms and Strategy

Six databases that included empirical literature were systematically searched: Ovid MEDLINE (R) All 1946 to present, Scopus, CINAHL, Embase, PsychINFO, and Web of Science from 1946 to 2020. Original search terms (Table 4.1) used to search the literature and reference lists of included studies were searched to evaluate their contribution to the research purpose. After duplicates were removed, two independent reviewers (RCP and SD) used the inclusion/exclusion criteria and Covidence software (Veritas Health Innovation, 2019) to screen the titles and abstracts.

Inclusion and Exclusion Criteria

Criteria for inclusion were consistent across qualitative, quantitative, and mixed methods studies. These criteria were a) published between 2011-2021 in peer reviewed journals, b) written in English, c) focused on the older persons' experience and or perspective about unplanned readmission, d) included participants who were over the age of 60 with one or more chronic condition(s), e) examined the unplanned readmission within 30 days from home to hospital. Older persons' age of 60 was included for consistency with global definitions (WHO, 2018; United Nations [UN], 2017). MCCs were defined as the combined signs and symptoms from the pathology of several single or interrelated medical diseases as well as symptoms, related "health issues," or disabilities caused by the disease over time (Boeckxstaens & Petrovic, 2020, p. 455; Xu et al., 2017). Conditions that increased patients' risk for ongoing health care follow-up (high blood cholesterol) or threatened patients' independent and dependent activities of daily living (physical, social, emotional) included pain, falls, incontinence (Boeckxstaens & Petrovic, 2020), polypharmacy, cognition, hearing, and vision (Xu et al., 2017).

Study exclusion criteria were a) abstracts, dissertations, and discussion papers, b) studies that were non-English studies, c) included participants whose mean age was less than 60, d) did not focus on older persons or older persons with one or more chronic conditions, e) examined unplanned readmission beyond 30 days, or f) examined planned or psychiatric readmissions.

Data Analysis

Studies that met the inclusion and exclusion criteria were read in full and mapped to either Synthesis 1 (QUAL) or Synthesis 2 (quant). Research reports, adapted from Sandelowski and Barroso's (2007) reading guide, were used to identify and extract data about and from the individual studies (Sandelowski & Barroso, 2007, p. 138).

Comparison Summary of QUAL and quant Data. Data was collected from the studies using a comparison summary (Sandelowski & Barroso, 2007) (Table 4.2). This collection tool assisted the researcher to identify patterns in the findings from the qualitative data (n=5 studies). The identified patterns were used to develop categories with descriptive themes to understand the psychosocial processes involved in unplanned readmission and the factors influencing older persons with MCCs' unplanned readmission. For the quantitative data (n=5), the comparison summary (Sandelowski & Barroso, 2007) assisted the researcher to extract findings about risk factors or factors associated with unplanned readmission. Due to the heterogeneity of the studies with large differences in clinical, methodological, and statistical processes (Munn et al., 2014), vote counting was used as an alternative method of analysis to meta-analysis as suggested by the SWiM guidelines (Campbell et al., 2020). In vote counting, the researcher assigns factors with significant positive results a positive vote (1), factors with significant negative results a negative vote (-1), and results with no significant association, a neutral vote (0). The votes are summed to determine factors with the most votes (Hedges & Olkin, 1980) (Table 4.3).

Integration of QUAL and quant data. Descriptive themes of the experience of unplanned readmission and qualitative factors were compared to the quantitative significant factors associated with older persons with MCCs' unplanned readmission, summarized, and then integrated to answer the overarching question. In this step of synthesis, the researcher identified matches, mismatches, and gaps (Harden & Thomas, 2010) related to older persons with MCCs' experiences of unplanned readmission. Findings from quant Synthesis 2 (the factors) were used to further develop the model from QUAL synthesis through aggregation (Sandelowski et al., 2012). Findings that were diverse/contradictory and could not be aggregated, were configured through the process of linking or meshing (Sandelowski et al., 2012).

Validity of the Findings

Descriptive, interpretive, theoretical, and pragmatic validity of the findings were optimized at each stage of the research project (Sandelowski & Barroso, 2007). As suggested by Sandeloski and Barroso (2007), upholding the validity was achieved using methods such as: following a systematic method of identifying, selecting, and appraising pertinent research studies for inclusion, documentation of the audit trail (Guest et al., 2012; Sandelowski & Barroso, 2007), scheduling regular meetings with team members (to ensure consensual and descriptive validity) of study finding interpretations (Guest et al., 2012; Sandelowski & Barroso, 2007), drawing on peer experts for review (Sandelowski & Barroso, 2007), identifying how these findings impact care of the older person, and using a reflexive journal (Guest et al., 2012). Discussions about reaching and negotiating consensus were documented in the audit trail and reflexive journal (Guest et al., 2012; Tashakkori et al., 2021).

Results

Sample Characteristics

The systematic search identified 6116 articles. Following screening for inclusion criteria, 10 articles met the inclusion criteria (Figure 4.1*).* No additional studies were identified from the reference lists of included studies. The Mixed Methods Appraisal Tool (MMAT) (Version 2018) (Hong et al., 2018) judged all studies (n=10) to be of adequate quality (Table 4.2). There were five qualitative studies (Dilworth et al., 2012; Enguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017), five quantitative studies (Albrect et al., 2014; Borkenhagen et al., 2018; Dong & Simon, 2015; Richards et al., 2019; Toledo et al., 2018), and no mixed methods studies. Studies were completed in four counties: Spain (Toledo et al., 2018), Australia (Dilworth et al., 2012; Slatyer et al., 2013), China (Han et al., 2017; Tang & Lee, 2017), and United States (Albrect et al., 2014; Borkenhagen et al., 2018; Dong & Simon, 2015; Enguidanos et al., 2015; Richards et al., 2019).

There were 12,336 participants represented in included studies (n=10) with 23% of having experienced unplanned readmission. The age of the total sample size for all the studies was, an average age of 75.5 years (Table 4.4). The total sample was included (46%) men and (54%) women with 59% of participants being married or living with someone. Approximately 86% of older persons with MCCs received support from a family caregiver (Dilworth et al., 2012; Enguidanos et al., 2015; Slatyer et al., 2013; Toledo et al., 2018).

Findings: Safeguarding Survival

The overarching theme, safeguarding survival, described older persons with MCCs' experience of unplanned readmission (Albrect et al., 2014; Borkenhagen et al., 2018; Dilworth et al., 2012; Dong & Simon, 2014; Enguidanos et al., 2015; Han et al., 2017; Richards et al., 2018; Slatyer et al., 2013; Tang & Lee, 2017; Toledo et al., 2018). Safeguarding survival included three psychosocial processes: a) identifying missing pieces of care, b) reaching for lifelines, and

c) feeling unsafe. Psychosocial processes were influenced by i) previous hospital readmissions, ii) chronic conditions and discharge diagnoses, iii) increased need for help with functional needs, iv) lack of discharge planning, v) lack of support, and vi) increased intensity of symptoms (Figure 4.2). As the timeframe from discharge increased, so did older persons' feelings of being unsafe (Dilworth et al., 2012; Han et al., 2017; Slatyer et al., 2013). Unplanned readmission restored safety as it relieved or helped control distressing or life-threatening symptoms (Dilworth et al., 2012; Enguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017), promoted recovery (Han et al., 2017) and survival (Tang & Lee, 2017). Older persons also gained additional time with their families (Tang & Lee, 2017).

Identifying Missing Pieces of Care

Identifying missing pieces of care focused on the older persons' realization that areas of knowledge and support were lacking. Missing pieces of care included lack of preparation for discharge and increased need for help with functional needs.

The consequence of short hospital stays and quick hospital discharges resulted in older persons feeling forced to return home without adequate knowledge and/or recuperation time from their illness, and little to no preparation time for their discharge. Older persons described feeling pressured (Tang & Lee, 2017), "pushed" (Enguidanos et al., 2015, p. 539); and "tricked" (Han et al., 2017, p. 306) into returning home. One participant shared "They just needed the bed. They were short of beds. I wasn't a serious case … more serious cases [were] waiting to occupy a bed" (Han et al., 2017; Slatyer et al., 2013, p. 451). In another case, the older person was given little notice of discharge: "the doctor just mentioned this afternoon, … we're thinking about sending you home, I said 'beauty'. That was that he just examined me and ducked off …" (Dilworth et al., 2012, p. 285).

Older persons identified that they had not recovered when they returned home (Dilworth et al., 2012, p. 285; Han et al., 2017). One participant said, "…I was not ready to go home. … I felt ill the moment I returned home" (Han et al., 2017, p. 306). Some participants feared reprisal from health care providers if they did not go home when discharged, "He is the doctor. When he discharges me, I must leave. Why should I ask him (for the reasons)?" (Tang & Lee, 2017, p. 1118).

Chronic conditions and symptoms influenced older persons' abilities to care for themselves (Dilworth et al., 2012; Enguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017). One participant said:

> I had breathing problems all the time …. But my breathing is getting worse … I've never been gasping for breath like that before in my life … I haven't been able to do things, like even to walk to the bus stop was killing me. (Slatyer et al., 2013, p. 449)

Older persons with MCCs' identified their increasing need for help to meet functional needs (Albrect et al., 2014; Dilworth et al., 2012; Dong & Simon, 2014; Enguidanos et al, 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017; Toledo et al., 2018). "Being cared for" (Dilworth et al., 2012, p. 284) reflected participants' changing dependence on family caregivers for assistance with activities of daily living (ADLs) (bathing, dressing, feeding, and walking), independent activities of daily living) (IADLs) (functioning to prepare meals, do laundry, and care for their home environment), and psychosocial needs (Dilworth et al., 2012; Dong & Simon, 2015; Slatyer et al., 2013; Toledo et al., 2018). Increased need for assistance influenced older persons' well-being (Albrect et al., 2014; Borkenhagen et al., 2018) and confidence in managing at home (Dong & Simon, 2014; Enguidnaos et al., 2015; Han et al., 2017; Richards et al., 2019; Slatyer et al., 2013). One patient said "I was very weak … I was a bit anxious … going home …

what if it happens again and it's fatal?" (Slatyer et al., 2013, p. 451). It is unclear whether older persons felt that the written discharge information addressed concerns about their chronic physical conditions and symptoms, emotions of anxiety and fear, or increased need with functional needs resulting from weakness or symptoms. One participant explained:

> We need to look at my overall picture …. I have a number of problems that I need to resolve, both medical and … psychological…. There's some financial problems … When I go home, OK, I'm faced with a whole group of problems that I have to resolve, which is enough to give a person a heart attack to begin with, and every day that I'm out, it gets worse." (Enguidanos et al., p. 539)

Reaching for Lifelines

Reaching for lifelines referred to measures or resources that the older person used and accessed as crucial for recovery and survival. These measures were undertaken to reduce the burden and risk associated with chronic symptoms and conditions, stabilize or manage symptoms, address older persons' functional needs, and to help them remain at home. Lifelines that older persons reached for included family caregivers, discharge plans, social networks, past symptom management strategies, and community health care services. Older persons reached for lifelines and resources to gain control over their symptoms (Tang & Lee, 2017), motivation (Enguidanos et al., 2015; Tang & Lee, 2017), independence (Enguidanos et al., 2015; Slatyer et al., 2013), and to survive (Enguidanos et al., 2015; Slatyer et al., 2013).

Absence of and age of family caregivers, the inability and lack of planning to obtain community health care services or being overconfident in their abilities to stabilize their symptoms negatively impacted older persons' recovery and survival. Some older persons with MCCs described the lack of support with discharge plans and community health care (Dilworth

et al., 2012; Enguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Toledo et al., 2018) which was confirmed by family caregivers (Dilworth et al., 2012). Participants' discharge plans for community health care services that were "still in the pipeline" (Dilworth et al., 2012, p. 294) left some older persons without follow-up health care treatment for up to three weeks (Dilworth et al., 2012; Enguidanos et al., 2015; Slatyer et al., 2013), adding to anxiousness and stress. One patient said: "Sometimes I have questions," and "I could have REALLY used a hospital bed" (Enguidanos et al., 2015, p. 539). Reasons older persons lacked access to critical community health care support and resources included long waiting times, lack of availability, lacking therapeutic value, or the support was needed for a longer timeframe than it was scheduled (Dilworth et al., 2012; Slatyer et al., 2013). Support scheduled in two to three weeks or at an "unknown point in the future" were not utilized by patients as they experienced unplanned readmission (Dilworth et al., 2012, p. 284). This may explain why only 7.5% of older persons (n=1929) who were hospitalized for community acquired pneumonia received home health or social care services (Toledo et al., 2018).

Older persons shared that family caregivers (presence or absence) (Albrect et al., 2014; Enguidanos et al., 2015; Richards et al., 2019; Slatyer et al., 2013; Tang & Lee, 2017; Toledo et al., 2018) influenced their motivation for self-care (Enguidanos et al., 2015). Ninety-two percent of older persons identified receiving "informal" support from family (Slatyer et al., 2013, p. 449) to meet their functional needs (Dilworth et al., 2012; Enguidanos et al. 2015; Slatyer et al., 2013; Tang & Lee,2017; Toledo et al., 2018) with their IADL and ADL (Dilworth et al., 2012; Slatyer et al., 2013; Toledo et al., 2018). Family caregivers may have assisted with the arrangement of older persons' community home health services (Dilworth et al., 2012; Slatyer et al., 2013), appointments, formal services, programs, transportation, and the home environment (Dilworth et

al., 2012; Enguidanos et al., 2015; Slatyer et al., 2013). Older persons identified being "grateful" to their spouses in caring for them and were conscious of not burdening them with additional duties (Tang & Lee, 2017, p. 1118). One patient stated: "My wife is really a dedicated, … Back and forth (between hospital and home) frequently. I said (to her), 'Don't commute so much. You are 70+, if I really need you, I will call you'" (Tang & Lee, 2017, p. 1118).

Living alone (Enguidanos et al., 2015), with a young child (less than 15 years old) (Toledo et al., 2018), or without community health support negatively influenced older persons' motivation to care for themselves and live independently (Enguidanos et al., 2015) and risk of unplanned readmission (Toledo et al., 2018). Another patient focused on their social isolation: "All my family is dead, I don't have any friends" (Enguidanos et al., 2015, p. 539). Another participant said "I have a home. I would like to go back to it, but I can't take of myself, and I can't find anybody who can provide care" (Enguidanos et al., 2015, p. 539). Lack of a family caregiver may influence older persons' fears of being discharged to a nursing home or dying, impacting older persons' physical and emotional decline (Enguidanos et al., 2015).

Some older persons identified using past symptom management strategies to manage symptoms (Enguidanos et al., 2015; Tang & Lee, 2017). However, they lacked awareness of the severity of their symptoms and conditions and were overconfident in their past successes in assessing, monitoring, and managing their symptoms. One participant explained "I am quite smart this time. With this method (pursed-lip breathing), I can stay away [from hospital] longer. Last time I came back [to hospital] just one week after discharge" (Tang & Lee, 2017, p. 1117). This participant also shared that they used pharmacological (puffers) and non-pharmacological strategies that were successful in the past to delay or refrain from hospital readmission: "Self-control. I know how to manage. If there is a medication at home, take the medication in advance,

just control in advance, right? If I can't take the medication, there's nothing I can do. This is the worst case." (Tang & Lee, 2017, p. 1117). Another participant shared their struggle with understanding the discharge instructions they received about the severity of their symptoms:

> The hospital, they say 'don't worry us with small things, go and see your doctor first' ... [I waited] all the weekend, you know, to see him on the Tuesday. And then that is when he realized it was really bad and sent me off [to the emergency department]. (Slatyer et al. 2013, p. 451)

Feeling Unsafe

Older persons felt unsafe when faced with intense symptoms that became unmanageable, increased need with functional needs, lack of support, and previous hospital (re)admission experiences. Older persons balanced their feelings of being unsafe and their need for acute care treatment and surviving the unmanageable symptoms with unpleasant emotions associated with past hospital readmission experiences.

Older persons identified the hospital environment as a place that would alleviate their feelings of being unsafe. The hospital environment was viewed as positive with feelings of "security" (Dilworth et al., 2012; Tang & Lee, 2017), "reassurance," being "looked after" (Dilworth et al., 2012, p. 284), and providing their spouses and adult children with respite (Tang & Lee, 2017). The hospital environment relieved their psychological distress and symptoms of breathlessness (Tang & Lee, 2017) and they felt safe. Older persons continued to experience fear associated with dying (Enguidanos et al., 2015; Han et al., 2017; Tang & Lee, 2017), but their focus changed to being satisfied with their "current state of living," and accepting unplanned readmission (Tang & Lee, 2017).

In contrast, other participants expressed unpleasant (harm) emotions (Dilworth et al., 2012; Enguidanos et al., 2015) towards their safety in hospital. One person said "Don't think too much, right? When there is food, shelter, and a place to sleep [at a hospital] just get some rest" (Tang & Lee, 2017, p. 1119). Another participant stated "I think that the doctor seemed to feel I was not in pain, I lied to them. I am an elder, not a child. It's not a lie and I will recover. I told them not feeling well, but they still told me that I should go home and rest" (Han et al., 2017, p. 307). Older persons with MCCs identified that readmission to hospital resulted in a changed role to patient and a subsequent loss of power and control with health care providers (Tang & Lee, 2017). One person stated: "I can't deal with this [hospital readmissions], I've become numb with it … In the first few times [of readmission], that really made me lost my confidence and motivation" (Tang & Lee, 20187, p. 1119).

