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# Psychosocial Interventions to Decrease Hospitalizations for Older Adults with Chronic Illnesses

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# Psychosocial Interventions to Decrease Hospitalizations for Older Adults with Chronic Illnesses

by

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MSW Clinical Research Paper

Presented to the Faculty of the  
School of Social Work  
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The Clinical Research Project is a graduation requirement for MSW students at St. Catherine University/University of St. Thomas School of Social Work in St. Paul, Minnesota and is conducted within a nine-month time frame to demonstrate facility with basic social research methods. Students must independently conceptualize a research problem, formulate a research design that is approved by a research committee and the university Institutional Review Board, implement the project, and publicly present the findings of the study. This project is neither a Master's thesis nor a dissertation.

### **Abstract**

Chronic illness has a significant impact on the lives of older adults, both physically and psychologically. Exacerbations of chronic illness can lead to hospitalizations, which in themselves can be traumatizing for an older adult. An initial literature search indicated a significant relationship between hospitalizations and reports of anxiety, depression, and even symptoms of post-traumatic stress. The purpose of this research was to examine the relationship between the use of psychosocial interventions and decreased hospitalizations for older adults with chronic illness. Using a systematic search of CINAHL, Academic Search Premier, Health Source: Nursing/Academic Edition, Medline, and SocINDEX databases, eight articles were identified and thematically analyzed. Although various chronic illness care models were addressed in the research, the following psychosocial themes were identified as core components of a successful model: patient-centered care and education, interdisciplinary consultation, care management, and mental health counseling and support. The utilization of these interventions resulted in a number of positive outcomes, including decreased symptoms of depression, improved quality of life, and decreased hospitalizations. The results indicated that incorporating psychosocial aspects into chronic illness care models are, in fact, essential to producing positive outcomes for older adults.

### **Acknowledgements**

Expressing my thanks in only a few words is an impossible task. The completion of this clinical research project would not have been possible without the support and encouragement of so many others, and in ways they could not begin to understand. To my research chair and committee, I thank you for the time you invested, for your thoughtful feedback, and for your kinds words of guidance and support. To my coworkers and friends that supported me throughout my graduate program, words cannot express how thankful I am for putting up with my hectic schedule and for the support you offered. And finally, to my wonderful husband and family, thank you for your unending love, sustenance, and understanding. Although the journey was long, and at times grueling, your words of motivation and encouragement never wavered. Because of you I was able to continue driving forward. Without you, achieving my goals would not have been possible. Thank you.

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### **Introduction**

As life spans continue to lengthen due to improvements in medical treatments and technology, increasing numbers of older adults are experiencing, and surviving, both acute and chronic illnesses (Johnston, 2014; Rattray, Johnston, & Wildsmith, 2005). Surviving these events, as well as living every day with chronic illness, has a significant impact on all areas of these individuals' lives. According to the Centers for Disease Control and Prevention (2013), the proportion of older adults within the United States will be growing exponentially, precipitated by aging baby boomers and the longer life spans the country is seeing. In fact, they estimate the older adult population will double during the next 25 years, reaching numbers greater than 70 million. Along with this growth in the aging population, comes an equally expansive growth in the number of older adults experiencing chronic illness and accessing health care resources.

Research is available that outlines the extent to which older adults are requiring emergent and inpatient care and the disproportionate rate with which they do so, compared to the general population. Older adults consume over half of the country's health expenditures, the majority of which includes intensive care (Fox, Sidani, & Streiner, 2007; Kilner & Janes, 1997). Chronic illnesses specifically are identified as the cause of over half of older adult hospitalizations, and the majority of health care expenditures over all (Fox et al, 2007). The hospitalizations this population experiences, and the burdens they endure due to chronic illnesses, are prevalent and growing issues that require attention.

Treatment for these illnesses can often be invasive and damaging to older adults. The fast-paced, unfamiliar, and stressful nature of the hospital environment can be traumatic, prevent effective coping, and aid in negative outcomes following discharge from the hospital. The psychological effects as a result of these situations can be long-lasting and impactful on an

individual's quality of life, yet this area of study produces only limited research. Even further, despite the growing numbers of older adults in the United States experiencing these illnesses and hospital stays, the research around that specific age group's psychological impact is found to be almost nonexistent (Johnston, 2014; Wallen, Chaboyer, Thalib, & Creedy, 2008).

The purpose of this research project is to consider the impact that chronic illnesses and subsequent hospitalizations have on older adults and to determine if there is relationship between the use of psychosocial interventions and decreased hospitalizations. As stated previously, the research available regarding the psychological impact on older adults is sparse. The following literature review is comprised of the limited research found on this topic, as well as the information available on the impact of hospitalizations on patients, and what psychosocial interventions are used prior to, and following, discharge back to the community.

### **Literature Review**

#### **Psychological Impact of Hospitalizations**

Multiple studies within the literature addressed the anxiety, depression, and posttraumatic stress symptoms experienced by those who have undergone a hospital stay. Davydow, Gifford, Desai, Needham, & Bienvenu (2008) discuss how the frightening experiences that many patients have in a hospital raise concern for increased posttraumatic stress disorder (PTSD) symptoms. Rattray (2008) reported in one study of hospital patients that PTSD develops based on the perceived threat to life and how an individual experiences a traumatic event. The study further discusses how patients see their hospital experience and how they can develop PTSD symptoms, causing severe distress and ramifications for their recovery.

In one longitudinal study of 80 adults in a hospital, anxiety was reported between 11.9% and 43%, depression between 9.8% and 30%, and PTSD between 14% and 27% (Rattray et al.,

2005). Another study reported that 46% of patients experienced increased anxiety following a hospital stay (Maddox, Dunn, & Pretty, 2001). The prevalence of these symptoms is enough to draw attention. A limitation with the research in this area, however, is that little research is available which discusses the distinction of symptoms found in older adults specifically.

