

**Understanding Perspectives on Care Manager Competencies:  
A Multiple-Method Needs Assessment**

by  
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## **Author's Declaration**

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.  
I understand that my thesis may be made electronically available to the public.

## **Abstract**

**Background:** Home-based primary care may be well situated as an alternative to conventional episodic primary care for chronically ill older adults, potentially delaying and reducing long-term care admissions while improving satisfaction with care and quality of life. Care management, which seeks to assist patients and their support systems in managing their illnesses, could play a key role in providing home-based primary care. However, little is known about the attributes and competencies a care manager should have when working in home-based primary care.

**Objectives:** To identify necessary competencies for care managers who work with older adults, verify competencies in a home-based setting, and gain a deeper understanding of why the competencies are important.

**Methods:** A scoping review following Arksey and O'Malley's framework was conducted. A search string encompassing care integration, care management, and clinical competence was used to find academic literature on PubMed, CINAHL, and Scopus. The academic search string was adapted to custom Google searches and targeted website searches to identify grey literature. Extracted competencies were organized into similar groups. The sixth step of Arksey and O'Malley's framework, consultation, was conducted using a quantitative survey to verify the literature review's findings, and qualitative interviews to gain a greater understanding. The survey used the competencies uncovered in the scoping review and asked care managers and healthcare providers to rank the importance of competency groups with respect to one another, and rate the importance of individual competencies from -3 to +3, with -3 being very unimportant and +3 being very important, in a home-based setting.

**Results:** The literature review identified 125 competencies from 65 academic articles and pieces of grey literature. These were categorized into 13 groups in three audience-facing facets. A total

of 20 survey participants rated competencies and ranked competency groups, the averages of which were used to ascertain the degree to which they are important for care managers. The highest-rated competencies were patient-facing relationship and rapport building (2.90) and patient-facing confidentiality (2.90); the highest-ranked competency group was patient care management (2.80). Cronbach's alpha for the survey was 0.93. A follow-up interview was conducted which provided further endorsement and nuance for some competencies, as well as a test for the feasibility of further qualitative investigation.

**Discussion and Conclusion:** The findings provide support for the importance of competencies for care managers who work in home-based settings with older adults. The review identified competencies beyond those suggested by professional organizations; these included personality traits and caregiver support and communication. Further contextualization is needed to gain a deeper understanding of why the identified competencies are important. Practitioners should be aware of the breadth of competencies a care manager may need to possess when working in home-based settings with older adults and should prioritize training according to their importance.

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## **1.0: Introduction**

### **1.1: Chronic Illness, Older Adults, and Primary Care**

Chronic illnesses develop over a long period of time, have complex onset due to multiple contributing factors, have a prolonged duration, and are typically associated with functional impairment (Bernell & Howard, 2016). As people age, they are more likely to encounter health deficits which, due to diminished repair capacity, accumulate and produce poor health, frailty, and chronic disease (Mitnitski & Rockwood, 2016; Zazzara et al., 2019). Overall, 12.9% of Canadians have two or more chronic conditions, and 3.9% report having three or more (Roberts et al., 2015). For Canadians over the age of 65, though, the proportion of people with two or more chronic diseases increases to 37%, approximately one-third, and 24% for those with three or more chronic conditions (Canadian Institute for Health Information, 2011; Public Health Agency of Canada, 2020; Roberts et al., 2015). A systematic review including 39 original articles and 70,057,611 patients found that age was strongly and positively associated with multimorbidity (Violan et al., 2014). However, as it is currently, the healthcare system is not well suited to managing patients with multiple chronic conditions (Moffat & Mercer, 2015). When first devised, provincial healthcare systems were largely tasked with treating acute illnesses, which typically require fewer resources to ameliorate than chronic illnesses, which are far more resource-intensive (Andrew et al., 2018; Murrow & Oglesby, 1996).

Caring for patients with multiple chronic illnesses utilizes a disproportionate number of resources, with healthcare spending increasing 22-fold for complex patients, those with 11 chronic conditions, in an inpatient setting (Hajat et al., 2021), with each additional chronic disorder increasing healthcare expenditures by 40% (Majumdar et al., 2019). In Canada, older adults with three or more chronic conditions, 24% of the senior population, used 40% of the