Older persons evaluated unplanned readmission as health care they were entitled to, because they were "so unwell and needed help" (Dilworth et al., 2012, p. 285). They felt safe because unplanned readmission allowed them to cope and survive their chronic illness symptoms (Han et al., 2017). One participant stated "I ain't going nowhere, and I'm' fighting" (Enguidanos et al., 2015, p. 539). Another stated "If the [anal] bleeding did not stop, I must go to have another check up! Another doctor may … have a different treatment method. If this one doesn't work, I should visit another … The more visits I pay, the more likely I am to meet a better doctor, and maybe I can recover sooner" (Han et a., 2017, p. 307). However, they felt obligated to respect, obey, and trust the healthcare providers' decisions (Dilworth et al., 2012; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017). One patient explained:

> I will do whatever the doctor tells me to do. If there is no improvement, bad luck. I still need to do something and try to look for a cure. … If the doctors here cannot catch the problem, I have no other options. Maybe it's incurable after all! (Han et al., 2017, p. 307)

Unplanned readmission was identified as an "only option" or "decision" (Slatyer et al. 2013, p. 284) that relieved their feelings of being unsafe and provided "aggressive care" for their serious conditions (Enguidanos et al., 2015, p. 537) and treatment of intensifying symptoms that they were unable to manage (Dilworth et al., 2012; Enguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017). One person said: "Press the safety alarm, just for safety…. Next inhale with the nose and exhale with the mouth. By doing so, I hope to buy some more time. When he [ambulance man] comes, I can have oxygen" (Tang & Lee, 2017, p. 1117).

Older persons' awareness about the value of their life, their vulnerability, immortality, and the importance of making choices about how they would spend their remaining time increased (Han et al., 2017; Tang & Lee, 2017). One participant stated "I coughed through the whole night; I felt like [I was] dying. When I woke up, I was very weak. I thought I was going to die …." (Han et al., 2017, p. 307). Another participant said:

> If I want to remain alive, I will go the hospital, right? This' so simple. …When I really can't hold it, I don't have other choices. It is nonsense to do nothing but die. It's a must, a must to attend a hospital. They [hospital staff] can save me. (Tang & Lee, 2017, p. 1117)

Factors Influencing Unplanned Readmission

Six factors that influenced the unplanned readmission experiences of older persons with MCCs included i) previous hospital readmissions, ii) chronic conditions and discharge diagnoses), iii) increased need for help with functional needs, iv) lack of discharge planning, v) lack of support, and vi) increased intensity of symptoms.

i) Previous Hospital Readmissions

Older persons' previous hospital readmissions resulted in feelings of ambivalence about their care. Emotionally and physically (Slatyer et al., 2013), older persons felt "let down" by (Dilworth et al., 2012, p. 284) and mistrustful towards (Han et al., 2017) the health care system and providers (Dilworth et al., 2012; Slatyer et al., 2013; Tang & Lee, 2017). Older persons refrained from unplanned readmission as long as possible (Tang & Lee, 2017, p. 1117), but identified that it was "unavoidable" (Slatyer et al., 2013; Tang & Lee, 2017). Although they understood there was no cure (Enguidanos et al., 2015; Han et al., 2015; Tang & Lee, 2017), older persons depended on and "prepared for" unplanned readmission (Tang & Lee, 2017, p. 1118) to manage or relieve the acuity of symptoms from their chronic condition(s) (Dilworth et al., 2012; Enguidanos et al., 2015; Han et al., 2015; Slatyer et al., 2013; Tang & Lee, 2017). Three hospital admissions in 90 days significantly predicted unplanned readmission (aOR 1.52, 95% CI 1.01-2.34, p=0.04) (Toledo et al., 2018) and two or more readmissions in the last six months resulted in a 53% increase in risk of unplanned readmission (Albrect et al., 2014).

ii) Chronic Conditions and Discharge Diagnoses

Older persons identified that the instability of their chronic condition(s) endangered their health, safety, and survival (Albrect et al., 2014; Borkenhagen et al., 2018; Dilworth et al., 2012; Dong & Simon, 2014; Enguidanos et al., 2015; Han et al., 2017; Richards et al., 2019; Slatyer et al., 2013; Tang & Lee, 2017; Toledo et al., 2018). The weighted Charlson Comorbidity Index scores (Charlson et al., 1987) illustrated that older persons had one or more severe chronic health conditions that impacted their health and mortality (Albrect et al., 2014; Borkenhagen et al., 2018; Dilworth et al., 2012; Enguidnaos et al., 2015; Han et al., 2017; Richards et al., 2019; Slatyer et al., 2013; Tang & Lee, 2017; Toledo et al., 2018). An increase in one point of the

severity or burden of older persons' chronic conditions using the Charlson Comorbid Index (Charlson et al., 1985) resulted in a 7% increase in risk (RR 1.07, 95% CI, 1.01-1.14) of unplanned admissions (Albrect et al., 2014).

Discharge diagnoses were significantly associated with 30-day unplanned readmission and varied across included studies. Diagnoses in an adjusted multilevel analysis included chronic respiratory failure (OR 1.53, 95% CI 1.24-2.45, p=0.001), heart failure (aOR 1.69, 95% CI 1.21-2.35, p=0.002), and chronic liver disease (aOR 2.27, 95% CI 1.21-4.31, p=0.01). Cardiovascular diagnoses were the most prevalent (50%). Two studies purposely sampled older persons with specific diagnoses and conditions, such as heart failure and cancer (Enguidanos et al., 2015) and chronic obstructive pulmonary disorder (Tang & Lee, 2017). Four studies reported that most participants had one or more chronic conditions (Albrect et al., 2014; Borkenhagen et al., 2018; Toledo et al., 2018) and as many as 9.8 chronic conditions (Slatyer et al., 2013).

iii) Increased Needs with Functional Needs

Some older persons with MCCs identified independence in their care needs prior to their hospital stay and required assistance after discharge (Dilworth et al., 2012). Many others identified the need for more help with their functional needs when they returned home **(**Dilworth et al., 2012; Enguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017; Toledo et al., 2018). These needs included ADLs, IADLs, health care routines such as medication administration and caring for the safety of their home environment (Dong & Simon, 2015). Toledo et al. (2018) identified an increased need for help with functional needs (aOR 1.39, 95% CI 0.99 to 1.95; p=0.05). Dong and Simon (2015) reported that mild (PE 1.09, SE 0.19, RR 3.00, 95% CI 2.07-4.34, p<0.001), moderate (PE 0.84, SE 0.13, RR 2.33, 95% CI 1.81-2.98, p<0.001) and severe (PE 1.24, SE 0.40, RR 3.45, 95% CI 1.57-7.58, p=0.002) decreases in

functional abilities significantly influenced unplanned readmission. Decreases in older persons' functional abilities reduced their capacity to meet or maintain their ADL, IADL, health, household environment needs, and safety. Reduced functional abilities, personal health and safety influenced older persons' risk for unplanned readmission. A moderate to high need for assistance with functional needs was reported by 46% (Toledo et al., 2018); 33% of older persons who experienced unplanned readmission (Slatyer et al., 2013).

iv*) Lack of Discharge Planning*

Lack of discharge planning was a factor that influenced unplanned readmission (Dilworth et al., 2012; Enguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017; Toledo et al., 2018). Older persons expressed frustration and concern (Dilworth et al., 2012; Han et al., 2017; Slatyer et al., 2013) that they lacked verbal or written discharge plans (Dilworth et al., 2012; Enguidanos et al., 2015). Discharge without a plan (Dilworth et al., 2012; Enguidanos et al., 2015; Slatyer et al., 2013; Tang & Lee, 2017) limited older persons' understanding (Dilworth et al., 2012; Enguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013) and abilities to manage and/or mitigate the condition or symptoms at home (Slatyer et al., 2013, p. 451). Lack of discharge instructions may explain why there was no significant association with being asked closed-ended questions about their needs for help at home (OR 1.219 (95% CI 0.818-1.815) or whether they received written discharge information about symptoms or health problems to anticipate after discharge OR 1.012 (95% CI 0.724-1.415) (Richards et al., 2018).

v) Lack of Support

In seven studies, older persons with MCCs identified that support influenced their unplanned readmission (Albrect et al., 2014; Dilworth et al., 2012; Dong & Simon, 2015; Enguidanos et al., 2015; Slatyer et al., 2013; Tang & Lee, 2017; Toledo et al., 2018). Two types

of support were identified: a) help with ADLs (to manage health conditions and home environment) received from caregivers or health care providers; and b) social outings with family and friends.

In three studies older persons identified receiving assistance to meet health and functional needs (ADLs and IADLs) (Dilworth et al., 2012; Enguidanos et al., 2015; Slatyer et al., 2013). Approximately 86% of older persons were supported by family caregivers who were spouses, family (adult children and siblings), friends (Dilworth et al., 2012; Slatyer et al., 2013; Tang & Lee, 2017; Toledo et al., 2018), and maids (Tang & Lee, 2017). One study reported that 58% of caregivers (n=7) lived within one kilometer and provided support that ranged from daily to three times per week (Slatyer et al., 2013, p. 449). Toledo et al. (2018) asked older persons (n=1756) structured questions about who they lived with and found that living with "cohabitants" who were younger than 15 years old was a factor that was associated indepedently with unplanned readmission (aOR 2.10, 95% CI 1.01-4.41; p=0.04). Young children may lack awareness and abilities that adult family caregivers have such as upholding older persons' complex and changing health care conditions, support needs, and complications (Dilworth et al., 2012; Enguidnaos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017). In addition, Enguidanos et al. (2015) reported that living alone and lack of support from family and friends also increased the risk of unplanned readmission

Albrect et al. (2014) identified that 12% of the sample of older persons were at risk of being socially isolated from family and friends. The risk of social isolation from family and friends increased to 24% in the sub-sample of older persons who experienced depressive symptoms (n=140). Dong and Simon (2015) found that those who experienced unplanned readmission had a lower mean social engagement score than older persons who were not

readmitted (2.1 +/- 1.7 vs 2.4 +/- 1.7). This score reflected older persons' social network size and their engagement in social outings in the community.

Older persons with MCCs identified they lacked support from community or home health care providers or services to assist with managing their chronic symptom(s) and associated conditions at home (Dilworth et al., 2012; Enguidanos et al., 2015; Slatyer et al., 2013; Tang & Lee, 2017; Toledo et al., 2018). One study identified not only the need for community health services to remain at home but that the absence of this support was a factor that increased the risk of influenced unplanned readmission (Enguidanos et al., 2015). Another study identified that only 25% of older participants received community services (Slatyer et al., 2013). Toledo et al. (2018) reported that 92.5% of older persons with MCCs returned home without services. This may be related to the lack of discharge planning prior to the older person returning home (Dilworth et al., 2012; Enguidanos et al., 2015; Slatyer et al., 2013; Tang & Lee, 2017) and challenges older persons experienced with community and home health care services.

vi) Increased Intensity of Symptoms

Increased intensity of symptoms was reported to influence unplanned readmission in six studies (Borkenhagen et al., 2018; Dilworth et al., 2012; Enguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017). Participants reported experiencing persisting, unresolved, and worsening symptoms from their chronic conditions (Dilworth et al., 2012; Enguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017) that resulted in weakness, anxiousness, and fear (Borkenhagen et al., 2018; Slatyer et al., 2013; Han et al., 2017; Tang & Lee, 2017). Risk of readmission increased by 15% with symptoms of anxiousness ($p=0.02$), 14% with symptoms of drowsiness ($p=0.01$) and shortness of breath ($p=0.004$) (Borkenhagen et al., 2017). Before their readmission, older persons experienced symptoms of

drowsiness (Dilworth et al., 2012), shortness of breath (Tang & Lee, 2017; Slatyer et al., 2013), and anxiousness (Enguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017). Anxiousness may have also been influenced by unmanageability of symptoms or concerns about the impact of the severity of symptoms on the older persons' health or death (Dilworth et al., 2012; Enguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017). Symptoms that concerned older persons included dizziness (Dilworth et al., 2012), bleeding (Han et al., 2017), coughing (Han et al., 2017), weakness (Han et al., 2017; Slatyer et al., 2013), decreased appetite (Enguidanos et al., 2015), and pain (Enguidanos et al., 2015; Han et al., 2017). Accidents or falls due to symptoms such as drowsiness (Dilworth et al., 2012) also increased older persons' health concerns. Depressive symptoms were also identified as increasing the risk of unplanned readmission by 17% (p=0.02) (Borkenhagen et al., 2018) and those that were readmitted had more depressive symptoms (1.8 +/-2.2) than those not readmitted (Dong & Simon, 2015).

Discussion

These findings expand our current theoretical knowledge of the concept of unplanned readmission and increase our understandings of older persons with MCCs' unplanned readmission experiences, which includes psychosocial processes and factors that influence it. Older persons with MCCs' unplanned readmission experience involves a process of "Safeguarding Survival." The model constructed from older persons' voices and experiences illustrates older persons' intensifying need for assistance and factors influencing the three psychosocial processes of identifying missing pieces of care, reaching for lifelines, and feeling unsafe (Figure 5.2).

The concept of unplanned readmission supported older persons' feelings of being unsafe and needing unplanned readmission because they were "unwell and needed help" (Dilworth et al., 2012, p. 285; Enguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017). Safeguarding survival, describes and illustrates unplanned readmission as an "experience, process, and event", which was described in a concept analysis of unplanned readmission (Coatsworth-Puspoky et al., 2021; p. 3). The concept's characteristics of "previous hospitalizations, urgent or emergent health crisis, and the need for acute care;" were reinforced by the MMSR (Coatsworth-Puspoky et al., 2021, p. 5). The MMSR facilitiates understanding about the pschosocial processes older persons experience and how these processes and factors influence what the experiences is like, and the processes undertaken to seek unplanned readmission. Antecedents that need to be in place for (Walker & Avant, 2011, p. 167) the concept of unplanned readmission to happen included lack of symptom stability, lack of support, lack of knowledge, and lack of safety (Coatsworth-Puspoky et al., 2021, p. 13). The MMSR reinforced the antecedents of the concept and provided understanding about where the antecedents happen and the influence they have on unplanned readmission. For example, the antecedent of lack of symptom stability included comorbid conditions, range of abilities to self-manage, and increasing dependence on others (Coatsworth-Puspoky et al., 2021, p. 13). In the MMSR, these factors were part of the process of identifying missing pieces of care. The psychosocial process of identifying missing pieces of care also included lack of discharge planning; which in the concept analysis was the antecedent of lack of knowledge. The MMSR also facilitated understanding about how the factors within each of the psychosocial processes influenced the next process and the older persons' need for unplanned readmission. For example, within the psychosocial process of missing pieces of care the factors of chronic conditions

increased older persons' need for support and help with functional needs (Borkenhagen et al., 2018; Dilworth et al., 2012; Dong & Simon, 2014; Enguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017). Further exploration is needed to determine the interrelationships between the other factors such as older persons' increasing acuity of symptoms, support needs, increasing needs with functional needs, unpleasant emotions, and decreasing physical safety.

Unpleasant emotions were consistent experiences in older persons unplanned readmission experiences (Blakey et al., 2017; Coatsworth-Puspoky et al. 2022; Coatsworth-Puspoky et al., 2021; Hestevik et al., 2019) and contributed to a "legacy of physical and emotional vulnerability" (Slatyer et al., 2013, p. 451). These emotions included unpreparedness, anxiousness, fear, frustration, powerlessness, worry, fear, lack of confidence, and motivation (Blakey et al., 2017; Borkenhagen et al., 2018; Coatsworth-Puspoky et al., 2022; Coatsworth-Puspoky et al., 2021; Dilworth et al., 2012; Enguidnaos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017). In a review of the literature, Blakey et al. (2017) argued that older persons experienced exclusion from critical knowledge (symptoms, condition), disregard for personal knowledge, and lack of preparedness by health care organizations and providers which negatively influenced their ability to manage at home (Hestevik et al., 2019; Lilleheie et al., 2020). Anxiety, uncertainty, unpreparedness, and loss further challenged older persons' ability to adapt to living at home (Hestevik et al., 2019). These negative interactions with health care organizations and providers contributed a "cycle of exclusion" (Blakey et al., 2017) resulting in harm emotionally (distress, trauma) (Kenward, 2017) and physically (Blakey et al., 2017). Kenward (2017) cautioned that reaction to the trauma, such as the negative emotions associated with unplanned readmission, may not occur until the person is discharged and home from the

hospital. This may explain why older persons feel unsafe at home and their attempts to avoid further psychological harm by weighing the decision to return to the hospital.