Kilner and Janes (1997) address how elderly patients hospitalized as a result of a chronic illness exacerbation or acute event are likely to develop cerebral impairment or an acute confusional state, such as delirium. Fox, Sedani, and Streiner (2007) discuss research that points to the fact that older adults in the hospital are often prescribed medications, including psychotropics, which in older adults have aggravated reactions and can add to cognitive processing difficulties. More studies expand on this to say that patients may experience frightening hallucinations, paranoid delusions, panic, anxiety, disorientation, fear, and even odd bodily sensations, all of which are a threat to their psychological health and successful outcomes (Davydow et al., 2008; Johnston, 2014; Maddox, Dunn, & Pretty, 2001). The stress of their physical conditions creates stress enough, and then these neurological effects exacerbate that stress even further, creating barriers to processing information about the events (Williams, 2009).

### **Psychosocial Interventions**

Current research indicates a growing interest in alternatives to pharmacological treatments. There is increasingly more evidence in the research to support interventions that address the emotional, psychological, and social aspects of aging and health care – or, as defined in this paper, psychosocial aspects of care (McCallion & Ferretti, 2010). The following psychosocial interventions have the potential to aid in producing improved outcomes for older adults experiencing the challenges of life with chronic illness.

**Comprehensive discharge planning.** The most common psychosocial intervention within the hospital setting is the discharge planning process. Preyde and Brassard (2011) describe discharge planning as the breadth of services and assessments that occur from preadmission to discharge. The purpose of a comprehensive discharge plan is to facilitate a patient's successful return to the community by addressing any patient needs or barriers that may result in adverse outcomes. Aspects of discharge planning include, but are not limited to, biopsychosocial assessment, counseling and education, care coordination, and community referrals. The following themes found within the research address several of the primary components of the comprehensive discharge planning process.

***Biopsychosocial assessment.*** The biopsychosocial assessment is an essential piece to the discharge planning process, and is often completed within the first day or two of a patient's hospital stay. The biopsychosocial model asserts that psychological issues develop because of a combination of factors: biological, psychological, and social. One systematic review that looked at post-discharge risk factors and interventions for older adults identified examples of assessment tools that have been used in acute care settings to address the aspects of this model: the Social Work Admission Assessment Tool (SWAAT), the Score Hospitalier d'Evaluation du Risque de Perte d'Autonomie (SHERPA), the Blaylock Risk Assessment Screening Score (BRASS), and the Uniform Needs Assessment Instrument (UNAI). The purpose of comprehensive, or biopsychosocial, assessment tools like these is to identify patients with more complicated discharge needs. Although these specific tools are not necessarily used, aspects of them are frequently involved in hospital discharge assessments. These assessment areas include physical function and challenges, need for in-home support, mental health or social service involvement, and cognitive impairment, among others (Preyde & Brassard, 2011).

Being aware of a patient's mental health status, history, and risk can be beneficial within discharge planning. A history of depression and depression at, and after, discharge were found to be major risk factors for older patients in several studies. Depression is a prevalent mental health issue in the older adult population. It not only negatively affects one's overall mood but can also lead to poor retention of educational content and poor adherence to behaviors (such as diet or medication regimes) that may prevent certain medical complications (Preyde & Brassard, 2011). Being aware of these issues within an older adult patient can help to tailor the interventions used and thus minimize the risk for poor outcomes later on.

***Patient education and processing.*** Another important piece to incorporate within discharge planning is patient education and helping patients to construct a narrative. A patient's understanding of their health diagnosis and management, as well as their hospital experience can be a predictor of positive or negative outcomes after discharge. In one study on chronic heart failure, patients' knowledge of their condition, or lack thereof, was a significant predictor of repeated hospitalizations (Fuchs, 2013). As noted previously, many individuals are affected cognitively when they are experiencing a hospitalization or major health event. These issues impact how individuals construct narratives around their experience, which can greatly affect their coping and recovery. Multiple findings in the literature found that helping patients to recall and reconstruct what happened to them can be beneficial in reducing negative symptoms after the experience. It can help the individual move from being a powerless recipient of the experience to a powerful, active constructor who can take ownership of the experience (Williams, 2009). Perrins, King, and Collings (1998) found that posttraumatic symptoms occurred more often in patients who had no recollection of the intensive care experience. Another study found that poor recall of memories of the hospital experience, and the occurrence

of odd perceptual experiences seems to be more predictive of PTSD symptoms. That same study also found that emotional processing of the critical event was associated with lower scores in the depression and anxiety scales that the study used (Rattray et al., 2005).

Social workers are in a unique position to assist patients in creating their illness narratives. Social workers' guiding principles and person-centered frameworks provide them with the tools to recognize the patients' need to take control back of their experiences and to help them do so through psychoeducation, validation of their experience, systems review and planning, support groups, and therapeutic counseling (Fabbre, Buffington, Altfield, Shier, & Golden, 2011; Graziano, 2008; Johnston, 2014; Maddox et al., 2001). Johnston (2014) described how patients are told about their illness by family and health care professionals, but they still voice distress due to their own gaps in recall of their experience. Social workers can help these patients to determine their own account, rather than that recounted by others.

***Social and emotional supports.*** Helping older adult patients to identify or establish ongoing social support is another vital step with the planning process. Johnston's (2014) study of older adults that had survived medical events provided some interesting qualitative results regarding the positive and negative aspects of social support through an illness. One interviewee described her experience: "A lot of people came to visit me in the hospital. A lot of support. I think one of the hard things now, now that I'm doing better, I'm not getting the support. People go back to their own lives, you know, as they should. So it feels lonely" (p. 91). Another interviewee reported that her support system seemed to have a lack of understanding of her experience; therefore the support was not always viewed as positive. So, overall the study found that while social support is important to recovery, it is much more complicated than it appears and could benefit from further study (Johnston, 2014).