healthcare expenditure used by that same demographic and accessed the healthcare system nearly three-fold when compared to their counterparts with no chronic conditions (Canadian Institute for Health Information, 2011). Further, in Ontario, the top 1% of patients with the most complex needs, due to multiple chronic conditions, accounted for 30% of expended resources, and the top 5% accounted for 60% of resources (Bronskill et al., 2010). The increased cost associated with caring for individuals with greater complexity and multimorbidity can be attributed to the independent provision of services by individual providers, resulting in inefficient resources such as duplication of resources, delays in service provision, failed transitions of care, and upward substitution of services (Goldhar et al., 2014; Sambamoorthi et al., 2015). Both patients and providers struggle with managing multimorbidity. For providers, treating patients with multimorbidity is challenging and due to their limited time and resources, they feel exhausted, demoralized, and overwhelmed (O'Brien et al., 2011). Providers report that patients struggle with problems arising from their health, and those patients are increasingly required to be self-sufficient in areas of their care where they may be unqualified (O'Brien et al., 2011). Additionally, the healthcare systems' reliance on specialized, disease-by-disease care, in the context of treating people with complex care needs, produces fragmentation and poor continuity of care (Bodenheimer, 2008; Sambamoorthi et al., 2015). Fragmented, discontinuous care produces poor health outcomes for chronically ill patients, increasing hospitalization rates, the diagnosis of additional chronic illnesses, and long-term care admission (Ajmera et al., 2012; Frandsen et al., 2015; Godin et al., 2019). This is especially the case for homebound older adults who, already experiencing impaired access to primary care (Ornstein et al., 2015), more frequently access episodic care, such as emergency departments, compared to their non-homebound counterparts (Musich et al., 2015). The experience of discontinuous care, for some

patients, can lead to feelings of frustration at their lack of access to their service providers, distrust when encountering gaps in their care, and a lack of security (Boye et al., 2019; von Bültzingslöwen et al., 2006). Unfortunately, communication within primary care settings, an essential component of care coordination and continuity of care (Gulliford et al., 2006), is often poor. Sovran et al. (2019) found that roughly a quarter of primary physicians communicate with patients' home care supports. In a review by Kripalani et al. (2007), even less communication was observed between hospital-based physicians and primary care physicians, with only 3% of primary care physicians being involved in discussions about patient discharge. This lack of communication can further exacerbate discontinuous care, and potentially lead to patient complications (Tiwary et al., 2019; Vermeir et al., 2015).

## **1.2: Long-Term Care and Long-Term Care Users**

Long-term care services are designed to provide quality healthcare to vulnerable patients who require attentive care not otherwise available in the community or primary care (Armstrong & Armstrong, 2019). In Canada, 46% of the 2,076 long-term care facilities are owned publicly, and the remaining 54% are privately owned and run on either a for-profit (29% of homes) or not-for-profit (23% of homes) basis (Canadian Institute for Health Information, 2021). Various health conditions and life events predispose older adults to admission to a long-term care facility. Older adults are more likely to be admitted to long-term care facilities if they have had recent falls or hospitalizations, cognitive and functional decline and impairment, or poor social relationships (Gaugler et al., 2007; Maxwell et al., 2013; Nihtilä et al., 2008). A retrospective cohort study of 371,696 Ontario home care clients found that 12.7% of those who had received assessments were admitted to a long-term care facility, and, within that sample, a diagnosis of dementia was the most significant risk factor for long-term care admission, followed by age,

client verbal abusive behaviour, caregiver distress, having had at least one fall, and incontinence (Williams et al., 2020). A similarly large study, including 280,722 people aged 65 and above, found dementias, Parkinson's disease, stroke, depressive symptoms and mental illness, hip fractures, and diabetes were associated with an increased risk of admission to long-term care (Nihtilä et al., 2008). In dementia patients, who are at greatest risk of being admitted to long-term care, the severity of impairment, a diagnosis of Alzheimer's disease, activities of daily living dependencies, and caregiver burnout are predictive of long-term care admission (Clifford et al., 2003).

### **1.3: Older Adult Perceptions of Long-Term Care**

Despite its position as a care setting for older adults who require higher level care, long-term care is not always the preferred setting of care for older adults. In a study investigating the desired care arrangements for older adults, it was found that older adults desire to avoid long-term care in most scenarios (Wolff et al., 2008). Older adults were asked, in hypothetical scenarios where they experienced impairment in performing instrumental activities of daily living, impairment in activities of daily Living, or an Alzheimer's or dementia diagnosis, where they would prefer to receive care (Wolff et al., 2008). Respondents were asked whether they would prefer to be cared for at home with unpaid care, at home with paid care, in their child's home, in an assisted living facility, and in a nursing home (Wolff et al., 2008). In the scenarios where older adults were to experience impairments to their ability to complete instrumental activities of daily living, 66.4% wished to remain at home and receive unpaid care, and 23.2% wished to receive paid care in their home (Wolff et al., 2008). Similarly, in scenarios where they experienced impairments in activities of daily living, 48.1% indicated and 27.8% wished to remain at home and receive unpaid and paid care, respectively (Wolff et al., 2008). Long-term

care was reported to be preferable in the scenario that they had Alzheimer's or other dementias, with 49.7% reporting it as their desired care setting (Wolff et al., 2008). A qualitative investigation conducted by Campbell-Enns et al. (2020), similarly, found that, amongst lower-care clients, long-term care was viewed as the option of last resort, only to be used when care in the community was no longer feasible (Campbell-Enns et al., 2020). Family caretakers of older adults admitted to long-term care describe conflicted emotions regarding their decision to admit their loved one to a long-term care facility: a sense of guilt and failure with no longer being able to provide appropriate care, as well as relief that the older adult could then receive the level of care they require (Campbell-Enns et al., 2020).