Family caregivers, the lifelines that older persons reached for in this study, provided older persons with physical and emotional support to recover and survive (Dilworth et al., 2012; Enguidanos et al., 2015; Slatyer et al., 2013; Tang & Lee, 2017; Toledo et al., 2018). Family caregivers emotionally and physically "cared for" older persons by directly helping them or indirectly arranging formal health care services for them (Dilworth et al., 2012, p. 284). Family caregivers' involvement was clearly "substantial" and one-third of the context of the health trajectory, yet this support was labelled by researchers as "informal" (Slatyer et al., 2013, p. 449). Similarly, strong positive support from family caregivers was cornerstone to older persons' abilities to adapt and cope with the care transition of being discharged from the hospital to home (Allen et al., 2017; Hestevik et al., 2019; Lilleheie et al., 2020). Assessing family caregivers' engagement in, knowledge, preparation, and ability to support older persons' care needs at home is important for the health and well-being of the older person and caregiver (Naylor et al., 2017). Additionally, assessing and supporting family caregivers' emotional and physical responses to the increased health care needs of the older person is needed to maintain their health and well-being (Naylor et al., 2017) and decrease the concerns of older persons (Allen et al., 2017; Hestevik et al., 2019; Lilleheie et al., 2020; Tang & Lee, 2017).

Challenges associated with unplanned readmission have been reported by younger patients. These challenges include being unprepared for discharge (Annema et al., 2009; Antony et al., 2019; Considine et al., 2020; Jeffs et al., 2014; Stein et al., 2016; Verhaegh et al., 2019), needing more support from family caregivers (Considine et al., 2020; Verhaegh et al., 2019), declining symptoms and illnesses (Annema et al., 2009; Donaghy et al., 2018; Jeffs et al., 2014),

unpleasant emotions (stress, sadness, fear, and anxiety) (Jeffs et al., 2014), and lack of community home health care (Stein et al., 2016) to support their recovery at home (Annema et al., 2009; Antony et al., 2018; Jeffs et al., 2014; Verhaegh et al., 2019). Additional challenges included returning to work, caring for young children (Strunnin et al., 2007), meeting basic needs (housing, medications, and treatments) (Donaghy et al., 2018; Strunnin et al., 2007; White et al., 2015), and mental health and substance misuse problems (Stein et al., 2016; Strunnin et al., 2007). Similar to our study, younger patients identified unplanned readmission as a "strategy" (Jeffs et al., 2014, p. 509), but expressed frustration with the lack of power they had to stop the "admission-readmission" cycle (Stein et al., 2016, p. 387). Findings from this doctoral study are significant as they reflect older persons with MCCs' experiences and illustrate the process (and factors) that influence unplanned readmission over time. This model depicts how older persons feel more unsafe as symptoms increase in intensity and unmanageability. Further exploration is needed to determine the fit of this model with younger patients.

Limitations

The limitations of this study are related to the database searches, study purposes, countries where the studies were completed, and in the method of completing this study. The literature search was limited to six databases and excluded abstracts, dissertations, and discussion papers. The search was also limited to studies that were published in English and to studies whose samples included persons over the age of 60. This may have eliminated studies focussed on unplanned readmission within 30 days of hospital discharge that included older persons in the sample. The majority of studies were from North America. Studies from other cultures may provide nuances to this study. The included studies focused on older persons with MCCs' experiences and perspectives about unplanned readmission within 30 days of being discharged

home. Each of the studies had their own limitations which add to the limitations of this review. The studies mostly utilized correlation types of design and interviews that occurred once in the hospital.

Implications for Future Research

Older persons with MCCs' sought unplanned readmission to safeguard their recovery and survival. The model we developed will assist researchers to advance the development of practice interventions or strategies to reduce unplanned readmission and to expand theoretical knowledge about the concept of unplanned readmission. For example, researchers could test this model by asking older people about their unplanned readmission experiences and measure the specific factors longitudinally. In addition, the factors could be utilized to develop strategies or interventions to help older persons cope with unplanned readmission. For example, a checklist could be developed to guide discussions between health care providers and patients about their discharge. These items may include older persons' burden of chronic conditions and discharge diagnoses, discharge planning that is communicated verbally and in writing, whether they have help at home and/or require community health services and resources, and what level of assistance they need based on their abilities to complete their ADLs and IADLs. These items may then be tested or developed into interventions.

Future studies should focus on ensuring older persons are physically prepared and emotionally prepared to return home with knowledge about and have access to needed community and home health care services and resources. Future research could also focus on developing knowledge and understanding about older persons' change in and need for increased assistance with functional needs at home, perceptions about what interventions would be helpful to help them feel emotionally and physically prepared to go home and manage their MCCs, and

the development and expansion of community health services to address older persons' emotional and support needs. The causal relationships between these factors and individually on unplanned readmission experiences is not known and requires examination. Understanding how older persons' unmet needs, emotional responses, well-being, feelings of trauma, and abilities to cope influence unplanned readmission may help with the development of interventions to mitigate the risks associated with unplanned readmission.

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Table 4.1

Search Terms and Relevant Thesaurus Terms used to Search Databases (Supplementary Table)

Databases Searched	Search Terms and Relevant Search Terms
Ovid MEDLINE (R) All 1946-present	*Patient Readmission, readmit*, readmission, re-admit, re-admission, rehospitali*, re-hospitali*, re-present, patient*, elder*, seniors, geriatric*, old*, perceive*, perception*, view*, belief*, report*, feedback, perspective, patients/px, interview, questionnaire*, self report*, experience*, "multipl* chronic condition* or disease*," "chronic disease* or condition*," "Aged, 60 and over", Aged, Frail Elderly, person*, person, adult*, men, women, *Home Nursing. The search will be limited to the English language.
SCOPUS	
CINAHL	
Embase	
PscyhINFO	
Web of Science	

Table 4.2

Cross Study Display for Comparative Appraisal of Characteristics of Included Studies (n=10)

Authors, Publication Date, Country	Objective	Methodology	Data Collection Method and Data Collected	Participants (n=?)	MMAT Appraisal	Findings
Albrecht , J. S., Gruber-Baldini, A. L., Hirshon, J. M., Brown, C. H., Goldberg, R., Rosenberg, J. H., Comer, A. C., & Furuno, J. P. (2014). United States	To examine whether older persons (>65 years) who have symptoms of depression are more at risk for 30-day unplanned readmission than older persons with no depressive symptoms. To assess whether screening for and treating symptoms of depression may assist with reducing unplanned readmission.	Prospective cohort design (admission, discharge, and 5, 15, and 31 days after discharge)	Questionnaire, medical charts, clinical data repository, and telephone calls Geriatric Depression Scale (GDS-15) (depressive symptoms >6 and no depressive symptoms <6) Wilcoxon rank sum test Log-Binomial Regression	N=750 older persons (140 older persons with Depressive symptoms and 610 without)	3.1: Yes 3.2: Yes 3.3: Yes 3.4: Yes 3.5: Yes	Unplanned readmission positively associated with depressive symptoms (relative risk (RR)=1.2, 95% confidence interval (CI)=0.83-1.72) Unplanned readmission positively associated with Charlson Comorbidity Index (7% increase in risk per year of age) (relative risk (RR)=1.07, 95% confidence interval (CI)=1.01-1.14) Unplanned readmission positively associated with hospital admissions in the past 6 months (53% increase risk for >2) (relative risk (RR)=1.53, 95% confidence interval (CI)= 1.12-2.09)
Borkenhagen, L. S., McCoy, R. G., Havyer, R. D., Peterson, S. M., Naessens, J. M., & Takahashi, P. Y. (2017). United States	To examine whether unplanned readmission and ED visits within 30 days of discharge could be predicted based on older persons' (>60 years) self-report of symptoms (ESAS) and to identify which symptoms created the most risk or burden for unplanned readmission.	Retrospective cohort design	Electronic Health Record and self-rating or with caregiver assistance during home interview Edmonton Symptom Assessment System (ESAS) Bivariate Analysis Time to event analysis Cox regression analysis	N=230 community dwelling, frail, older persons with multiple chronic conditions and high Elder Risk Assessment scores (ERA)	3.1: Yes 3.2: Yes 3.3: Yes 3.4: Yes 3.5: Yes	Unplanned readmission is positively associated with self-reported symptoms of drowsiness (P=.01), depression P=.02), shortness of breath (P=.004), anxiousness (P=.02), and total ESAS score (P=.01) Unplanned readmission risk sensitivity (47.1%) and specificity (72.6%) influenced by ESAS score >20; positive predictive value.
Dilworth, S., Higgins, I., & Parker, V. (2012). Australia	To explore older persons experiences and perspectives about discharge, reasons related to readmission, and the presence of person-centered care	Qualitative descriptive	In-depth interviews	N=3 2 men 1 woman	1.1: yes 1.2: yes 1.3: yes 1.4: no 1.5: yes	Felt ignored and excluded from explanations about care plans, changes in care plans resulting in feelings of fear, distress and feeling in "no man's land" -Responded carefully in a manner that was polite and expected about food, treatment Not able to ask questions as arrangements "still in the pipeline" Felt not listened to and not in a position to question health professionals Felt they were not back to their pre-admission functional status or recovered Discharge was ordered within hours of discussion

Dong, X., & Simon, M. A. (2014). United States	To understand the effects of reported self-neglect on unplanned readmission by examining older persons' self-neglect with rates of unplanned readmission and by examining the continuum of severity of self-neglect with unplanned readmission within 30-days.	Prospective population design	Interviews with questionnaires, observations, and hospital data Elder self-neglect 15 item scale scored between 0-3, scores of 1+ reflected danger to the older persons' health and safety Elder neglect severity was rated when older persons' self-neglect was confirmed by higher scores 1-45 by social service workers (mild 1-15; moderate 16-30; severe 31-45) Univariate analysis Poisson regression models	N=7,219 of older (>65 years of age) persons living in the community who were enrolled Chicago Health and Aging Project (CHAP) study and were reported to social services for suspicions of self-neglect Number of older persons readmitted to the hospital within 30 days: N=1,998	3.1: Yes 3.2: Yes 3.3: Yes 3.4: Yes 3.5: Yes	Increased rates of unplanned readmission were independently predicted from elder self-neglect (RR 2.30, 95% CI 1.89-2.80) after adjusting for depressive symptoms and social engagement An independent association between increased rates of unplanned readmission within 30 days was found between mild self-neglect (PE 1.09, SE 0.19, RR 3.00, 95% CI 2.07-4.34, p<0.001), moderate self-neglect (PE 0.84, SE 0.13, RR 2.33, 95% CI 1.81-2.98, p<0.001) and severe self-neglect (PE 1.24, SE 0.40, RR 3.45, 95% CI 1.57-7.58, p=0.002) Unplanned readmission rates and self-neglect was not modified by medical conditions (PE 0.00, SE 0.01, RR 1.00, 95% CI 0.98-1.02, p=0.56), cognitive impairment (PE 0.00, SE 0.01, RR 1.00, 95% CI 0.98-1.02, p=0.69), physical disability (PE 0.00, SE 0.00, RR 1.00, 95% CI 1.00-1.01, p=0.19), depressive symptoms (PE 0.00, SE 0.00, RR 1.00, 95% CI 0.99-1.01, p=0.97) or social engagement (PE 0.00, SE 0.01, RR 1.00, 95% CI 0.99-1.01, p=0.89)
Enguidanos, S., Kogan, A. M., Schreibeis-Baum, H., Lendon, J., & Lorenz, K. (2015) USA	To determine the reasons for 30-day readmissions to hospital from the perspectives of seriously ill older persons	Prospective qualitative study	Semi-structured interviews	N=9 9 men	1.1: yes 1.2: yes 1.3: yes 1.4: yes 1.5: no	Felt they lost their "purpose in life" and questioned "Why am I doing this" Angry about being told their condition was terminal and identified the need to fight for medical care and pain treatment for their illness: "I'm not going nowhere, and I'm fighting" Unresolved medical and psychological problems worsened "everyday at home" Discharge was "disturbing" and distressing because felt they were being "pushed out the door" Requested health care providers "Figure out why I'm here and what the problem is before you discharge me."
Han, C-Y., Lin, C-C., Goopy, S., Hsiao, Y-C., & Barnard, A. (2017). Taiwan	To explore and understand the experiences of elders who return to the ED within 72 hours of discharge.	Phenomenography	In-depth interviews	N=30 18 men 12 women	1.1: yes 1.2: yes 1.3: yes 1.4: no 1.5: yes	Felt "tricked" into going home as not ready, concerns ignored (did not receive acceptable solution to medical issues) and "unable to settle at home" ED was shopping for doctors, "better care," a diagnosis, the best deal, and faster recovery

						Fear or risk of dying related to unresolved symptoms, potential serious disease, persisting problem Lack of trust for health care providers because had not received the best care on first visit Felt physicians held power and they were required to follow their orders
Richards, B. G., Hajduk, A. M., Perry, J., Krumhoz, H. M., Khan, A. M., & Chaudhry, S. I. (2019). United States	To evaluate whether older patients (>75 years) reports about the quality of their discharge from hospital was associated with 30-day readmission or visits to the emergency department after acute myocardial infarction.	Multi-center prospective cohort study	Mailed questionnaire and medical records Quality of discharge from the hospital: During hospital stay, did doctors, nurses, or other hospital staff talk with you about whether you would have the help you needed when you left the hospital? and "During this hospital stay, did you get the information in writing about what symptoms or health problems to look out for after you left the hospital?" (p. 809). Sociodemographic characteristics (age, sex, race, cohabitation status) Comorbidities prior CAD, AMI, revascularization, arrhythmia, or heart failure, peripheral vascular disease, valvular disease, CVA, COPD, chronic kidney disease, cancer, diabetes mellitus, AMI and hospitalization characteristics, length of admission (p. 810) Unadjusted and adjusted logistic regression	N=2132 older persons Number of older persons readmitted within 30 days: N=410	3.1: Yes 3.2: Yes 3.3: Yes 3.4: Yes 3.5: Yes	Being asked about having the help they needed at home had no significant association with readmission (OR 1.304 (95% CI 0.882-1.928 and OR 1.219 (95% CI 0.818-1.815). Patient report of receiving written information about symptoms or health problems to be aware of after discharge was not significantly associated with 30-day readmission (OR 0.982 (95% CI 0.709-1.359) and OR 1.012 (95% CI 0.724-1.415).
Slatyer, S., Toye, C., Popsescu, A., Young, J., Matthews, A., Hill, A., & Williamson, D. J. (2013) Australia	To explore older persons, caregivers, and health care providers' perceptions about readmission to the hospital	Qualitative descriptive	Semi-structure interviews	N=12 6 men 6 women	1.1: yes 1.2: yes 1.3: yes 1.4: no 1.5: yes	Fear about changes in their symptoms, independence, fear of recurrence, and narrow escape from death Felt confident to manage in the hospital but still dealing with the physical and emotional impact of disease Returned to hospital because recovery did not happen and they had escaped death, but were afraid it was going to happen again

Tang, F., W., & Lee, D. T. (2017) Taiwan	To explore the lived experiences of unplanned hospital readmission of older Chinese persons with COPD.	Descriptive phenomenology	Unstructured interviews	N=22 18 men 4 women	1.1: yes 1.2: yes 1.3: yes 1.4: yes 1.5: yes	Understood what it is like to live with chronic condition, self-care, self-control and management of disease Learned new techniques each time hospitalized Survival and living were cravings Psychological distress and suffering caused from breathlessness Needed hospital to relieve feelings of anxiety, distress, urgency, and symptoms of breathlessness Ambulance was like "pressing the safety alarm" -submissive to hospital staff and to do what is expected of them Hospital readmission was respite for families and method to relieve burden -aging involved weakness and deterioration that was uncontrollable Inevitability of readmissions was perpetual as resignation as it is uncontrollable and fate
Toledo, D., Soldevila, N., Torner, N., Perez-Lozano, M. J., Espejo, El., Navarro, G., Egurrola, M., Donginguez, A. (2018). Spain	To identify factors that placed older persons (>65) who were first hospitalized with community acquired pneumonia at risk for 30-day readmission.	Cross sectional study across 29 hospitals in 7 Spanish regions	Questionnaire, interview and hospital records Multi-level regression analysis using backward stepwise procedure Barthel Index-functional capacity (0-89 moderate to high dependency and >90 no or little dependency) Charlson Comorbidity Index assigned weights to comorbid conditions (0-no comorbidity, 1-low comorbidity, 2-high comorbidity) Pneumonia Severity Index (PSI)(at admission, LOS<8 days and >8 days, Intensive care admission, mechanical ventilation, adequacy of antibiotic treatment plan, discharge disposition	N=1,756 of older persons Number of older persons readmitted within 30 days: N=200	3.1: Yes 3.2: Yes 3.3: Yes 3.4: Yes 3.5: Yes	Lives with cohabitant <15 years old p=.04 Three or more hospital admissions in last 90 days >3 p=.04 Barthel Index (moderate to high dependency) p=.05 Chronic respiratory failure p=.001 Heart failure p=.0002 P: Chronic liver disease p=.01 Discharge home with home care p=.0005 Tentative association with moderate to high degree of dependency (p=0.05)

Table 4.3

Overview of the Outcome Variables Associated with Unplanned Readmission

Variable	Relationship with Unplanned Readmission				Positive Factors
	Positive	Negative	No Association	Other	
Demographical					
Age	Albrect et al. (2014) (+)		Toledo et al. (2018) (0)		1
Gender			Albrect et al. (2014) (0) Toledo et al. (2018) (0)		0
Living with someone who is <15 years old	Toledo et al. (2018) (+)				1
Hospital Admissions/Visits	Albrect et al. (2014) (+) Toledo et al. (2018) (+)				2
Vaccinations			Toledo et al. (2018) (0)		0
Illness Severity					
Primary Discharge Diagnoses	Toledo et al. (2018) (+)				1
Charlson Comorbid Index	Albrect et al. (2014) (+)				1
Medical Conditions			Dong & Simon (2015) (0)		0
Need for Assistance					
Barthel Index	Toledo et al. (2018) (+)				1
Decreased Abilities to Care for Self	Dong & Simon (2015) (+)		Dong & Simon (2015) (0)		1
Self-Neglect			Dong & Simon (2015) (0)		0
Intensity of Symptoms					
Depression	Borkenhagen et al. (2017) (+)		Dong & Simon (2015) (0)	Observed Albrect et al. (2014)	1
Anxiousness	Borkenhagen et al. (2017) (+)				1
Drowsiness	Borkenhagen et al. (2017) (+)				1
Shortness of Breath	Borkenhagen et al. (2017) (+)				1
Total score on Edmonton Symptoms Assessment Scale >20	Borkenhagen et al. (2017) (+)				1
Hospital Processes					

Discharge to Home with Home Health Care	Toledo et al. (2018) (+)				1
Hospital Care Processes			Toledo et al. (2018) (0)		0
Received Written Information about symptoms or health problem after discharge			Richards et al. (2019) (0)		0
Asked whether they had needed help at home			Richards et al. (2019) (0)		0
Social Engagement					
Social Engagement			Dong & Simon (2015) (0)		0
Social Isolation			Albrect et al. (2014) (0)		0
Perception of Health					
Self-Rated Health			Albrect et al. (2014) (0)		0

Note: This table outlines the comparison summary about risk factors or factors that were significantly associated with unplanned readmission from the quantitative data (n=5). Positive and negative factors were summed to determine factors that had the most votes (Hedges & Olkin, 1980). Those factors with the most votes were determined by the researcher assigns factors with significant positive results a positive vote (1), factors with significant negative results a negative vote (-1), and results with no significant association, a neutral vote (0).