The kind of support that family and friends can provide is not limited to physical support during recovery. It also includes the emotional support that patients need in dealing with the psychological effects of their experience. Patients experiencing these illnesses alone report reduced self-esteem, whereas those with maximum support report greater well-being. However, diminished well-being can occur when returning home even for those with a lot of support initially, possibly due to the decline in amount of support after discharge (Maddox et al., 2001; Perrins, King, & Collings, 1998). Despite the complications that come with social support, the risks for both experiencing trauma and developing PTSD are increased in the absence of adequate, ongoing socioeconomic resources and social supports, making this an important piece to consider in the discharge planning process (Graziano, 2008).

**Post-discharge support.** Outside of the acute care environment there is support available to older adults in several forms. Preyde and Brassard (2011) point out that in the six months post-discharge many adverse outcomes are known to occur, including readmission to the hospital, mortality, and significant physical or psychological decline. The following psychosocial interventions can assist in reducing the risk for these negative outcomes. Other psychosocial interventions that should also be noted are adult day programs, palliative care consultation, and hospice services.

**Home care services.** Research indicates that despite the effectiveness that home care services have in decreasing depression and exacerbation of health conditions for older adults, they are an underutilized resource (Lam, Cervantes, & Lee, 2014). By accessing home care services, which can include home social work visits, both physical and psychological outcomes can improve for older adults. Home care social workers are able to assess for emotional needs, oversee the receipt of other home care services, provide counseling and support, educate patients

on their illness and disease management, help connect older adults with community resources, and assist with financial and long-term planning. Having this type of comprehensive support post-discharge can be essential in maintaining stability.

***Care coordination or management.*** Two articles in the literature discuss another role that social workers can play in disease management for older adults. Care coordination, sometimes identified as case or care management, involves a central case manager, typically a nurse or a social worker, who works directly with the individual to provide support, education, and to coordinate inpatient, outpatient, and community-based services. The goal of this type of program is to improve patient outcomes, promote self-management of the disease, and decrease unnecessary hospitalizations and treatments. By placing a social worker specifically in this role, the care coordination can be enhanced from a more psychosocial perspective (Claiborne and Vandenberg, 2001; Volland, Schraeder, Shelton, & Hess, 2012).

***Mental health support or therapy.*** A third psychosocial intervention that is underutilized for older adults with chronic illness is psychotherapy. Bergin and Walsh (2005) cite multiple sources that have found psychotherapy to be a successful intervention for helping to alleviate mental health symptoms, like those that have been discussed throughout the literature review, in older adults. The article discusses how therapy can look different with older adults due to multiple compounding issues. While experiencing physical and cognitive limitations and other personal losses, they also have these chronic health concerns with which they have to learn how to cope. The authors especially focus on helping older adults to find hope within their situations.

The purpose of this systematic review is to analyze the relationship between psychosocial interventions, like those detailed in the literature review, and decreased hospitalizations for older adults with chronic illnesses.

### **Conceptual Framework**

The conceptual framework used for this systematic review is that of person-centered care. Because hospitalizations and living with a chronic illness can be traumatic, as seen in the background literature, it seems imperative to direct any interventions and approaches towards the older adult's specific needs and goals. Johnston (2014) is of the opinion that, "Older adults are often stereotyped as childlike, feeble, and set in their ways," which can lead to providers minimizing their opinions and disregarding their goals (p. 83). This perception can even project onto the older adults themselves, which can have a negative effect on their health outcomes. Rattray, Johnston, and Wildsmith (2005) found evidence that perceptions of illness severity, threat to life, or the hospital experience were more predictive of distress than the illness severity. This indicates the necessity of assuring the individual's understanding and involvement in their care.

Despite perceptions that older adults are more at risk for poor outcomes, there is minimal evidence that just because a person is older that they will have a lesser quality of life. One study found that following discharge 88% of elderly patients were able to return home, with 70% of those individuals living independently indicating that positive outcomes are possible, and even likely, for older adults (Kilner & Janes, 1997). Maddox et al. (2001) found that individual attitudes and positive outlooks have significant relationships to illness recovery, so disregarding the older adult's perspective of their illness or hospital experience could potentially impact that individual's outcomes. By using a person-centered framework for this systematic review, it will help maintain the client as the focus of the research's goals.

## **Methods**

### **Research Design**

A systematic review is a research method that uses a specific methodology of analyzing existing literature with the goal of producing a scientifically based summary about a particular issue. The review's aim is to answer a specific question or to test a hypothesis regarding that issue (Pettigrew, Roberts, & Wiley, 2006). As previously stated, the purpose of this systematic review is to determine the relationship between the use of psychosocial interventions and decreased hospitalizations for older adults with chronic illness.

### **Sample**

The population targeted for this research is older adults that have chronic illnesses. For the purposes of this research, an older adult is defined as any individual over the age of 55. Chronic illness is defined as a condition that cannot be completely cured, causes physical, mental, and functional impairment, and requires ongoing management by the patient, family, and health care professionals (Chronic Illness, 2013). Examples of chronic illness in older adults include but are not limited to: congestive heart failure, hypertension, or chronic obstructive pulmonary disease.

### **Search Strategy**

To help assure both the validity and relevancy of the research, only peer-reviewed, full-text articles published after 2005 were considered for this review. The articles analyzed in this review were collected using the following databases: CINAHL, Academic Search Premier, Health Source: Nursing/Academic Edition, Medline, and SocINDEX.

The literature considered for inclusion in this systematic review included multiple research designs. The variety of methods was included in order to capture as many articles as possible for a very specific, under-researched topic.