Table 4.4

Combined Demographic Characteristics of Participants in 10 studies

Characteristics	Average Scores	Percent (%)
Total number of participants	12,336	
Gender Male Female	 5973 6363	 48% 52%
Number of participants readmitted to hospital within 30 days	2,877	23%
Age	75.5	
Gender: Male Female	 1,142 1,342	 46% 54%
Marital Status Married	 174	 59%
Race White Non-White	 914 1285	 42% 58%
Education <12 years	1,043	76%
Caregiver Support	42	86%
Number of Readmissions in past year	3,238	
Diagnoses of Readmitted Patients (3,290) Cardiovascular	 1,621	 49%
Cancer	487	15%
Diabetes	309	9.4%
Neurological	309	9.4%
Respiratory	182	5.5%
Musculoskeletal	107	3.25%
Renal	66	2%
Infection	54	1.6%
Other	50	1.5%
Gastrointestinal	46	1.4%
Blood/Immunity	40	1.2%
Medical Complications	19	0.5%
Hospital Data Length of Hospital Stay <8 days	 226	 65%
Length of Hospital Stay>8 days	120	35%
Time between Discharge and Readmission	72 hours-12.6 days	
Time between development of symptoms to hospital readmission < 6 hours	1263	60%

Time between development of symptoms to hospital readmission > 6 hours	857	40%
Discharge with Home Health Care	12	6%

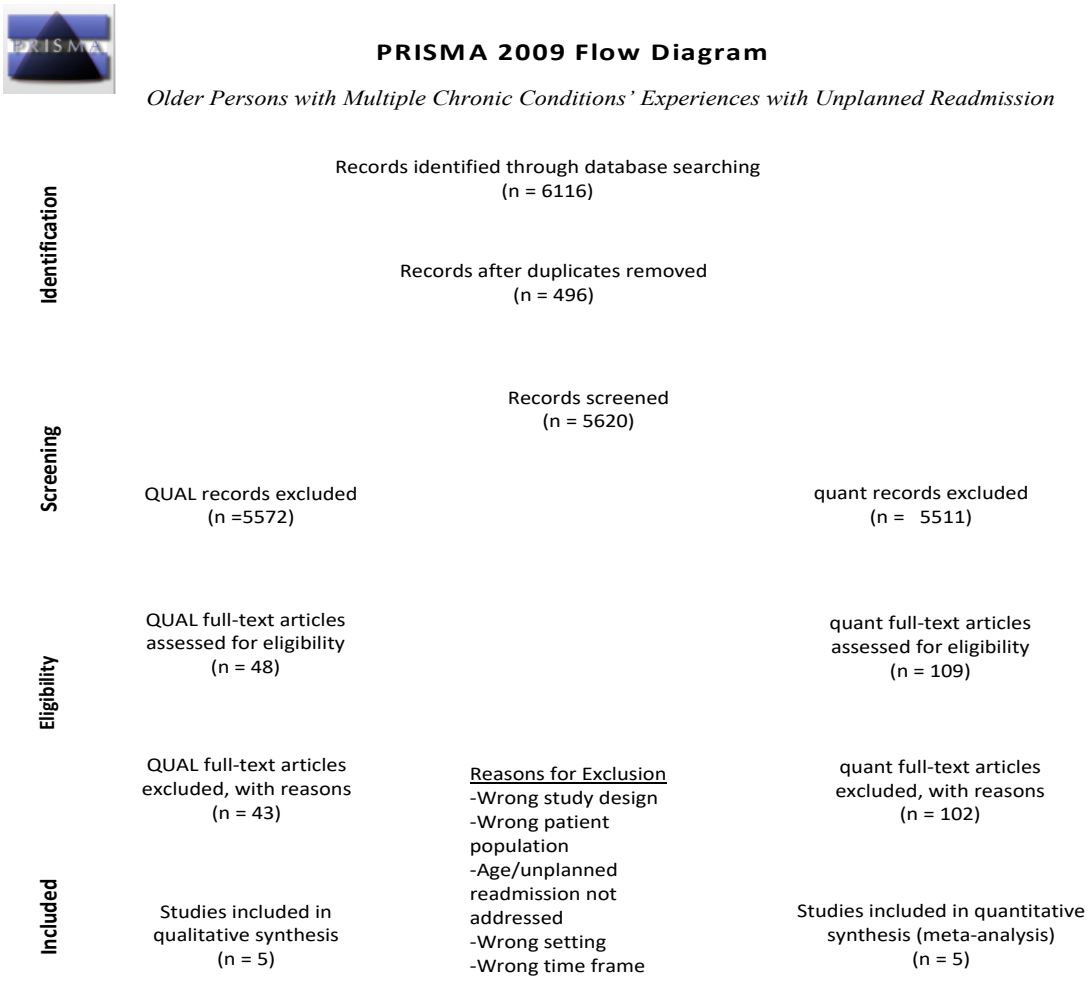
Table 4.5

Findings: Older Persons with Multiple Chronic Conditions' Experiences with Unplanned Readmission with References

Psychosocial Processes	Factors and References
Safeguarding Survival	**Previous hospital readmissions** (Albrect et al., 2014; Dilworth et al., 2012; Eguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017; Toledo et al., 2018) Increased burden or severity of conditions and diagnoses (Albrect et al., 2014; Enguidanos et al., 2015; Han et al., 2017; Tang & Lee, 2017; Toledo et al., 2018) **Increased Need for Help with Functional Needs** (Dilworth et al., 2012; Dong & Simon, 2015; Enguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017; Toledo et al., 2018) **Increase in the Intensity Symptoms** (Borkenhagen et al., 2018; Dilworth et al., 2012; Enguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017) **Lack of Support** (Albrect et al., 2014; Dilowrth et al., 2012; Dong & Simon, 2015; Enguidanos et al., 2015; Slatyer et al., 2013; Tang & Lee, 2017; Toledo et al., 2018) **Lack of Discharge Planning** (Dilworth et al., 2012; Enguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017; Toledo et al., 2018)
a) Identifying Missing Pieces of Care	**Burden of Chronic Conditions and Discharge Diagnoses** (Albrect et al., 2014; Enguidanos et al., 2015; Han et al., 2017; Tang & Lee, 2017; Toledo et al., 2018) **Lack of Discharge Planning: Unprepared to Return Home** (Dilworth et al., 2012; Enguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017; Toledo et al., 2018) **Increased Need for Help with Functional Needs** (Dilworth et al., 2012; Dong & Simon, 2015; Enguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017; Toledo et al., 2018)
b) Reaching for Lifelines	**Lack of Support** (Albrect et al., 2014; Dilowrth et al., 2012; Dong & Simon, 2015; Enguidanos et al., 2015; Slatyer et al., 2013; Tang & Lee, 2017; Toledo et al., 2018)
c) Feeling Unsafe	**Increase in Intensity of Symptoms: Unmanageable** (Borkenhagen et al., 2018; Dilworth et al., 2012; Enguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017) **Previous Hospital Readmission Experience** (Albrect et al., 2014; Dilworth et al., 2012; Eguidanos et al., 2015; Han et al., 2017; Slatyer et al., 2013; Tang & Lee, 2017; Toledo et al., 2018)

Figure 4.1

PRISMA 2009 Flow Diagram: Older Persons with Multiple Chronic Conditions' Experiences with Unplanned Readmission

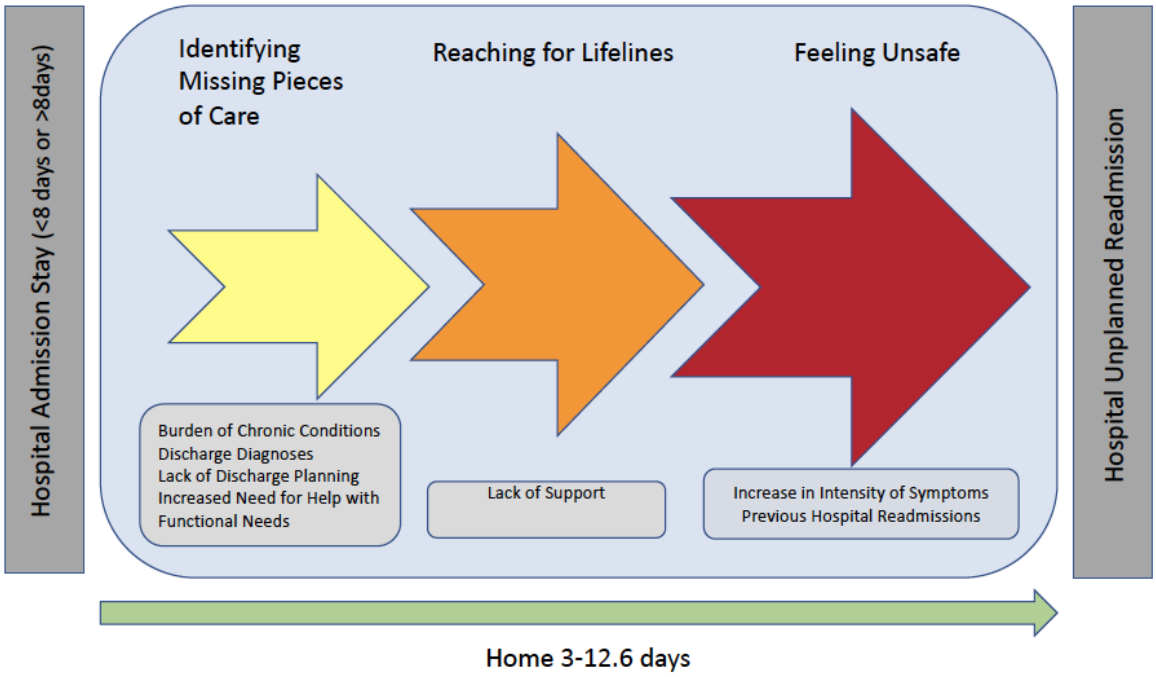


From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). *P*referred *R*eporting *I*tems for *S*ystematic Reviews and *M*eta-*A*nalyses: The PRISMA Statement. PLoS Med 6(6): e1000097. doi:10.1371/journal.pmed1000097

For more information, visit www.prisma-statement.org.

Figure 4.2

Safeguarding Survival



Note. This figure illustrates the integration of the psychosocial processes and factors of older persons with MCCs' unplanned readmission experiences. Unplanned readmission occurred between older persons previous hospital admission and stay and hospital unplanned readmission. Previous hospital admission lasted less than eight days for 65% of participants (Albrect et al., 2014; Toledo et al., 2018) and greater than eight days for 35% of participants (Toledo et al., 2018). As older persons move through each sub-process, there is an increased acuity in older persons' need for unplanned readmission as indicated by the arrow colour and size. Sixty percent of older persons with MCCs sought safety and returned to the hospital in less than six hours of symptoms beginning, while 40% of older persons with MCCs experienced symptoms for longer than six hours before returning to the hospital (Richards et al., 2019).

Chapter Five:

Mixed Methods Systematic Review Prioritizing Qualitative Meta-Synthesis Findings: Challenges and Learnings

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Abstract

Systematically synthesizing and integrating findings from qualitative and quantitative studies is important in developing knowledge and understanding about complex phenomenon. Using a mixed methods systematic review approach involves prioritizing qualitative or quantitative findings and integrating the findings from both types of studies. There is a lack of concrete examples that describe and illustrate prioritizing qualitative findings using Harden and Thomas' (2010) mixed method approach. The purpose of this article was to describe the mixed methods systematic review procedure that was used to prioritize meta-synthesis qualitative study findings of older persons with multiple chronic conditions experiences of unplanned readmission from home to hospital within 30 days. The challenges encountered from using this method included how to prioritize qualitative findings, how to "interrogate" the findings of the first synthesis (qualitative meta-synthesis findings) using the findings of the second synthesis (quantitative synthesis), and how to ensure validity of the integrated study findings. The lessons learned from the challenges include 1) the importance of using a cross-study table for the final synthesis; 2) the need to follow the procedure to address the research question; and 3) the need to ensure the validity of the mixed methods systematic review findings.

Mixed Methods Systematic Review Prioritizing Qualitative Meta-Synthesis Findings: Challenges and Learnings

Introduction

Mixed methods systematic reviews utilize systematic literature review methods as an overarching method to integrate primary data derived from qualitative, quantitative, and mixed methods studies in response to a research question (Grant & Booth, 2009; Harden & Thomas, 2010; Sutton et al., 2019; Tashakkori & Creswell, 2007). In mixed methods systematic reviews (MMSR) researchers use a systematic approach to review, mix, analyze, and integrate findings from previous studies, answer new research questions, and create new cumulative findings (Harden & Thomas, 2010; Sandelowski et al., 2006; Sandelowski et al., 2012; Sandelowski et al., 2016). MMSR approaches allow for the integration and synthesis of knowledge from the results or findings of empirical qualitative, quantitative, and mixed methods studies that address the same areas of research (Creswell & Plan Clark, 2018; Halcomb, 2018; Harden & Thomas, 2010; Sandelowski et al., 2006; Sandelowski et al., 2012) to influence nursing practice and research (Sandelowski et al., 2006).

Harden and Thomas (2010) described and illustrated a MMSR approach to determine the effectiveness and suitability of interventions. They characterized their method as a sequential mixed methods review where both qualitative and quantitative analyses are conducted separately and the findings from this analysis are integrated. Harden and Thomas' (2010) approach followed systematic process of searching, appraising, synthesizing, and documenting the procedure (Grant & Booth, 2009). Three procedural synthesis steps were outlined by Harden and Thomas (2010). The first step of this approach was identified by the study purpose and research question that prioritized or "weighted" which synthesis step would be prioritized. In Harden and

Thomas' study, quantitative findings were prioritized by the study purpose and research question. Their first synthesis step involved completing a meta-analysis of quantitative findings but argued that vote counting could also be used to synthesize quantitative data. The next synthesis step consisted of the synthesis of qualitative data in two sub-steps to develop descriptive and analytic themes. In the first sub-step thematic synthesis was used to develop descriptive themes from "line by line" coding of the findings from qualitative studies. Then, Harden and Thomas (2010) synthesized the qualitative findings using meta-ethnography to form analytic themes that reflected participants' perspectives or experiences. In the final step, the third synthesis, two sub-steps were completed to integrate quantitative findings with qualitative findings. Harden and Thomas' (2010) analyzed and evaluated whether trial interventions addressed or included the experiences or perspectives about the implications from their study findings. The findings from this first sub-step in the third synthesis were placed in a conceptual and methodological matrix to determine matches, mismatches, research gaps, and intervention quality.

To answer research questions that prioritized qualitative findings a sequential mixed methods systematic review (Harden & Thomas, 2010), could be used. Lacking in the literature are clear explanations about how to apply Harden and Thomas' procedures or Sandelowski et al.s' (2006) approaches. In addition, there was little guidance in explanations of these methods or concrete examples that illustrated the application of mixed method systematic reviews that prioritized the experiences of participants.

Lack of consistency in the naming and defining of mixed method research reviews (Howell Smith & Shanahan Bazis, 2021) further complicated locating a completed example study for expert guidance. Leary and Walker (2018) defined meta-study, systematic review, or

mixed methods meta-synthesis as combining quantitative studies and qualitative studies with methods of meta-analysis and meta-synthesis and "uniting" findings in the final step. They cited Harden and Thomas' (2010) method as a mixed-methods meta-synthesis while Harden and Thomas (2010) identified the method as a sequential mixed methods design. Gough et al. (2012) referred to Harden and Thomas' (2010) method as a "mixed methods review with three syntheses" where "two sub-reviews" could be "combined and contrasted in a third synthesis" (p. 6). Cerigo and Quesnel-Vallee (2020) suggested that when integration occurs using a synthesis method in the third synthesis it is a results-based integration or segregated design (p. 701). In keeping with terminology of "the review family" (Gough et al., 2019) and the typologies of reviews (Grant & Booth, 2009) the method being described in this article and used in the Coatsworth-Puspoky et al., (2022) study was labelled as a mixed methods systematic review (MMSR).

To overcome the inconsistencies in naming and defining MMSR, Harden and Thomas (2010) advised that researchers document the procedures used to complete the method. This paper aims to describe and illustrate the procedures that were taken to adapt Harden and Thomas' (2010) MMSR, using examples from a completed MMSR (Coatsworth Puspoky et al., 2022), Harden and Thomas' (2010) model was adapted to prioritize the meta-synthesis findings and was influenced by descriptions of mixed methods research synthesis designs (Sandelowski et al., 2006; Sandelowski et al., 2012). Prioritizing qualitative meta-synthesis findings within the MMSR procedure posed several challenges and lessons learned. The following will be discussed: 1) the process of completing a synthesis to integrate quantitative synthesized findings into prioritized qualitative synthesized findings using a cross-study matrix 2) the need to carefully

follow the Harden and Thomas (2010)'s adapted procedure, and 3) the need to ensure validity of systematic review findings.

As there is a shortage of explanations and method exemplars of MMSR in which qualitative research findings are prioritized (Howell Smith & Shanahan Bazis, 2021; Sandelowski et al., 2006), this paper will address a current gap in the literature surrounding how to prioritize qualitative research findings in MMSR. Knowledge about this procedure, the challenges, and lessons learned will expand methodological and practice knowledge about completing a MMSR (Howell Smith & Shanahan Bazis, 2021). In addition, this paper serves as a foundation to guide other researchers who want to prioritize qualitative research and add to discussions about MMSR.

Background

Mixed method systematic review designs were developed to mix, integrate, and synthesize primary findings from the results of qualitative and quantitative research studies to address complex and specific clinical practice issues (Harden & Thomas, 2010; Sandelowski et al., 2006). Several types of mixed methods review approaches are proposed by researchers. Harden and Thomas' (2010) described their MMSR as a "sequential mixed methods design" (p. 26) as the data was analyzed sequentially and then integrated. In contrast, Sandelowski et al. (2006) described three different ways to approaches to design mixed research synthesis studies. Segregated, integrated, and contingent mixed research designs differ in the assumptions about and ways to synthesize qualitative and quantitative research (Sandelowski et al., 2006). In a segregated approach, similar findings about a topic are generated by qualitative and quantitative methods. Findings are only able to be synthesized after being separately synthesized within their method. In an integrated approach, findings from on method (for example qualitative) can be

transformed into the other method (for example quantitative). Once data is transformed, it can then be integrated. In contingent approaches, the researcher uses synthesized findings in a cycle to answer questions and identify the next group of studies.

Harden and Thomas' (2010) design builds on the segregated mixed method synthesis review approach of Sandelowski et al. (2006). Table 5.1 compares these two approaches. These two approaches are similar in their view of qualitative and quantitative data which influences the development of research questions, retrieval of studies, and the analysis of data. The qualitative and quantitative research questions of Sandelowski et al.s' (2006) segregated design are developed in parallel, without assigning priority to one question or the other. Both approaches assume that only complimentary or related data about a topic are generated from qualitative and quantitative research questions (Harden & Thomas, 2010; Sandelowski et al., 2006). Sandelowski et al. (2006) recognizes that this as an exercise in which the researcher confirms that findings are "related to each other," "in the same domain of research," but do not address "the same aspects of the domain" (p. 7). Further, the segregated design is indicated when the goal is to configure findings from qualitative and quantitative research into a "coherent whole" of an argument, relationships, or timeline of events (p. 7).

Building on Sandelowski et al.s' (2006) approach, Harden and Thomas (2010) identified the need for a broad overarching question which functions to guide the development of the two research sub-questions, sequence which sub-question will be analyzed first, and complete final synthesis of data. Data in both approaches are analyzed with methods that are consistent with the design. For example, qualitative data is analyzed using meta summaries or meta-synthesis (Sandelowski et al., 2006; Sandelowski et al., 2012) and quantitative data analyzed using vote counting or meta-analysis (Sandelowski et al., 2006; Sandelowski et al., 2012) resulting in the

formation of synthesized qualitative and quantitative findings. Only findings that are synthesized in the initial steps can be synthesized in the final step of the approach. The synthesized data acts to answer the overarching study question (Harden & Thomas, 2010), building on Sandelowski et al.s' (2006) approach. Harden and Thomas (2010) describe a third synthesis where the first and second synthesis findings are integrated. During this process of integration, quantitative data were compared and analyzed with the experiences of participants. Then, a cross-study matrix was used to synthesize and evaluate matches (similarities), mismatches (dissimilarities), and research gaps (not addressed) related to the overarching research question. Using both qualitative and quantitative research is a strength identified by both approaches. Interrogating or testing the findings from one synthesis with findings of the other synthesis to formulate explanations, part of the third synthesis described by Harden and Thomas' (2010), advances the approach described by Sandelowski et al. (2006).

The MMSR by Harden and Thomas (2010) offered a new systematic review method suitable to address complex clinical problems such as unplanned readmission in older persons with multiple chronic conditions. For example, by prioritizing the qualitative meta-synthesis findings, older persons with multiple chronic condtions' (MCCs) subjective and experiential knowledge about unplanned readmission (Coatsworth-Puspoky et al., 2022) were used to explain the quantitative findings. In this way, the subjective perspectives of older persons were used to understand the context of factors that influenced unplanned readmission in "real-world practice" as suggested by Creswell & Plano Clark (2018, p. 37), Harden & Thomas (2010), and practice models. Factors identified in the second synthesis, from the meta-analysis of quantitative data, can be tested and explained by the qualitative data. Harden and Thomas (2010) illustrated and explained the procedural steps used to complete their MMSR procedural steps. Harden and

Thomas (2010) argued that the same procedure could be followed when qualitative synthesis findings were prioritized. The adapted procedural steps from Harden and Thomas' (2010) are illustrated in Figure 5.1.

Procedural Steps: MMSR Approach of Prioritizing Qualitative Findings

Harden and Thomas (2010) described and illustrated the MMSR procedure of how to prioritize research syntheses in three steps, a process similar to that of Sandelowski et al.'s (2006) segregated design. In our study (Coatsworth-Puspoky et al., 2022), the MMSR procedure by Harden and Thomas (2010) was initiated with the development of one broad research question: What is the experience of unplanned readmission for older persons with multiple chronic conditions (MCCs)? Then, two sub-questions were developed to answer the overarching question using qualitative and quantitative research results. As mentioned earlier, this study prioritized the qualitative data as the first step to better understand nuances in older persons with MCCs' unplanned readmission experiences, so the sequence of analysis was changed from Harden and Thomas' (2010) approach (qualitative-quantitative-integration). As a result, the Synthesis 1 sub-question was: What are the psychosocial processes of older persons with multiple chronic conditions? Synthesis 2 addressed the sub-question: What are the factors that influence or are associated with unplanned readmission? In the final step, Synthesis 3, findings from Synthesis 2, were integrated into the meta-synthesis findings from Synthesis 1 to address the overarching question (Harden & Thomas, 2010; Tashakkori et al., 2021). This paper will describe and illustrate the systematic procedure and three synthesis steps of the MMSR in which the qualitative meta-synthesis findings were prioritized and integrated into quantitative findings. Challenges of using this approach and lessons learned will be discussed.

Methods

In keeping with traditional review characteristics described by Grant and Booth (2009), research databases were systematically searched using key search terms and strategies and appraised (Harden & Thomas, 2010; Sandelowski et al., 2006). Six databases were searched with key search terms developed with a librarian. Criteria for inclusion and exclusion, the procedure for appraising study quality, process used to screen and reach consensus are described in the MMSR paper (Coatsworth-Puspoky et al., 2022). Each set of studies (qualitative, quantitative) were analyzed separately first, then integrated. Details of the MMSR are available elsewhere, presented here is an overview of the adapted method (Figure 5.1).

Synthesis 1: Qualitative Meta-Synthesis

Sandelowski and Barroso's (2007) meta-synthesis method was used to synthesize and examine the qualitative findings related to older persons with MCCs' unplanned readmission experiences. Using applied thematic analysis data from the research reports were analyzed (Guest et al., 2012) with the goal of understanding older persons with MCCs' unplanned readmission experiences. In contrast to the meta-analysis and thematic synthesis completed by Harden and Thomas (2010), this study constructed psychosocial processes and analytic themes using Guest et al.s' (2012) approach. Guest et al (2012) suggested that descriptive and analytic themes should be identified from the data, which in this case was the findings from the qualitative studies included in the review.

Descriptive Themes

Text elements (processes) were analyzed and grouped for "similarity, dissimilarity, and relationships" (Guest et al., 2012, p. 50), boundaries of segmentation or "key-word-in-context" (KWIC) (p. 51). The "key-word-in-context" was the focus of a theme or concept in the text body and included not only the identifying features, but also the context of the theme (Guest et al.,

2012). In the next step, codes or labels were developed, defined, and redefined. Codes or labels described and linked theoretical and conceptual components, and instances when the code should or should not be used (Guest et al., 2012, p. 54). A codebook was developed and used by the research team to help sort the meaning of text into "categories, types and relationships of meaning" (Guest et al., 2012, p. 52).

Analytic Themes

Structural and content coding was completed to contribute to the development of analytic themes (Guest et al., 2012). Structural coding identified the meaning (and description of the code label) and content coding categorized text segments that were common, different, related, unclear, or identified speakers. This process was used to update or change decisions about the constructed codes.

Synthesis 2: Quantitative Analysis

In the second synthesis, quantitative data were synthesized using systematic review procedures to address the research question: What are the factors associated with older persons with multiple chronic conditions' unplanned readmission? Included quantitative studies were assessed using Munn et al.'s (2014) criteria to determine their heterogeneity of the clinical, methodological and statistical processes used by the researchers. As a result of the heterogeneity of the included studies (Munn et al., 2014) vote counting was supported and used as an alternative method of synthesis without meta-analysis (SWiM) (Campbell et al., 2020). In vote counting, the number of significant study findings that were classified as positive, negative or null (Center for Review and Dissemination [CRD], 2009; Munn et al., 2014; Verbeek et al., 2012) received a positive, negative, or no vote. Then, similar results were grouped and summed by the researcher. The categories with votes were considered to be quantitative factors and those

categories with more votes were identified as having more strength (Hedges & Olkin, 1980, p. 359).

Synthesis 3: Integration of Qualitative and Quantitative Findings

In the final step, findings from the qualitative and quantitative meta-syntheses were integrated using Harden and Thomas' (2010) method to address the overarching question: What are older persons with multiple chronic conditions' experience of unplanned readmission? In this step, the findings about the quantitative factors that influenced unplanned readmission (Quantitative Synthesis 2) were mapped to the model of psychosocial processes and analytic themes (qualitative factors) (Qualitative Synthesis 1). Figure 5.2 illustrates this mapping.

In Synthesis 3, the "cross-study synthesis" as described by Harden and Thomas (2010) was the beginning of the synthesizing findings. Findings from Synthesis 1 (the psychosocial processes and analytic themes) and Synthesis 2 (factors identified from vote counting) were integrated using a conceptual and methodological matrix (Harden & Thomas, 2010). This matrix assisted the researcher to evaluate the psychosocial and analytic themes and factors across the qualitative studies. These factors assisted the researcher to identify similarity (matches) between the factors that influenced the experience of unplanned readmission and differences between factors that did not influence unplanned experiences (mismatches).

The cross-study synthesis matrix as described by Harden and Thomas (2010) assisted with identifying and synthesizing by aggregation, similar findings aggregated by vote counting and the meta-synthesis findings at the study level and with linking and meshing findings through configuration (Sandelowski et al., 2012). Similar qualitative and quantitative synthesis findings that were matched were aggregated as they addressed the same factors of unplanned readmission (Sandelowski et al., 2012, p. 7).

Linking or meshing are processes of the research synthesis of configuration (Sandelowski et al., 2012). In configuration, sets of aggregated findings are linked or meshed (Sandelowski et al., 2012, p. 9). Configuration assists the researcher to understand the relationships between findings "contradict, extend, explain, or modify" each other (p. 9). The process of linking or meshing occurred after the researcher reflected on matches, mismatches, and gaps (Harden & Thomas, 2010) (Figure 5.2). For example, previous hospital admission was identified as a factor in the meta-synthesis findings and was also identified as a factor in the quantitative analysis findings. It was therefore identified as a match. From the qualitative data, it was a factor that influenced unplanned readmission, but was a mistmatch to previous hospital admission experiences. Therefore, older persons previous hospital admission was linked to older persons' experiences of unplanned readmission. The final overarching theme, themes and factors about older persons with MCCs' experience with unplanned readmission were identified (Coatsworth-Puspoky et al., 2022) and assisted with understanding the "big picture" (Sandelowski et al., 2012, p. 10) of unplanned readmission experiences in older persons with multiple chronic conditions.

The Challenges and Lessons Learned

Articulating the procedures of research methods is important for the development of methodological knowledge and consistency in research methods. Several challenges arose when applying Harden and Thomas' (2010) approach due to the limited examples in the literature. The challenges included how to interrogate the findings from the first and second synthesis, how to prioritize qualitative findings, and how to ensure validity of the study findings The lessons learned from these challenges are discussed below.

The Challenges

The challenges identified from using the MMSR by Harden and Thomas' (2010) and the integrated MMSR by Sandelowski et al. (2006) included: questions about how to adapt Harden and Thomas' (2010) method to prioritize qualitative meta-synthesis findings, how to use the findings from the first synthesis step to "interrogate" the findings from the second synthesis step, and how to ensure validity of the mixed methods systematic review findings.

Adapting Harden and Thomas' (2010) Method to Prioritize Qualitative Findings

Harden and Thomas (2010) and Sandelowski et al. (2006) provided diagrams that numbered and sequenced the order in which data was analyzed: Synthesis 1, 2, and 3; as well as written descriptions about the "best" procedure to follow for the "cross-study synthesis" in Synthesis 3. Their written description about the "best" procedure to follow with illustrations of matrices described the cross-study synthesis when quantitative research was prioritized. This necessitated returning to the illustration and written descriptions frequently to analyze where the synthesis step was at to ensure the data was synthesized in a sequential process as outlined by Harden and Thomas (2010). The first step was to segregate qualitative and quantitative study findings.

Using the First Synthesis Findings to "Interrogate" the Second Synthesis Findings

Qualitative findings were synthesized first using a meta-synthesis approach as outlined by Sandelowski and Barosso (2007) and followed by quantitative findings synthesized using vote counting. Prior to completing the steps of synthesis within the third synthesis it was difficult to envision how findings that never appeared together in primary research findings may be "meshed" together or configured to advance knowledge and develop models and theories (Sandelowski et al., 2012, p. 9). Misreading the synthesis processes of aggregation and configuration before matches, mismatches, and gaps in findings were identified, resulted in the

researcher completing an integrated design in which all included studies (n=10) were analyzed at the same time. The meant that qualitative findings were not synthesized nor prioritized. As a result, study findings changed and were primarily focused on the quantitative findings, specifically the safety of the older person with multiple chronic conditions. The perspective of the older person "Safeguarding Survival" was lost.

How to Ensure Validity of Mixed Methods Systematic Review Findings

The lesson learned when this occurred, was the importance of following the procedure to address the research question, but also to look at how findings were being optimized at each stage of the research study. Optimization of findings occurred by using descriptive, interpretive, theoretical, pragmatic and consensual validity to ensure the validity of findings (Sandelowski & Barroso, 2007). For example, interpretive validity was upheld by data gathering strategies and regular committee meetings to ensure that older persons with MCCs' perspectives and experiences were prioritized. It was during these meetings and the written report that it was discovered that the qualitative findings had not been prioritized. This deviation to focusing on the quantitative data, impacted the theoretical validity. One of the factors, lack of support and age of cohabitants, was optimized through the process of negotiated consensual validity as one study reported that cohabitants less than 15 years old influenced older persons' unplanned readmission, similar to lack of support. Therefore, the factor of cohabitants' age was included with lack of support. At each synthesis step in the adapted model, similar to Harden and Thomas' (2010) model, findings were optimized using interpretive, theoretical, pragmatic, and negotiated validity.

Lessons Learned

These challenges mentioned above resulted in key learnings related to the procedure of completing a MMSR when qualitative research findings are prioritized and synthesized with quantitative findings. The lessons include 1) utilizing a table for the final Synthesis 3; 2) the need to follow the study procedure to address the research question; and 3) the need to ensure validity of MMSR findings.