**Inclusion criteria.** Using the above databases, the following combination of core search terms were used: “readmission” or “rehospitalization” or “hospitalization” or “hospital admission” or “hospital readmission” AND “chronically ill” or “chronic disorder” or “chronic illness” or “chronic disease” AND “older adult” or “elderly” or “geriatric” or “aging” or “aged” or “senior.” These terms were intended to narrow the focus of the search to the specific population being studied and to the question posed.

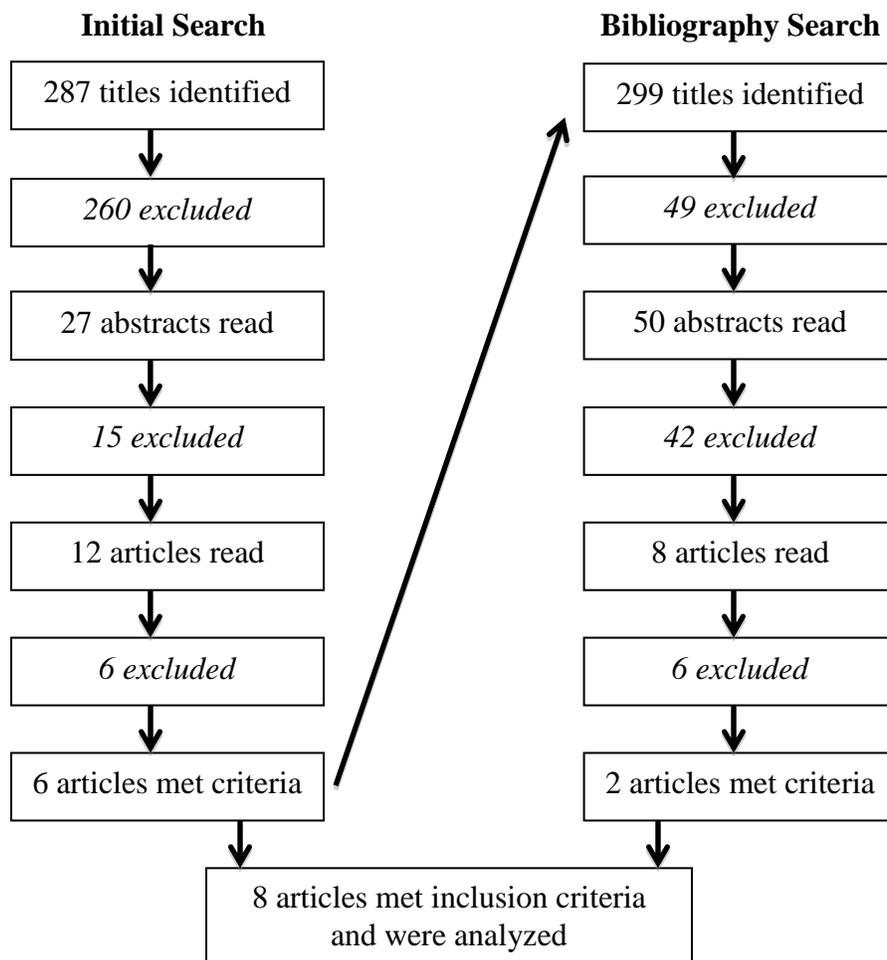
Then, combined with the above terms, four separate searches were performed using these subsequent groupings: (a) “palliative” or “advance care planning” or “palliative care” or “hospice” or “hospice care” or “home care,” (b) “discharge plan” or “comprehensive assessment” or “geriatric assessment” or “social work assessment” or “psychosocial assessment,” (c) “psychoeducation” or “psychotherapy” or counseling,” and (d) “care coordination” or “care management” or “case management.” These search terms were determined to be common psychosocial interventions based on the researcher’s knowledge and that gained in completing the initial literature review.

These searches initially identified a total of 287 articles, 27 of which appeared, based on their titles, to be relevant to the question posed. The researcher read the abstracts of these 27 articles, discarding 15 that did not meet the inclusion criteria. The researcher read the remaining 12 articles, excluding another six that did not meet the criteria. Due to such a small sample, articles were then also derived from the final articles’ bibliographies. The bibliographies contained a total of 299 titles, of which only 50 appeared to be relevant to the research question.

The researcher read the abstracts of these 50 articles, discarding 42 more that did not meet the inclusion criteria. Of the eight articles read further, the researcher excluded six more articles, leaving two that met all criteria. The process of identification of the final eight articles combined from these two searches and analyzed in this paper can be seen in Figure 1.

**Exclusion criteria.** The articles excluded from the final systematic review were those published prior to 2006, written in languages other than English, published outside of the United States, and whose sample population included those under age 55. Also excluded were duplicate studies and those that did not focus, at least partially, on the relationship between psychosocial interventions, factors, and outcomes for individuals with chronic illness.

Figure 1. Literature search and exclusion process.



### **Research Analysis**

Following this data collection process, eight articles were identified that studied psychosocial interventions or factors impacting the outcomes of older adults with chronic illness. These articles (shown and briefly summarized in Appendix A) were broken down using the article analysis categories shown in Appendix B. This analysis was necessary in order to further support the validity of the systematic review and determine if the results are relevant to the question being posed. Upon the completion of this step, the final articles' data was synthesized and integrated with the literature review outlined previously.

### **Results**

The purpose of this systematic review was to analyze the relationship between psychosocial interventions and decreased hospitalizations for older adults with chronic illnesses. Through a systematic search of CINAHL, Academic Search Premier, Health Source: Nursing/Academic Edition, Medline, and SocINDEX databases, eight articles were identified and reviewed, using the criteria outlined above. As discussed, and as seen in Appendix A, the included articles consisted of a multitude of research designs.

Similar to the studies' designs, the purpose of each article also varied. Three of the articles (37.5%) looked at the effectiveness of telehealth interventions for older adults with chronic illness. One article (12.5%) examined the relationship between depression and chronic illness symptoms. Another (12.5%) used a systematic review to identify a variety of models proven to be successful in the chronic care of older adults. Two of the eight articles (25%) studied outcomes for care management interventions. The final article (12.5%) focused on the risk factors that can predict rehospitalizations for older adults.

Demographically, seven of the included articles (87.5%) focused on both female and male older adults. Only one article (12.5%) had strictly male participants. Two articles (25%) looked specifically at low-income older adults, whereas the majority did not specify income. A variety of chronic and comorbid conditions were evaluated, but a few chronic conditions were of particular focus. All eight articles looked at both heart failure and chronic obstructive pulmonary disease, and seven of the articles (87.5%) also included diabetes. Examples of comorbid conditions found in the research included hypertension, cancer, and arthritis. Depression was also an important measure in many of the articles. In fact, six of the eight articles (75%) included depression measurements as key pieces of their studies.

### **Thematic Analysis**

Upon analysis of the eight final articles, the researcher focused on three overarching themes in which to analyze the studies, which were psychosocial interventions, outcomes, and risk factors. These concepts stood out as the most relevant to the research question being posed and most impactful to future research or practice.

**Psychosocial interventions.** Each article within the research embraced psychosocial aspects of care, but they did so with a variety of interventions and models. Each of these was individually determined to be successful in producing positive outcomes, which will be discussed later, for older adults with chronic illness. Despite the variation in specific models, several sub-themes appeared to be consistently present. Those themes included patient-centered care and education, interdisciplinary consultation, care management, and mental health counseling and support.

***Patient-centered care and education.*** Multiple studies within the review placed emphasis within their models on patient-centered care and education for older adults living with chronic

illness (Baker et al., 2013; Boulton et al., 2009; Counsell et al., 2007; Gellis, Kenaley, & Have, 2014; Radwany et al., 2014). Among these, Radwany et al. (2014) placed particular focus on involving the patient and family in discussions about care goals, providing education regarding the older adult's chronic illness, and emphasizing self-care. The study presents the outcomes of a pilot intervention, Promoting Effective Advance Care for Elders (PEACE). PEACE is an in-home, interdisciplinary, care management model that places an emphasis on symptom management, medication reconciliation, consumer self-management, goal setting, and coaching for completion of advance care planning. Boulton et al. (2009) spoke of a few different models of care that incorporated aspects of patient-centered care. One example of these models is a chronic disease self-management program, which is designed to engage older adults in taking an active role in managing their chronic conditions. Another example the authors found is transitional care, which along with coordinating transitions between healthcare settings, emphasizes patient education regarding self-care and how to communicate effectively with healthcare providers.

***Interdisciplinary consultation.*** Five of the eight articles articulated interventions that incorporated an interdisciplinary team and presented this aspect as an essential piece of a successful model of care (Bekelman et al., 2014; Boulton et al., 2009; Counsell et al., 2007; Gellis et al., 2014; Radwany et al., 2014). In a systematic review of comprehensive care models for older adults with chronic illness, Boulton et al. (2009) found that nine of an identified fifteen successful models were based on interdisciplinary primary care. The review defined an interdisciplinary team as one composed of physicians, nurses, social workers, nurse practitioners, and therapists, who consult with one another to provide comprehensive care to patients. Each team member is able to provide unique expertise and knowledge to enhance the quality of interventions for the patients. Depending on the focus of an intervention, other specialty team

members may also be included. For example, Radwany et al. (2014) indicated the need for a more specialized team to meet the advance care planning needs of their model, mentioned above. The team consisted of a hospice and palliative medicine specialist, geriatrician, care manager, palliative care nurse, social worker, spiritual advisor, and pharmacist.

**Care management.** The use of care management for improving outcomes for older adults with chronic illness is another theme found in several of the included articles (Baker et al., 2013; Bekelman et al., 2014; Boult et al., 2009; Counsell et al., 2007; Gellis et al., 2014; Radwany et al., 2014). Boult (2009) described care management as the involvement of a nurse or social worker to help chronically ill patients and caregivers to troubleshoot problems, coordinate care with health providers, and help the patient to navigate the healthcare system. An example of one such model is The Health Buddy Program, an integrated telehealth and care management program. While the telehealth device collects daily information regarding the older adult's symptoms, vital signs, mental health symptoms, knowledge, and health behaviors, the care manager reviews this information and identifies the need for further interventions and coordination with medical providers (Baker et al., 2013). Another example of a care management model is the Geriatric Resources for Assessment and Care of Elders (GRACE) model, which includes the in-home care management and assessment by a nurse practitioner and social work team. This team provides an initial comprehensive geriatric assessment, collaborates with other interdisciplinary members and the patient's primary care provider to develop an individualized care plan, and initiates both telephone and in-home follow up visits to review the care plan. Other roles of the care management team include integration with pharmacy, mental health, home health, community-based services, and inpatient geriatric care services (Counsell, et al., 2007).