Utilizing a Cross-Study Matrix for Synthesis 3

Lack of a procedure to follow when qualitative research findings were prioritized necessitated returning to the procedure multiple times to accommodate and transform the matrix to prioritize qualitative research findings. Interrogating or testing the findings from Synthesis 1 and 2 is best performed using a matrix (Harden & Thomas, 2010). The matrix allowed the researcher to compare synthesis findings across the studies to identify factors that matched, did not match, or where there were gaps (Harden & Thomas, 2010); similar to synthesizing data by aggregation, configuration and meshing results (Sandelowski et al., 2012). In the next step, the findings from matching, not matching, or gaps assisted in defining and describing the factors associated with unplanned readmission from older persons with multiple chronic conditions' experiences.

The Need to Follow the Study Procedure to Address the Research Question

The second lesson learned in using this method was the need to trust, follow, and return to the method for clarification. The method outlined by Harden and Thomas (2010) was constructed by synthesizing and using the quantitative meta-analysis data into and to interrogate the qualitative meta-synthesis data. Confusion had arisen because the procedure undertaken in the MMSR differed as the qualitative meta-synthesis was synthesized into and used to interrogate the quantitative findings. Therefore, it was important to complete each step of the

synthesizing the data and then return to the adapted procedure, before reading ahead and moving ahead to the next step. This reduced the confusion around the steps of synthesis in the third synthesis, specifically about gaps in themes. For example, the quantitative factor, the number of previous hospital admissions, and the qualitative factor, previous readmission experiences, were factors that appeared to be similar, but were very different. Meshing was used to merge these findings that were "never placed together in researcher reports reviewed" (Sandelowski et al., 2006, p. 9) and to place this factor in the psychosocial process that influenced older persons' feelings of being unsafe and unplanned readmission.

The Need to Ensure Validity of Mixed Methods Systematic Review Findings \

Finally, the third lesson involved the optimization of findings using descriptive, interpretive, theoretical, pragmatic and consensual validity to ensure the validity of findings (Sandelowski & Barroso, 2007). This became critical during Synthesis 3 when findings from Synthesis 1 and 2 were integrated in order to uphold the interpretive, theoretical, pragmatic, and negotiated validity. Findings were optimized with an audit trail, regularly scheduled meetings with team members (to ensure consensual validity) (Guest et al., 2012; Sandelowski & Barroso, 2007), drawing on the expertise of peers for review of findings (Sandelowski & Barroso, 2007), and using a reflexive journal (Guest et al., 2012). Weekly meetings (by phone, zoom, email, or correspondence), interpretation of the findings at each stage, and how the findings were integrated in the final stage were documented by the researcher using an audit trail (Guest et al., 2012; Sandelowski & Barrosso, 2007). Understanding about the model or theory of unplanned readmission was increased by reflecting on the audit trail and the process associated with integrating older persons' unplanned readmission (quant) into the QUAL findings of the unplanned readmission processes. Consistent with applied thematic analysis, the audit trail

provided the researcher with a document that reflected the changes that occurred during the research process, such as changes in the codebook, rationales, and how the systematic approach was maintained, in keeping with applied thematic analysis (Guest et al., 2012, p. 94).

The codebook was also used to "extend, revise, and test ideas" within the evidence of data; and was updated as definitions changed (Guest et al., 2012, p. 75). During the third synthesis, negotiated consensual validity, or the collaborative social processes (agreeing, disagreeing, reasoning, explaining, and negotiating) (Sandelowski & Barroso, 2007) was used by the team to advise the researcher to return to the method. During the weekly team meetings, this type of validity occurred between the research team members. Similarly, emails assisted the first author to be clear about the explanations and judgements surrounding how research findings were integrated. Consensual validity was documented in the audit trail to reflect how consensus was met or not met by team members, and also in the code book and reflexive journal (Guest et al., 2012; Tashakkori et al., 2021).

Discussion

This article offers novel descriptions and illustrations about the procedures related to prioritizing the qualitative meta-synthesis findings and integrating meta-synthesis findings with the vote counting findings in a synthesis of factors that influence unplanned readmission. As predicted by Harden and Thomas, the MMSR was successful when qualitative data were prioritized and effective in providing "reliable answers" to the research questions (Harden & Thomas, 2010, p. 25). In contrast to Harden and Thomas' (2010) study that examined interventions and their implications, our findings used the voices of older persons with multiple chronic conditions to understand their unplanned readmission experience and explain the factors that older persons identify as influencing their unplanned readmission experience.

Harden and Thomas (2010) developed guidelines for conducting a sequential mixed methods review using quantitative synthesis to inform qualitative synthesis. The key principles that guided the researchers included: transparency, error avoidance, involvement of persons utilizing the knowledge, consistency between review methods and the types of reviewed research studies, viewing differences between qualitative and quantitative research as complimentary, and learning from the research process (Harden & Thomas, 2010, p. 10). Using these principles and completing a qualitative synthesis to inform the quantitative synthesis, will contribute to the development of knowledge related to mixed methods meta-synthesis research design.

Prioritizing the qualitative findings in MMSR was significant as it strengthened the voices of older persons with multiple chronic conditions and produced a model that was constructed from older persons' experiences about unplanned readmission. Prioritizing qualitative findings also identified differences in language between older persons and health care providers about factors that influence unplanned readmission. These findings may be useful for health care providers when initiating discussions with older persons about discharge, returning home, their unplanned readmission experiences, or when listening to older persons experiences and health care needs.

These findings may contribute to establishing "best practices to guide future reviews" by providing clarity about the procedure and decisions that were used gather, analyze, and compile the results throughout this approach (Howell Smith & Shanahan Bazis, 2021, p. 556). The title of the completed study is identified as a MMSR and the reason for using this review approach was articulated by the researchers. Combined, these two factors enable other researchers to identify it within the published literature and evaluate the "value of" (Howell Smith & Shanahan Bazis, 2021, p. 547) MMSR to the development of knowledge in nursing.

Conclusion

This study utilized a novel procedure, a MMSR which prioritized qualitative meta-synthesis research findings and used analyzed quantitative findings (vote counting) factors to inform the findings from the synthesis of qualitative studies. This MMSR approach to synthesizing data expands our current understanding of the Harden and Thomas' (2010) model and methodological knowledge related to mixed methods meta-synthesis research designs. Prioritizing qualitative data resulted in a more complete understanding of unplanned readmission, prioritized older persons subjective experiences and voices, and may help explain or reduce the frequency of or avoid unplanned readmission.

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Table 5.1

Comparison of Mixed Methods Systematic Review Approaches

	Harden & Thomas (2010) Sequential Design	Sandelowski et al. (2006) Segregated Design
Indication for Use	Diverse studies of complementary data used to address several broad questions by sequencing or emphasizing each synthesis. Qualitative and quantitative findings "weighted" and analyzed equally.	Qualitative and quantitative findings/data in the domain of research are viewed as complimentary to each other (p. 6) Mixed research synthesis may occur using aggregation or configuration.
Research Question	Range of questions: one broad overarching review question to elicit answer to "what is …" about a specific domain of research. Two sub-questions developed to address overarching question with two independent syntheses; one question addresses analysis of qualitative data and the other sub-question addresses analysis of quantitative data.	Two research questions designed to address questions within the same domain of research. Research questions segregated by qualitative and quantitative methods, analysis, and findings. A qualitative and quantitative question are designed to be complementary or overlap in findings about the same domain of research.
Research Data	Findings section, abstracts, and discussions.	Findings section only
Research Design	Qualitative and quantitative data and methods of analysis are equally weighted. One research question and method of synthesis is prioritized and independently synthesized before the second synthesis. In the final stage, two syntheses are synthesized to answer overarching question. The findings of the second synthesis are used to interrogate the findings of the first synthesis.	Qualitative and quantitative studies retrieved, analyzed, and synthesized based on their differentiation of being qualitative or quantitative research. Qualitative and quantitative synthesized findings synthesized using aggregation or configuration.

Research Sample	Diverse types of studies (trials) and qualitative studies. Quality of studies assessed.	Quantitative and qualitative studies with the same domain (research purpose and questions) included. Quality of studies not addressed.
Analysis	Order for completing syntheses determined by the overarching question. Usually three independent syntheses. Involves pooling of qualitative findings Thematic synthesis is conducted in 3 steps: 1) line by line coding of the text to translate concepts of one study to another study; 2) descriptive themes from the analysis are developed and integrated; 3) analytic themes are generated through interpretative synthesis Interpretive synthesis is a process assumptions, interpretive framework, and review questions and findings are used to develop analytical themes (Harden & Thomas, 2010, p. 20) Data is then integrated within a matrix to determine matches, mismatches, and research gaps (p. 21) Cross-study synthesis was used to test the hypothesis in the first synthesis and trail it in the second synthesis The final synthesis involves the integration and interpretation of findings from syntheses 1 and 2 to answer the research question. The purpose is to create an argument or theory.	Order of synthesis is not identified by research question. Researcher determines whether study findings are 1) complementary (study findings are repeated in qualitative and quantitative studies) (assimilation/aggregation) or refutation (study findings are divergent or in opposition in study sample) (Sandelowski et al., 2006, p. 6) OR 2) are not amenable to assimilation ie address different aspects of the phenomenon and require configuration ("organized into a coherent whole") (p. 7) Synthesis of findings for each domain occurs separately and methods specific for each domain are used ie quantitative (meta-analysis) and qualitative data (meta-summary, constant comparison) to form "synthesis products" The final synthesis involves configuration of findings from quantitative and qualitative syntheses. Configuration is a process used by the researcher to 1) arrange or link similar or different individual or aggregated findings from each domain into conclusions, theories/frameworks, or path analysis (Sandelowski et al., 2006; Sandelowski et al., 2012). OR 2) link findings that are diverse and are unable to be pooled that "contradict, extend, or explain" (Sandelowski et al., 2016, p. 352) Configuration occurs via a "top-down" (building on

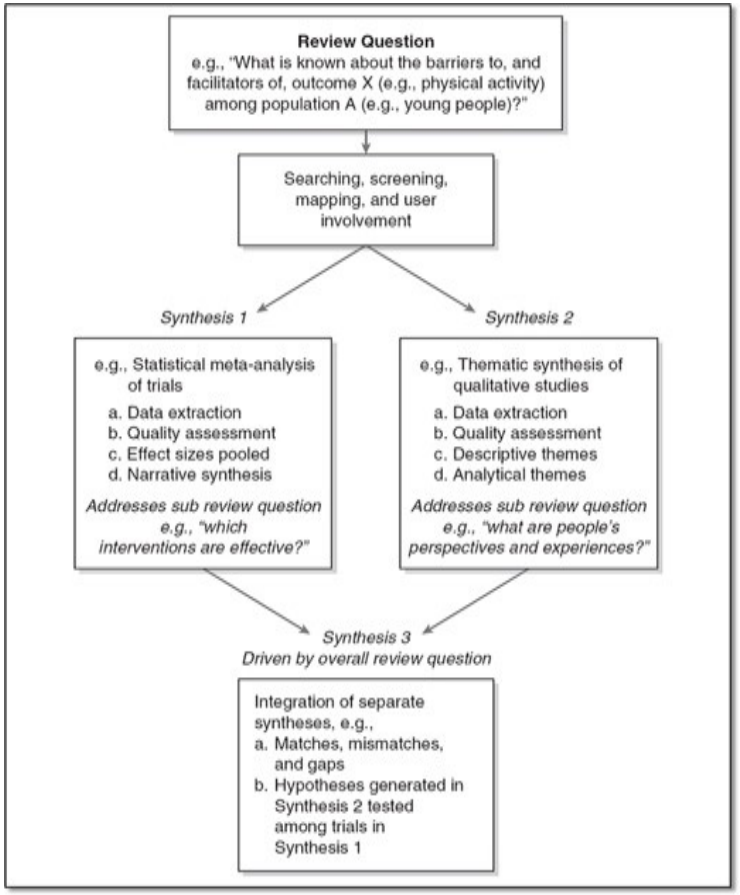
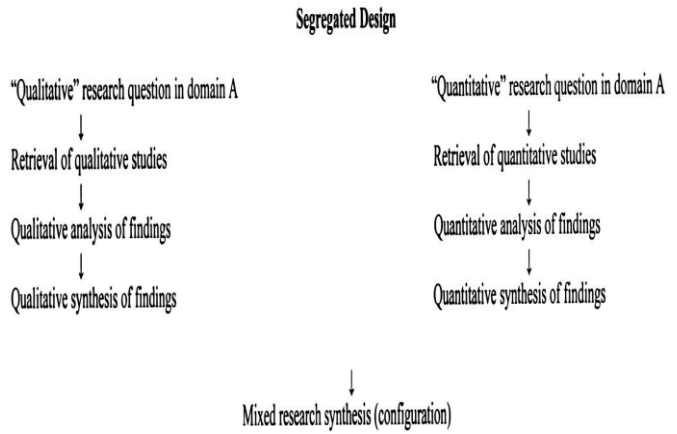
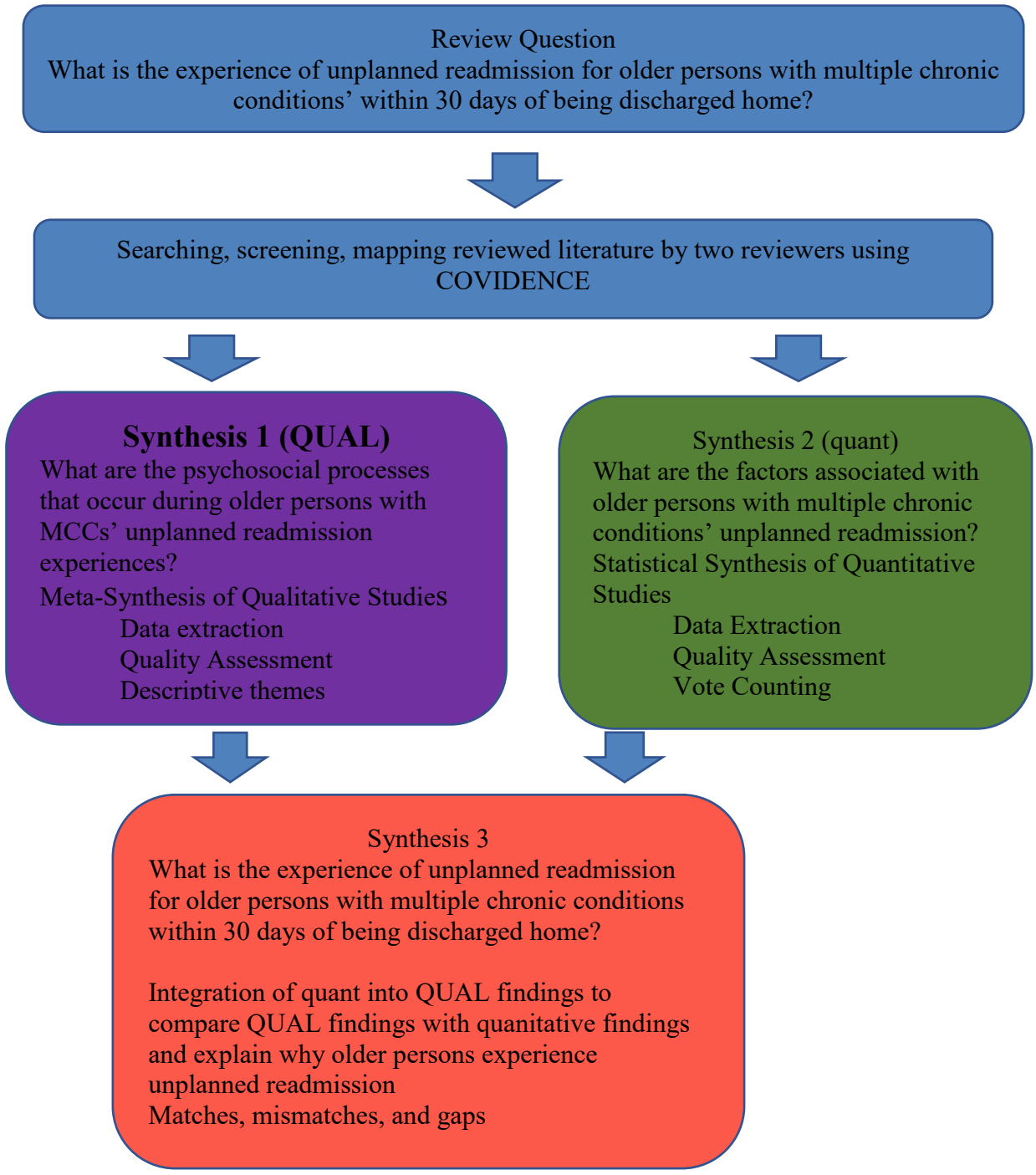
		developed concepts, frameworks or theories) or "bottom-up" ("data-driven") approach (Sandelowski et al., 2012)
Illustration of Procedure	 SOURCE: Adapted from Harden et al., 2004; and Oliver et al., 2005.	 (Sandelowski et al., 2006, p. 14)