***Mental health counseling and support.*** Over half of this review's articles included interventions that incorporated mental health counseling or support. (Bekelman et al., 2014; Boulton et al., 2009; Counsell et al., 2007; Gellis et al., 2014; Radwany et al., 2014). A large piece of Gellis, Kenaley, and Have's (2014) Integrated Telehealth Education and Activation of Mood (I-TEAM) model was depression management. The intervention team in this model assessed for depression in their older adult participants and then provided evidence-based, brief problem-solving treatment (PST). These PST sessions occurred over the phone for eight weeks and incorporated a structured procedure, which included symptom monitoring, medication use, psychoeducation, problem-solving strategies, and behavioral activation ("getting active"). Additionally, The Collaborative Care to Alleviate Symptoms and Adjust to Illness (CASA) model in another study also incorporated mental health care. Within this model, a psychologist or social worker provided six structured telephone counseling sessions designed to help patients adjust to living with chronic illness and to alleviate any depressive symptoms as they arose. These sessions were structured around four modules which covered grief and loss, role transition, behavioral activation, and pacing (balancing activity and rest) (Bekelman et al., 2014). From a slightly different perspective, Boulton et al. (2009) found that several effective care models incorporated programs for caregiver education and support. These were typically also led by social workers or psychologists and integrated emotional support, counseling, and education on how they can cope with the patient's illness. They found this to be effective in combination with the typical education and training related to the illness itself.

**Outcomes.** The purpose of this systematic review was to look at the outcomes related to psychosocial interventions for older adults with chronic illness, which made this theme within the findings especially important. The measured outcomes of the studies and interventions varied

due to the different designs and purposes of each study, but the most common outcome measures identified were depression and quality of life and healthcare utilization. Other measures less prominently studied included mortality, functional status, autonomy, and quality of care.

*Depression and quality of life.* As mentioned previously, six of the reviewed articles looked at depression's relationship with chronic illness, several of which included interventions linked to improving depression and quality of life (Bekelman et al., 2007; Bekelman et al., 2014; Boulton et al., 2009; Counsell et al., 2007; Gellis et al., 2014; Radwany et al., 2014). One study in particular examined the interrelationship between depression, symptoms, and quality of life. Exacerbation of chronic symptoms is often the reason that older adults seek acute care; however, few studies have looked at symptom burden on individuals with chronic illness – heart failure in particular. The study discussed how the relationship between depression and chronic illness symptoms is bi-directional. Depression can manifest with physical symptoms, as well as lead to increased sensitivity to chronic illness symptoms. In return, increased symptoms and related distress can lead to depression. Analysis of the study's patient surveys found that as the number of depression symptoms increased, the number of chronic illness symptoms reported increased, as well as the severity of distress related to their chronic illness symptoms. Finally, it found that increased chronic illness symptoms correlated with decreased quality of life (Bekelman et al., 2007).

Gellis et al.'s (2014) study, described earlier, noted that although depression is prevalent in individuals with chronic illness, it is often undertreated, or even undetected. The researchers found that with an integrated depression and telehealth care model, like theirs, significant improvements to depression scores and other positive outcomes were possible. In fact, the study found significantly decreased Patient Health Questionnaire-9 and Hamilton Depression Rating

Scale scores, as well as significantly improved scores with the Social Problem-Solving Inventory-Revised at three and six months for those in the intervention group.

***Healthcare utilization.*** Five of the eight studies described in this analysis found significant outcomes in relation to decreased hospital and emergency room utilization, which was an important theme in relation to the research question posed for this study (Baker et al., 2013; Boulton et al., 2009; Counsell et al., 2007; Gellis et al., 2014; Radwany et al., 2014). The GRACE care management model, mentioned previously, found that in the second year of the intervention, both emergency department visits and hospital admission rates had decreased significantly (Counsell et al., 2007). Similarly, the aforementioned Health Buddy Program saw an 18% hospital admission decrease in the group of older adults that received their integrated telehealth and care management intervention. The PEACE advance care planning intervention discussed earlier also saw significant decreases in both hospitalizations and nursing home placements (Radwany et al., 2014). Finally, within Boulton et al.'s (2009) systematic review, the researchers identified lower healthcare utilization in multiple models of care, including care management, interdisciplinary care, caregiver education and support, and chronic disease self-management, among others.

***Risk factors.*** As previously mentioned, one article's focus was to examine the risk factors for readmissions for older adults with chronic illness. Although the other research did not focus on this, Ilouabuchi, Deming, Tu, and Counsell (2014) identified multiple risk factors. Living alone, poor or fair satisfaction with the individual's primary care provider, not having Medicaid insurance, receiving a new assistive device in past six months, and having a nursing home stay in the past six months are all risk factors for older adult repeat hospitalizations. Age, however, was not a factor that affected hospital utilization. The article also pointed out the

importance of identifying risk factors, which are often modifiable, so that early intervention and prevention can be pursued.

### **Discussion**

The purpose of this systematic review was to determine the relationship between psychosocial interventions and decreased hospitalization for older adults with chronic illness. Using an intentional search process of the available literature, and through the use of specific inclusion and exclusion criteria, a narrowed sampling of literature on the topic was determined and then analyzed. Through this review, the researcher was able to determine a number of successful models for addressing chronic illness care needs for older adults, and identify common psychosocial intervention themes within these models. The findings suggest that the integration of psychosocial interventions in chronic illness care for older adults has an impact in reducing hospitalizations, as well as producing other positive outcomes, for these individuals.

Both the initial literature review and the literature derived from the systematic review process identified psychosocial aspects of care that can be integrated into chronic care models. Patient-centered care, experience, and education were prevalent themes throughout this research. By placing a focus on educating older adults on their chronic illness and symptoms, and helping them to explore and define their experiences – both of hospitalizations and living with chronic illness – older adults can experience more positive outcomes in relation to mood and quality of life. The research indicated that perception of illness is a high indicator of success, has a great influence upon severity of depression and symptom distress, and can even predict repeat hospitalizations. By empowering older adults to take ownership of their chronic illnesses, and providing them with the necessary educational tools, those positive outcomes are possible (Baker

et al., 2013; Boulton et al., 2009; Counsell et al., 2007; Fuchs, 2013; Gellis et al., 2014; Radwan et al., 2014; Williams, 2009).

Interdisciplinary care was the next overlapping theme. The integration of various disciplines into chronic illness interventions for older adults is a vital piece of providing well-rounded, comprehensive care. The skilled expertise brought by each individual team member enhances the quality of care and ability to individualize the care plan for each older adult. Interdisciplinary care coincides well with the idea of the biopsychosocial model – viewing the person from a holistic viewpoint, ensuring that all aspects of care are addressed. This facet of care was found within multiple models in the research indicating that it does have an effect on the outcomes discussed in this review. While having medical providers is essential, having social workers, psychologists, or spiritual advisors assures that the psychosocial needs of a patient are also met. As this research shows, the medical and psychosocial pieces of care are interrelated and that relationship should not be discounted (Bekelman et al., 2014; Boulton et al., 2009; Counsell et al., 2007; Gellis et al., 2014; Radwan et al., 2014).

A fair amount of research was uncovered on the theme of care coordination or care management, within both the initial and systematic literature reviews. These interventions were found to be part of successful models of care that aided in reducing hospitalizations, improving satisfaction with care and quality of life, and decreasing symptoms of depression. Managing chronic illness can be an overwhelming process, so having a professional that is knowledgeable about healthcare systems is undeniably beneficial for the older adult with chronic illness. As identified, an important task of a care manager is to provide a comprehensive geriatric assessment of the older adult's needs and situation. Every individual is unique, and the circumstances of their lives are distinctive, as well. Having a designated person to work with the

individual on evaluating their support systems, strengths, care needs, and other outlying factors, can make a difference when it comes to managing the difficulties that chronic illness management can bring (Baker et al., 2013; Bekelman et al., 2014; Boult et al., 2009; Claiborne and Vandenberg, 2001; Counsell et al., 2007; Gellis et al., 2014; Radwany et al., 2014; Volland et al., 2012).

As evident in the research available, depression and outcomes for older adults are interrelated. Chronic illness symptoms and resulting hospitalizations can impact depression, and having depression can also impact the exacerbation of chronic illness symptoms. This indicates that chronic illness care models should include the assessment, diagnosis, and treatment of depression and chronic conditions simultaneously. This is also why the research pointing towards mental health support, counseling, therapy, and any other depression or mental health interventions is important. Unfortunately, an older adult's psychological reaction to hospitalization and the life changes that chronic illness brings is often overlooked. Living with chronic illness alone is stressful and relentless, but when coupled with a traumatizing hospital experience, this is only compounded and can result in exacerbated symptoms of depression, posttraumatic stress, anxiety, or cognitive impairment such as delirium. Without the consideration for mental health within care models, the older adults are more susceptible to negative outcomes and stressors (Bekelman et al., 2007; Bekelman et al., 2014; Boult et al., 2009; Counsell et al., 2007; Davydow et al., 2008; Gellis et al., 2014; Maddox et al., 2001; Radwany et al., 2014; Rattray et al., 2005).

Despite the variation in psychosocial interventions and care models, each has shown to be successful in producing positive outcomes for older adults with chronic illness. Several of the psychosocial interventions found in the research were able to impact both emergency department

and inpatient hospital admission rates. Although the goal of this research was to look at decreased hospitalizations specifically, it also found significance in impacting other outcomes, like the reduction in symptoms of depression and improved quality of life. It can be argued that these outcomes could also potentially have an influence on hospitalization rates due to lower levels of distress for the individual with chronic illness (Baker et al., 2013; Boulton et al., 2009; Counsell et al., 2007; Gellis et al., 2014; Radwany et al., 2014).

### **Limitations**

One primary limitation for this systematic review was the limited number of articles that met the inclusion criteria. The articles that had to be excluded primarily were medically focused, or were based on studies outside of the United States. Opening up the search to other countries could draw further data and research potential. Another limitation of the research is that only a select number of databases were searched with the criteria mentioned. It is possible that further studies that met the criteria could have been found using other databases. Another limitation of the study is that the articles included can not necessarily be applied to other subgroups within the older adult population. Several of the studies excluded participants who screened positively for dementia, and others excluded those who had either substance use or mental illness histories. A final potential limitation is the generalizability of some of the research. Several of the models were trialed in specific locations, such as a specific clinic or hospital system. Further trials would need to be completed to assess if the models would be successful in a broader context.

### **Future Implications**

The results from this research have practice implications across many settings for social workers – hospital, clinic, nursing home, in-home, etc. Although not all of the interventions examined in the studies specifically required a social worker, the ethics and values that social

work embodies can only enhance the psychosocial aspects of these models of care. Social workers have a unique set of skills to be able to address the complex emotional and psychological ramifications that living with chronic illness brings.

It is within the social work Code of Ethics to challenge social injustices and pursue change for the more vulnerable and underserved populations that exist (Workers, 2008). Older adults are, for many reasons, considered to be a vulnerable population. When compounded with the complexities of chronic illness and hospitalizations, the risk for vulnerability only increases. The social worker can play a major part in keeping the voice of the patient at the forefront of medical care and making sure interventions are patient-centered, which this research shows is essential to successful outcomes.

Some of the models addressed in the research have the potential to reach more isolated groups of older adults. The telehealth model of care that this review considered is one good example of a model that has the potential to impact the lives of some of those people. Older adults living in rural communities, or who have physical limitations that prevent them from leaving their homes, may have more difficulty accessing the services that they require. Telehealth uniquely has the ability to bring the expertise of medical professionals to the individual's home no matter the location. Incorporating mental health care into these models, like some shown in the research accomplished, could present social workers with a valuable opportunity. While telehealth has been primarily used for identification of medical symptoms, it has the potential to address emotional and psychological concerns, as well, through telephone-based therapy, mood, and cognitive assessments.