Figure 5.1

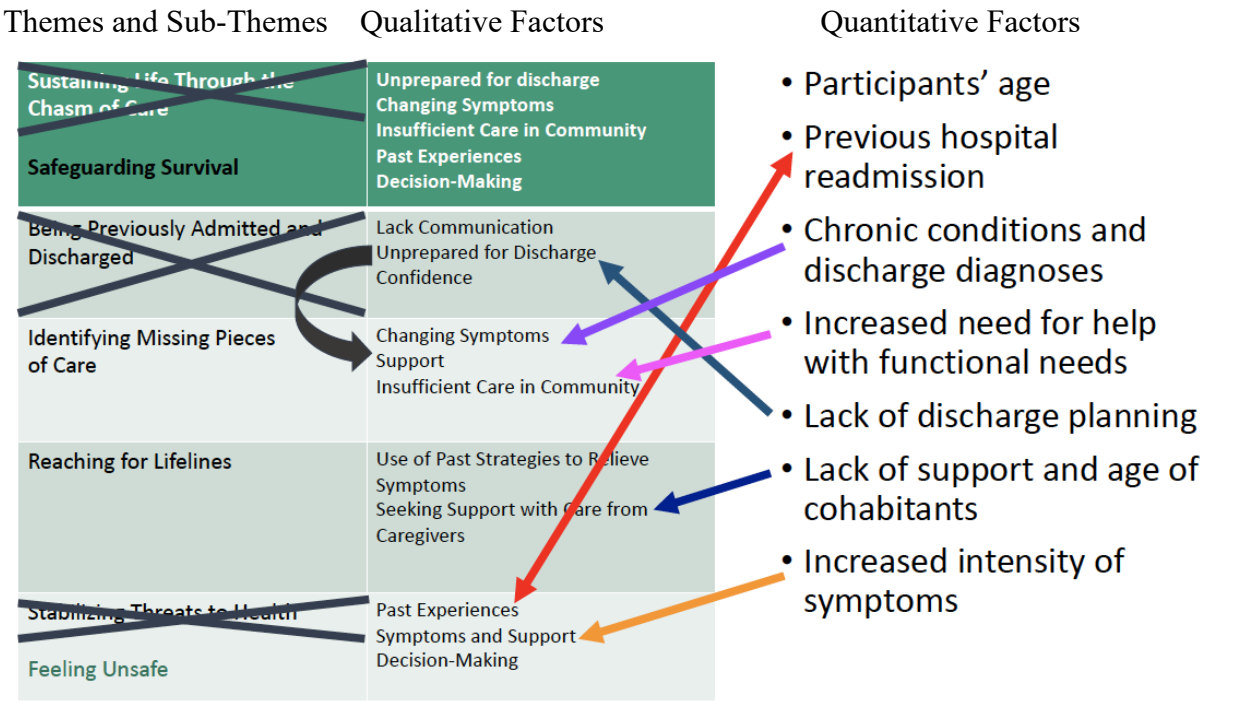
Review Process for Mixed Methods Systematic Review



Note: The review process outlined above (Coatsworth-Puspoky et al., 2022) is adapted from Harden and Thomas (2010).

Figure 5.2

Process of Matching, Mismatching, and Gaps in Themes



Note: The processes of matching, mismatching, and gaps in themes from the qualitative meat-synthesis findings and quantitative meta-analysis findings are illustrated. The straight coloured arrows show the matching between qualitative and quantitative factors. The X's through themes illustrated themes that are mismatched. Finally, the new themes that were developed based on the qualitative factors are identified under the X's.

Chapter Six: Putting It All Together

Discussion

The integration of the papers from this study provides a crucial overview of older persons with multiple chronic condtions' (MCCs) unplanned readmission experiences. First, the integrative review sequel of unplanned readmission demonstrated the relationship of the interconnected events of the previous hospital experience, intrinsic and extrinsic challenges at home, and unpleasant feelings and emotions. The second paper allowed for a better theoretical understanding of unplanned readmission focusing on its' unique characteristics, antecedents, and consequences (negative, positive, and unintended). Using these unique characteristics, a better definition of unplanned readmission within 30 days of discharge to home was constructed. Unplanned readmission provided older persons with MCCs with needed acute care treatment for their health crisis (serious or emerging) after they were hospitalized. The concept of unplanned readmission was differentiated from similar concepts such as discharge readiness, emergency readmission, and planned readmission. As such nursing and theoretical knowledge about the concept of unplanned readmission were expanded.

In the third paper, the mixed methods systematic review (MMSR) highlighted the psychosocial process of older persons with MCCs as a safeguard for recovery and survival by seeking unplanned readmission. This process was influenced by factors that increased in acuity, contributed to unmanageability, and resulted in older persons feeling unsafe; reducing older persons' abilities to prevent or avoid unplanned readmission. Thus, seeking unplanned readmission was an action that older persons used to manage the increasing severity of symptoms after older persons identified missing critical support components (increased need for help with functional needs, lack of discharge planning) and reached for support from family

caregivers and community health care services. These findings provided a more complete understanding of the older person with MCCs' experience and the factors that influenced their experience. The most significant finding was that as the intensity and unmanageability of symptoms increased, older persons felt more unsafe and required unplanned readmission. Addressing factors that occur during the process of unplanned readmission may prepare older persons emotionally and physically to return home and mitigate the risks for unplanned readmission.

Lastly, in the fourth paper, the procedure was articulated which was used to create a holistic understanding of the experience of unplanned readmission for older persons with MCCs. Challenges and lessons learned from conducting the MMSR that was adapted from Harden and Thomas' (2010) method and informed using Sandelowski et al.s' (2006) segregated findings were shared. This MMSR prioritized qualitative meta-synthesis findings followed by analyzing quantitative data using vote counting. Then in the final step, quantitative findings were used to test and then synthesized with qualitative findings.

The key issues that influenced older persons with MCCs' unplanned readmission experiences included lack of support and family caregiver support, lack of effective symptom management, lack of maintaining current functional state, lack of safety, and unmet physical and emotional needs. It is essential for hospital and community health care services work together to address and align with the complex needs (health and social care) of older persons with MCCs (Boyd & Fortin, 2010; Kuluski et al., 2016; Marengoni et al., 2011; McGilton et al., 2018). To align with the care needs of older persons who have more than one care need (MCCs, social, and mental health) the current focus of the acute health care system delivery model of "episodic care" and "one disease at a time" must be transformed beyond the disease or needs of the health

care system, to being integrated, centered on, and driven by patient or family needs across care settings (Boyd & Fortin, 2010; Kuluski et al., 2016, p. 18; Marengoni et al., 2011; McGilton et al., 2018; Ploeg et al., 2019). Nurses are ideally situated in leadership, educational, research, and clinical positions in hospital and community settings to influence the need to and address older persons with MCCs' health care needs.

Implications

The implications on nursing practice, policies, nursing education (undergraduate and graduate), nursing theory, nursing research, the formation of partnerships between hospital and community services, and future research will be addressed.

Nursing Practice

Several nursing practice issues arose from older persons with MCCs' unplanned readmission experiences. These issues included: a) the negative emotions associated with past unplanned readmission experiences, b) the desire of older persons with MCCs and their family caregivers to be included in discharge and care planning, c) the increased need for assistance with care needs, d) better management of symptoms and burden of disease, e) more assistance at home with needs, and f) unmet emotional needs. In a scoping review (n=28 papers), McGilton et al. (2018) sought to identify older persons with MCCs' perspectives about their health and social needs. They identified that older persons with MCCs, family caregivers, and health care providers needed timely information, to be included in health and social care, to obtain coordinated services, to maintain current functioning, to receive education about managing their multiple chronic conditions, and support groups.

Nurses require knowledge in their admission assessment about the number of previous hospital readmissions to help understand older persons' experiences of the quality of and

efficiency of health care services and practices (Chambers & Clarke, 1990; Fischer et al., 2014; Scott et al., 2014). Nursing practices such as enquiring about older persons with MCCs' previous readmissions may provide support for the older persons' reasons for seeking care, facilitate the development of a therapeutic relationship between the older person and nurse, and promote recovery and emotional healing for the older person. Data gathered about older persons' previous unplanned readmission may provide the nurse with critical data and understanding about the complexities that older persons' experience (Ploeg et al., 2019). This may include older persons' chronic conditions and intensity of symptoms, the negative emotions associated with past unplanned readmissions, their support and service needs (physical, emotional, spiritual, cultural, and social) at home, and changing functional abilities and needs (Ploeg et al., 2019; Ploeg et al., 2017). This information may be useful for the development of nursing interventions.

Older persons and family caregivers identified being excluded from written and verbal discharge and care planning. Inclusion in and hearing older persons' needs in care planning is important for the provision of holistic person-centered and family-centered care (Boyd & Fortin, 2010; Dahlke et al., 2017; Kuluski et al., 2016) and the coordination of health care services in community settings (Ploeg et al., 2019; Ploeg et al., 2017). In interviews with older people and their families about their experiences with interprofessional teams, Dahlke et al. (2017) concluded that nurses must work with older persons and family caregivers as partners in care, listen to each other, and share explanations in lay language. These actions will help older persons and family caregivers understand how to implement their care plan, how and when to access help, and increase their comfort in asking questions (Ploeg et al., 2019). It is also important for nurses to evaluate how written and verbal care plans are translated into self-care practices at home by older persons and family caregivers. Dahlke et al. (2017) identified that lack of

communication between older persons and families and health care team members resulted in increased experiences of increased anxiety about care needs, lack of support and concern for the older persons, and unmet needs; further adding to unpleasant emotions in the unplanned readmission experience of older persons with MCCs (Coatsworth-Puspoky et al., 2022) and emotions associated with unmanageable symptoms (Ploeg et al., 2019).

Older persons with MCCs experienced unpleasant emotions that result from a variety of causes. For example, older persons identified unpleasant emotions (fear and mistrust, disappointment and loss, anxiousness and pressure) associated with their unplanned readmission experience, intensifying and unmanageable symptoms, and burden of multiple chronic conditions. Lebel et al. (2020) completed a systematic review of the literature about the experience of health anxiety fears and chronic illnesses fears associated with worsening or recurring symptoms. The presence or response of anxiety or health concerns about chronic illnesses were present in 91% of disease or illness definitions as an emotion of fear or a cognitive response of worry (p. 4). Researchers argued these responses were normative but cautioned if these responses of fears and worries increase, older persons' quality of life and daily functioning is impacted. Persons with higher health anxiety report "symptoms, disability, limitations, and impairments in daily functioning" (p. 31). Increasing nurses' awareness that older persons with MCCs experience increased feelings of worry and fears in relation to their chronic illnesses, is important to reduce the "stigmatizing health-related concerns" or "over-diagnosing" of these feelings being associated with a psychiatric diagnosis (Lebel et al., 2020, p. 32). Understanding how health anxiety influences older persons symptoms and daily functioning is an important consideration in care planning with older persons with MCCs and their family caregivers.

Family caregivers were often involved as the physical and emotional lifeline that support older persons with MCCs. Community-living older persons with MCCs identified that they depended on family caregivers "for help with just about everything" (Ploeg et al., 2019, p. 5). This help ranged from follow-up and community health care services (Dilworth et al., 2012; Ploeg et al., 2019; Slatyer et al., 2013) to help with meeting their ADLs and IADLs (Dilworth et al., 2012; Enguidanos et al., 2015; Slatyer et al., 2013; Ploeg et al., 2019; Tang & Lee, 2017; Toledo et al., 2018) and emotional and social support (Dilworth et al., 2012; Slatyer et al., 2013; Ploeg et al., 2019; Tang & Lee, 2017). The amount of support provided by family caregivers was identified by older persons as "critical for successful recovery" (Hestevik et al., 2019, p. 9), adjustment at home (Allen et al., 2017), and their "safety net" after their discharge home and "when their situation at home became 'unsafe'" (Lilleheie et al., 2020; p. 8). In a meta-synthesis, Hestevik et al. (2019) found that older persons were concerned and nervous about the strain their condition and need for support placed on their caregivers. They were conscious of not "overburdening" them (p. 9) by reducing the demands they placed on their caregiver using unplanned readmission for respite (Tang & Lee, 2017). Ploeg et al. (2019) suggested that to provide better support for older persons with MCCs', health care providers require understanding and knowledge about their complex health conditions and needs. They advise that nurses assess how older persons and their family caregivers are managing their MCCs as well as assess the factors that influencing how they manage ("social support, finances, and transportation") (p. 8).

Nursing Policies

Nursing care policies must address the need to restructure care for older persons with MCCs who have experienced more than one unplanned readmission in the past 30 days. Restructuring the care of older persons must prioritize older persons' declining functional

abilities through their hospital stay and partnerships with community partners to transition care. Older persons experienced identified an increased need for assistance with their care needs as their functional abilities declined during their hospital stay (Bail et al., 2016; Dahlke et al., 2019; Greysen et al., 2015). In an integrative review (n=23), Dahlke et al. (2019) examined acute care nurses' perspectives about safety and harm of older persons who were hospitalized. They suggested the current biomedical model and nursing practices as de-prioritizing the functional needs of older persons. Nurses used physical restraints and minimized older persons' mobility to uphold the organizational priority of safety in acute care hospital environments. In complex acute care hospital environments, Bail et al. (2016) theorized that "failure to maintain" older persons' mobility, skin, hydration and nutrition status, and interaction skills arose from implicit nursing practices. Nurses using these practices became task focused on acuity and safety, visilbility and surveillance, medical risks and efficiency (p. 155). As a result of "inadequate delivery of" (p. 158) or "rationed" (p. 155) "essential nursing care" (p. 158), older persons experience cognitive, functional, and physical complications during their hospitalization (Bail et al., 2016). Diagnosing the restoration or maintenance function as a safety priority and loss of function as a threat to safety during unplanned readmission of older persons with MCCs is urgently needed in nursing policies, practices, and education (Bail et al., 2016; Dahlke et al., 2019). A shift in nursing practice focus would also ensure that older persons with MCCs receive care that promotes health by being responsive to the changing burden of disease and intensity of symptoms.

Nursing Education: Undergraduate, Graduate, and Nurses

The findings from the MMSR speak for the need for undergraduate and graduate nursing students to expand the gerontological nursing education in undergraduate and graduate programs and to include additional curriculum to practicing nurses on unplanned readmissions for older

persons with MCCs. For example, students and practicing nurses need to understand the challenges that older persons with MCCs' experience to "safeguard their survival" during unplanned readmission. It is important that nursing students and nurses understand how older persons with MCCs' need for unplanned readmission increases in intensity as they experience more unmet needs (identifying missing pieces of care, reaching for lifelines, and feeling unsafe). Also, understanding how "failure to maintain" (Bail et al., 2016) during older persons with MCCs' previous hospital admissions and their previous hospital readmission experiences influence unplanned readmission is needed to meet older persons' complex health and social care needs. It is also important to understand unintended consequences associated with MCCs (Boyd & Fortin, 2010), consequences of unplanned readmission (Coatsworth-Puspoky et al., 2021), and failure to maintain (Bail et al., 2016). To meet the health and social care needs of older persons with MCCs who have experienced unplanned readmission nursing students and nurses require an understanding of models of care delivery and knowledge about how to revise models of care delivery for older persons with MCCs (Boyd & Fortin, 2010; Marengoni et al., 2011). This understanding will to increase nurses' confidence in working with older persons with complex MCCs (McGilton et al., 2018).

Over twenty years ago Baumbush and Andrusyszyn (2002) expressed concerns baccalaureate nursing students lacked preparation in gerontological nursing education. Only half of the baccalaureate nursing programs in Canada (n=21) offered and required gerontological nursing courses with few faculty (6%) being prepared to teach gerontological nursing preparation to teach (p. 123). Ten years later, gerontologically prepared faculty in nursing consisted of 3% at the baccalaureate level, 2.4% at the Masters level, and 6% at the Doctoral level (Hirst et al., 2012). Hirst et al. (2012) identified that Canadian nursing schools prepared students using an

integrated curriculum to assess older persons and their families and intervene with them. Swan et al. (2019) explored the experiences of care coordination and transition management of health care leaders and nurses. They advocated for the redesign of curriculum to address gaps in knowledge and ensure that patients receive care that is coordinated and covers the care continuum. They recommended faculty development and foundational generalist baccalaureate student knowledge that included health promotion, caring for persons with chronic diseases, and specific strategies of restorative, palliative and supportive care (Swan et al., 2019, p. 85). Consequently, there is an urgency with the changing demographics for nursing students at all educational levels to be prepared with courses specific to gerontology and gerontological issues by faculty with expertise in gerontology (Hirst et al., 2012), but also with knowledge about MCCs. Between 2002-2012, the amount of gerontological content in nursing rose from 52.4% (Baumbush & Andrususyzn, 2002) to 79% (Hirst et al., 2012). This 29% increase in gerontological content in nursing curriculum over 10 years is encouraging as nursing students are receiving more gerontological education but it remains a concern as the gerontological content was integrated content (Hirst et al., 2012). Current education about older persons with MCCs' and unplanned readmission is needed to provide new and practicing nurses with knowledge about care transitions, to provide care across the continuum; facilitating the development of partnerships between academia and clinical settings (Kirby & Good, 2020; Swan et al., 2019). The small number of faculty academically prepared to teach and conduct research with older persons, is even more troubling a problem, as most placements are primarily with older persons (Baumbush & Andrusyszyn, 2002). Research is needed to determine the current gerontological content, how curriculum is delivered (integrated/individual courses), and topics within the

curriculum to ensure that gerontological nursing education includes learning about unplanned readmission for older persons with MCCs.

Nursing Theory

The findings from this doctoral dissertation about older persons with MCCs' unplanned readmission experiences suggested that unplanned readmission is a transition. Transitions are complex, individual experiences or passages "from one fairly stable state to another" that are initiated by change (Meleis, 2010, p. 11). Findings from the mixed methods systematic review may be used to clarify the concept of unplanned readmission and expand Transitions Theory (Meleis et al., 2010). Although several models and theories exist that focus on transitions (Coleman & Boult, 2003; Meleis, 2010; Naylor et al., 2007; Naylor & VanCleave, 2012; Reigel et al., 2019), none currently exist that reflect the concepts in the MMSR. These concepts include the psychosocial processes that older persons experience during unplanned readmission, burden of chronic conditions and discharge diagnoses, lack of discharge planning, increased need for help with functional needs, lack of support, increase in intensity of symptoms and previous hospital readmission. Additional research is needed to support and develop this model into a mid-range theory to guide research about older persons with MCCs' unplanned readmission experiences, interventions to reduce unplanned readmission, and as a tool that can be used in practice to support and plan nursing care with this population of older persons. These findings may also be useful to expand knowledge about transitional care or models (Goegiadis & Corrigan, 2017; Naylor et al., 2007), transitional health care (Foust et al., 2012), or care transitions (Fuji, et al., 2012). These findings may explain the theoretical underpinnings of transitional care models where complex interventions and services were implemented by health care providers in a timely, safe, and coordinated or seamless manner with patients who had

complex medical needs that were moving between different levels, locations, or sites (situational transitions) (Coleman & Boult, 2003; Naylor, 2000; Naylor & VanCleave, 2012).

Although researchers have utilized a meta-synthesis approach to explore older persons' discharge home, analyzing the concept of being discharged home for older persons with MCCs' would also contribute to the development of an unplanned readmission theory. Integrating the concepts of unplanned readmission (Coatsworth-Puspoky et al., 2021), discharge readiness (Galvin et al., 2017), and being discharged home would describe, explain, predict, prescribe, and control unplanned readmission (Walker & Avant, 2011), and provide new insight into the phenomenon of unplanned readmission and older persons with MCCs.

Nursing Research

Blakey et al. (2017) argued that older persons' voices and words about their health care needs and experiences must not only be listened to and heard by health care providers (Boyd & Fortin, 2010; McGilton et al., 2018), but that older persons' voices and words about returning to the hospital must be included in care and in research. Including older persons' voices and their experiences in care will help to reduce the "negative experience and cycle of exclusion" and reveal how older persons maintain their "existential, emotional, and psychological well-being" (Blakey et al., 2017, p. 710). Future research on unplanned readmissions should purposefully recruit older persons who are diverse culturally, geographically, ethnically, and socioeconomically. Based on the findings from this dissertation project, the next research study should focus on examining how older Canadian persons with MCCs understand and describe their experiences, what they believe influences their unplanned readmission, what they believe would help with unplanned readmission, and how their experiences are influenced by the rural or urban context. Additional research may include exploring how family caregivers understand

older persons with MCCs' unplanned readmission experiences, what they believe influences unplanned readmission, and what would help with unplanned readmission. It would also be helpful to understand how nurses understand their role in working with older persons with MCCs who experience unplanned readmission. Using participatory research methods would help to ensure all older persons' voices are represented and disseminated in research findings. Participatory action research could be used to explore unplanned readmission to answer questions such as *What does the hospital do to promote health for older persons with MCCs' who are returning home?*; and *What are the barriers and facilitators of community home health care for older persons with MCCs?*

To ensure older persons' voices are represented in disseminated findings, methods that focus on older persons' experiences and perspectives or methods that prioritize older persons' voices should be used in future research on unplanned readmissions. Photovoice may be a participatory action research tool that may be helpful in exploring and describing older persons with MCCs' emotions associated with their unplanned readmission experiences and what unplanned readmission may symbolize for older persons with MCCs. Older persons' voices and experiences are also needed for the development of interventions to reduce or mitigate the risks for unplanned readmission. This knowledge may be used to uncover social support strategies to promote health of older persons with MCCs.

Additional research and knowledge about research methods that prioritize qualitative findings, such as mixed methods studies and mixed methods systematic reviews is needed to expand the development and evaluation of mixed methods research. Documenting the procedures taken by researchers is necessary to ensure that knowledge about the method can be evaluated

and (Howell Smith & Shanahan Blais, 2021) researchers can better learn how to prioritize participants' voices to promote health and well-being and influence change.

Partnerships between Hospital and Community

The changing contexts of care may contribute to older persons' unpleasant emotions which go unrecognized by as the nurses and health care providers in community and hospital settings. Older persons experience a polar shift in the focus of their care between the hospital and community (Facchinetti et al., 2020; Hestevick et al., 2019). For example, at home the older person or their family caregiver is responsible for managing the chronic conditions and symptoms. In contrast to the care at home, in the hospital the older persons' condition and symptoms become acute, are managed using acute care interventions, and this management is completed by health care providers (Facchinetti et al., 2020). In addition, generalized symptoms may interfere with older persons' abilities to manage and increase their unpleasant emotions. For example, at home, older persons identified generalized symptoms of not feeling well (Han et al., 2017, p. 307), weakness (Slatyer et al., 2013), nausea, pain (Enguidanos et al., 2015; Toledo et al., 2018), and decreased appetite (Dong & Simon, 2014). Similar symptoms of tiredness, pain, and lack of appetite placed increased strain on older persons' abilities of "settling into a new situation at home" (Hestevik et al., 2019, p. 5). Concurrently, at home, older persons worked to regain their independence in meeting their care needs (ADLs and IADLs), manage the intensity of their symptoms, health care needs, and home environment (Dilworth et al., 2012; Dong & Simon, 2014; Enguidanos et al., 2015; Slatyer et al., 2013). The above work is complex and mandatory for older persons to remain at home. This work assumes that older persons have skills to adapt to the "new normal" (Blakey et al., 2017, p. 707) and is under-recognized by hospital health care providers (Facchinetti et al., 2020; Hestevik et al., 2018) as it is not part of the

hospital context of care. As a result, older persons may experience increased feelings of insecurity and being unsafe (Allen et al., 2017; Hestevik et al., 2019, p. 3; Lilleheie et al., 2020). It is important that nurses are aware of older persons' challenges of returning home and the feelings of insecurity and being unsafe that result from these feelings. Feelings of insecurity and being unsafe may potentiate physical symptoms associated with their chronic conditions or the physical symptoms may potentiate older persons' feelings of insecurity and being unsafe.

Next Steps

This PhD project serves as the foundation for the next steps in establishing a program of research on unplanned admission. The steps that will be discussed include disseminating the MMSR and findings from this project, establishing partnerships and networks with other researchers, testing the model "Safeguarding Survival," and examining potential sources of funding for this project.

My plans for disseminating the work that I have completed to date include participating in conferences that are occurring in 2022-2023. Some of the conferences that I will submit my abstract to include the Canadian Association of Gerontology (CAG) (October 20-22, 2022), Canadian Gerontological Nursing Association Conference (CGNA) (April 20-23, 2023); and Sigma Theta Tau Region 10 Conference (April 2023). For my methods paper, I would like to submit my abstract to present at the "*Thinking Qualitatively Conference*" and attend a conference to further develop the adapted MMSR of prioritizing the qualitative meta-synthesis findings, such as the "*International Congress of Qualitative Inquiry*." I would like to submit the papers about older persons with MCCs' unplanned readmission experiences that were developed using meta-synthesis and vote counting for publication. In addition, I would like to write a paper on the findings from Synthesis 1 using Sandelowski et al.s' (2006) integrated mixed methods

systematic review. Two other papers that I would like to complete with my advisors is a philosophy paper about the mixed methods systematic review that prioritized qualitative meta-synthesis findings and a paper that explains the gaps in the current transitions theories and how my study adds to these theories.

The next step for developing my program of research is to begin testing the model "Safeguarding Survival" by developing and testing interventions to reduce or mitigate the risks of unplanned readmission. I plan to re-connect with contacts I made at two hospital sites (rural and urban) before the COVID-19 pandemic about interviewing older participants (multiple chronic conditions) about their unplanned readmission experiences. There are two purposes for re-connecting with these two sites. The first purpose is to reason is to share my findings about older persons with MCCs' unplanned readmission experiences with health care agencies and to share my plan to develop interventions from older persons with MCCs' experiences to pilot. From these PhD project findings, interventions are necessary early in the process of unplanned readmission are important; specifically, to reduce or circumvent older persons identifying missing pieces of care and reaching for lifelines. Intervening early in older persons' discharge home may safeguard their survival and recovery before they feel unsafe and need unplanned readmission. These interventions may support older persons' abilities to reduce, avoid or even prevent unplanned readmission. However, the findings from the second study are necessary to determine what older persons and their family caregivers need.

The original proposal that was developed and approved for my PhD project before the COVID-19 pandemic, will assist with testing the model, clarifying the concept of unplanned readmission, and developing interventions. This proposed study will examine how older persons describe their unplanned readmission experience, what they identify as influencing their

unplanned readmission experience, and what they think would help with their unplanned readmission experiences using Thorne's Interpretive Description method. By interviewing older persons from urban and rural settings, I will also be able to determine how these contexts influence older persons beliefs and experiences of unplanned readmission. This study will assist in confirming the processes identified in the model and will also confirm the factors that contribute to unplanned readmission. Listening to and understanding older persons' perspectives and experiences of unplanned readmission will provide critical information to assist with the development of care practices and interventions related to unplanned readmission that reflect the needs of older persons with multiple chronic conditions in the Canadian context. Family caregivers who are identified by older persons will constitute a secondary source of data that will inform the older persons' experiences. Caregivers' data can also be used to begin understanding their perspectives about older persons unplanned readmission, caregivers' needs during the older persons unplanned readmission, and future work in developing interventions to reduce the strain on family caregivers. This research will assist with the development of interventions, test the model that was developed, expand and clarify the theoretical concept of unplanned readmission, and move closer to developing a theory of unplanned readmission.

The process that I will take to implement this next step are being considered. I may implement this project as post-doctoral work to expand my learning so that I have mentorship in applying for funding, utilizing a new method, and having a network of researchers. I also plan to look for researchers to partner with who share my interest in older persons with MCCs to further my knowledge and experience with implementing research, working in research teams, writing and publishing. The other step in testing the model, is to examine and apply for a research grant

to fund the next step of this work about older persons with MCCs' unplanned readmission experiences.

Limitations

The limitations of the studies included in the integrative review, concept analysis, and MMSR were related to the methodologies used to draw on published empirical literature to answer specific questions. Thus, the searches of the databases, purpose of the studies, samples sizes of the studies, characteristics of the sample (age of participants and number of chronic conditions), definition of unplanned readmission, and countries where the studies were completed are limitations. The completed studies used searched between four and six databases. Abstracts, dissertations, discussion papers, and literature that was not published in English were excluded. Cultural and geographical influences were difficult to assess. Inconsistent definitions associated with older persons, MCCs, unplanned readmission, support, and mixed methods systematic review appraoches also contributed to challenges.

Conclusion

The work I have completed during my PhD project makes significant contributions to the field of nursing and health care knowledge in several ways. First, older persons' unpleasant emotions related to unplanned readmission were identified as unmet by health care providers. Next, unplanned readmission was identified as a theoretical concept that is a process and experience influenced by complex interconnected physical and emotional factors. Antecedents, attributes and consequences of unplanned readmission were supported and expanded upon as part of the process that older persons engage in to safeguard their survival. The psychosocial processes extend across continuum of the previous hospitalization, to home, and to older persons unplanned readmission, within 30 days of being discharged home. New knowledge constructed

from these studies gives voice to older persons with MCCs' experiences and perspectives, identifies the needs of older persons, and reflects the needs of older persons' with MCCs. Moreover, the research process and lessons learned was clearly laid out including lessons learned. Future research about older persons unplanned readmission experiences is necessary to expand our understanding of and develop interventions to address older persons with MCCs' and family caregivers' health and emotional care needs across the continuum of unplanned readmission.

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Appendix A

Online Supplemental Material: Literature Search Strings for Databases

CINHAL

1. ((MM "Readmission") or TI(readmit* OR readmission OR "re-admit" OR "re-admission" OR rehospitali* OR "re-hospitali*" or ("return visit" or represent* or "re-present*") w/3 (hospital* or emergency)))
2. ((patient* OR elder* OR seniors OR geriatric* OR old* OR w/3 multi* chronic conditions* OR multi* chronic diseases* OR multi* chronic illnesses*) n3 (perceive* OR perception* OR view* OR belief* OR report* OR feedback OR perspective OR experience*) or TI ((patient* or elder* or seniors or geriatric* or old*
3. (multi* chronic condition* or multi* chronic diseases* or multi* chronic illnesses*) and experience*)) AND ((MH "Aged+") or elder* OR seniors OR geriatric* OR veteran* OR (old* w2 (person* OR people OR adult* OR patient* OR men OR women) AND (multi* chronic conditions* OR multi* chronic diseases* OR multi* chronic illnesses*) and experience*)
4. 1 and 2 and 3

Embase

1. *Patient Readmission/ or (readmit* or readmission or re-admit or re-admission or rehospitali* or re-hospitali* or re-present*).ti,kw.
2. ((patient* or elder* or seniors or geriatric* or old*) adj3 (multi* chronic conditions* or "multi* chronic" diseases*) adj3 (perceive* or perception* or view* or belief* or report* or feedback or perspective)).mp. or patients/px or (interview* or questionnaire* or self report*).mp.
3. (((patient* or elder* or seniors or geriatric* or old*) adj3 (multi* chronic conditions* or "multi* chronic" diseases*)) and experience*).ti,kw.
4. 2 or 3
5. 1 and 4
6. aged/ or frail elderly/ or (elder* or seniors or geriatric*).mp. or (old* adj2 (person* or people or adult* or patient* or men or women)).mp.
7. 5 and 6
8. limit 9 to English language

Ovid MEDLINE(R) Epub Ahead of Print, In-Process & Other Non-Indexed Citations, Ovid MEDLINE(R) Daily and Ovid MEDLINE(R) <1946 to Present>

1. *patient readmission/ or (readmit* or readmission or re-admit or re-admission or rehospitali* or re-hospitali* or re present*).ti,kf.
2. ((patient* or elder* or seniors or geriatric* or old*) adj3 (perceive* or perception* or view* or belief* or report* or feedback or perspective)).mp. or patients/px or (interview* or questionnaire* or self-report*).mp.
3. ((patient* or elder* or seniors or geriatric* or old*) and experience*).ti,kf.
4. 2 or 3

5. 1 and 4
6. exp "Aged, 80 and over"/ or exp Aged?/ or exp Frail Elderly/ or (elder* or seniors or geriatric*).mp. or (old* adj2 (person* or people or adult* or patient* or men or women)).mp.
7. 5 and 6
8. multimorbid*.mp.
9. (multi* adj3 chronic adj2 (disease* or condition*)).ti,kf.
10. chronic diseases/ or multiple chronic conditions/
11. (chronic adj2 (diseases* or conditions*)).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
12. (multi* adj2 chronic adj (conditions* or diseases*)).mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]
13. 8 or 9 or 10 or 11 or 12
14. 1 and 6 and 13
15. 7 or 14
16. limit 15 to English language

Scopus

TITLE(readmit* OR readmission OR "re-admit" OR "re-admission" OR rehospitali* OR "re-hospitali*" OR (("return visit" OR represent* OR "re-present*") PRE/3 (hospital* OR emergency))) AND (TITLE-ABS ((patient* OR elder* OR seniors OR geriatric* OR old*) AND (W/3 multi* chronic conditions* OR "multi* chronic" diseases*) W/3 (perceive* OR perception* OR view* OR belief* OR report* OR feedback OR perspective OR experience*)) OR TITLE ((patient* OR elder* OR seniors OR geriatric* OR old* OR W/3 multi* chronic conditions* OR "multi* chronic" diseases*)) AND experience*)) AND TITLE-ABS (elder* OR seniors OR geriatric* OR veteran* OR (old* PRE/2 (person* OR people OR adult* OR patient* OR men OR women) OR multi* chronic conditions* OR "multi* chronic" diseases*))) OR (TITLE (readmit* OR readmission OR "re-admit" OR "re-admission" OR rehospitali* OR "re-hospitali*" OR (("return visit" OR represent* OR "re-present*") AND (hospital* OR emergency))) TITLE (elder* OR seniors OR geriatric* OR veteran* OR (old* PRE/2 (person* OR people OR adult* OR patient* OR men OR women) OR PRE/3 multi* chronic conditions* OR "multi* chronic" diseases*)) AND TITLE (perceive* OR perception* OR view* OR belief* OR report* OR feedback OR perspective OR experience*)) AND (LIMIT-TO (LANGUAGE , "English ")) AND (LIMIT-TO (DOCTYPE , "ar ") OR LIMIT-TO (DOCTYPE , " re "))

Appendix B

Permission to Reprint Unplanned Readmission for Older Persons: A Concept Analysis

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