A common issue that arose as a theme with many of the articles, which was not relevant to the research question and thus not mentioned previously, is the issue of reimbursement for the

proposed intervention models. Medicare reimbursement strongly favors medical procedures, and at this time very strictly limits non-medical interventions of nurses, social workers, etc. This issue presents with policy implications in the matter of need for policy reform with the medical and insurance models. Radwany et al. (2014) estimated the cost savings of their advance care planning intervention. They found that the cost of the intervention was approximately \$942 per individual per year. Because this intervention was found to reduce hospitalizations and nursing home costs, it also looked at the estimated costs of one hospitalization in combination with a one-month hospital stay, which would be a common occurrence for an older adult. This cost is \$7115 per individual per year, which lands significantly less than the intervention's cost, looking at potentially thousands of dollars per patient every year.

The findings also indicated implications for further research. As mentioned, there are limitations to this review. The models found in this research should be considered for replication or further study to further prove validity, generalizability, and cost-effectiveness. As discussed the cost savings have the potential to be quite significant, but in order for there to be policy change, further research would be needed to confirm this cost-effectiveness on a larger scale. Another area of research that should be explored further is what therapy approaches are most effective in addressing depression in older adults with chronic illness. Some of the models in this research included depression assessment and treatment, but they do not specifically address options for therapy models that may be effective.

### **Conclusion**

As is clear throughout this review, the care needs of an older adult are complex and layered. Chronic illness has a strong impact on an individual's life and can result in distressing outcomes, such as hospitalizations, depression, and decreased quality of life. The literature and

research shows that incorporating psychosocial interventions into chronic care models is effective in reducing these adverse outcomes. With the expected growth in the older adult population discussed earlier, addressing chronic illness from a more preventative, comprehensive perspective can bring innumerable benefits.

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## Appendix A. Included Articles and Summary

Authors	Title	Design	Summary
Baker, L., Macaulay, D., Sorg, R., Diener, M., Johnson, S., & Birnbaum, H. (2013)	Effects of Care Management and Telehealth: A Longitudinal Analysis Using Medicare Data	Retrospective matched cohort study	Study of telehealth and care management program for 1767 Medicare beneficiaries that resulted in 15% lower mortality and 18% fewer inpatient hospital admissions.
Bekelman, D., Havranek, E., Becker, D., Kutner, J., Peterson, P., Wittstein, I., Gottlieb, S., Yamashita, T., Fairclough, D., & Dy, S. (2007)	Symptoms, Depression, and Quality of Life in Patients with Heart Failure	Cross-sectional study	Study of relationship between depression and chronic illness symptoms for 63 older adults with heart failure. Results showed that as depression symptoms increased, symptom reporting increased, and as the number of symptoms increased, quality of life decreased.
Bekelman, D., Hooker, S., Nowels, C., Main, D., Meek, P., McBryde, C., Hattler, B., Lorenz, K., & Heidenreich, P. (2014)	Feasibility and Acceptability of a Collaborative Care Intervention to Improve Symptoms and Quality of Life in Chronic Heart Failure: Mixed Methods Pilot Trial	Prospective mixed-methods pilot trial	Study of 17 older adults who received an intervention that consisted of nursing phone visits, phone counseling, and weekly interdisciplinary consultation. Identified positive feedback of the intervention and determined its feasibility as an intervention to improve symptoms and quality of life.
Boult, C., Green, A., Boult, L., Pacala, J., Snyder, C., & Leff, B. (2009)	Successful Models of Comprehensive Care for Older Adults with Chronic Conditions: Evidence for the Institute of Medicine's "Retooling for an Aging America"	Systematic literature review	Review identified 15 successful models of chronic care out of a review of 123. Models produced positive outcomes including improved quality of life, improved

	Report		functional autonomy, reduced use of health services, and increased survival rates.
Counsell, S., Callahan, C., Clark, D., Tu, W., Buttar, A., Stump, T., & Ricketts, G. (2007)	Geriatric Care Management for Low-Income Seniors: A Randomized Controlled Trial	Randomized controlled trial	Trial of home-based care management for 951 low-income older adults by a nurse practitioner and social worker resulted in lower emergency department visit and hospital admission rates.
Gellis, Z., Kenaley, B., Have, T. (2014)	Integrated Telehealth Care for Chronic Illness and Depression in Geriatric Home Care Patients: The Integrated and Telehealth Education and Activation of Mood (I-TEAM) Study	Randomized controlled trial	Trial evaluating telehealth intervention focusing on both chronic illness and depression care for 102 older adults. Results showed 50% lower depression scores, improved problem-solving skills, improved self-efficacy in managing chronic condition, and fewer emergency department visits.
Iloabuchi, T., Mi, D., Tu, W., & Counsell, S. (2014)	Risk Factors for Early Hospital Readmission in Low-Income Elderly Adults	Prospective cohort study	Study of 951 low-income, older adults identifying the risk factors that affect hospital readmission rates.
Radwany, S., Hazelett, S., Allen, K., Kropp, D., Ertle, D., Albanese, T., Fosnight, S., & Moore, P. (2014)	Results of the Promoting Effective Advance Care Planning for Elders (PEACE) Randomized Pilot Study	Randomized pilot trial	Trial involving 80 older adults to determine feasibility of a palliative interdisciplinary care management intervention. Results showed 5% decrease in hospitalizations and 10% decrease in nursing home placements.

## Appendix B. Article Analysis Form

Research question(s) and/or hypothesis(es)
Independent variable(s) and operational definition(s)
Dependent variable(s) and operational definition(s)
Control or intervening (modifying) variables
Sample
Data collection – methods and procedures
Research design
Purpose of the research
Data analysis
Findings
Conclusions
Ethical issues and safeguards
Practice implications
Policy implications
Research implications
Limitations/critiques