Some older residents in long-term care facilities describe that, although care providers make efforts, their quality of care is insufficient, and they have negative appraisals of their environment and care (Donnelly & MacEntee, 2016). Some older adult residents of long-term care facilities describe feeling as though they had little dignity (Dong et al., 2021; Donnelly & MacEntee, 2016), degraded autonomy (Donnelly & MacEntee, 2016; Hellström & Sarvimäki, 2007), and austerity from care providers (Donnelly & MacEntee, 2016; Hellström & Sarvimäki, 2007). When it occurs, this treatment is antithetical to the goals and expectations for supportive aging, whether in the community or in long-term care (Travers et al., 2022). In the context of long-term services and supports, which encompasses community and long-term care settings, older adults expect to maintain function and independence, increase quality of life, relieve burdens, and foster security and safety (Travers et al., 2022).

#### **1.4: Ontario Long-Term Care and Home-Care Context, and Disconnect Leading to Long-Term Care Admission**

Not only do older adults want to avoid long-term care (Wolff et al., 2008), but the current capacity of long-term care homes is not sufficient for their needs (Financial Accountability office of Ontario, 2019). In Ontario, the area in which this work is being conducted and the region which would be the primary beneficiary of the results of this work, available long-term care beds do not meet the current demand: approximately 70,000 beds are required in the province, 38,000 to meet the current and immediate need, and an additional 32,000 to replace existing beds (Marracco et al., 2021). The financial implications of meeting the demand amongst older adults for this type of care are in excess of \$20 billion (Marracco et al., 2021).

Home care is often used as a method to support older adults aging in place (Ayalon et al., 2010), allowing them to delay admission to long-term care facilities (Young et al., 2015) and avoid hospital admissions (Shabani et al., 2022). In a home care model, some services are rendered in a home-based setting, such as personal support, physiotherapy, and nutritional counselling (*Home Care*, n.d.). In Ontario, though, home care provision is not without issues (Marani et al., 2023). Informal caregivers of those who receive homecare feel as though the current homecare system in Ontario is poorly integrated and not sensitive to needs or changes in needs (Marani et al., 2023). They also cite a need for a professional who acts as a middle-person to bridge some forms of informational gaps between caregivers, recipients, and the homecare system (Marani et al., 2023). The disconnect between homecare and primary care was also echoed by care providers working in Ontario, who noted poor communication between patients and providers and poor continuity of care (Valaitis et al., 2020). Greater continuity of care

between primary care and community aged care reduces hospital admission (Dyer et al., 2022), which is a risk factor for long-term care admission (Goodwin et al., 2011).

### **1.5: Home-Based Primary Care**

Recently, there have been calls for new healthcare models that address the shortcomings of primary care, long-term care, and homecare (Giosa et al., 2022; Saari et al., 2024). Home-based primary care can serve as a valuable alternative to both long-term care and conventional primary care for vulnerable patients (Totten et al., 2016). Home-based primary care aims to provide high-quality and patient-centred care, typically to chronically ill or frail persons, in a more accessible and continuous way than contemporary care (Haggerty et al., 2003; Schuchman et al., 2018). As the name suggests, home-based primary care aims to relocate the provision of services from an office-based model to a patient's home to overcome logistical and accessibility barriers encountered by vulnerable patients (Schuchman et al., 2018). Besides improving access to care, shifting primary care settings from office-based to home-based can considerably impact patient care quality (Schuchman et al., 2018; Totten et al., 2016). Home-based primary care has shown effectiveness in the American healthcare system (De Jonge et al., 2014; Edes et al., 2014; Hughes et al., 2000; Totten et al., 2016), however little implementation and investigation have been done in Canadian contexts (Sawchuk et al., 2022).

The provision of home-based primary care in those American contexts is less resource-intensive when compared with conventional alternatives (De Jonge et al., 2014; Stanhope et al., 2018). In a study of 722 home-based primary care users, compared to 2161 controls not receiving home-based primary care, it was found that care through a home-based model was associated with a 17% reduction in total cost, with no difference in mortality (De Jonge et al., 2014). It was also found that home-based primary care clients experienced fewer hospitalizations

and emergency department visits, and fewer days spent in skilled nursing facilities (De Jonge et al., 2014; Hughes et al., 2000; Rosenberg, 2012; Wajnberg et al., 2010). Stanhope et al. (2018) found similar results, however, they also found that substantial savings followed the high costs during program entry after the first year of care. Additionally, older adults enrolled in home-based primary care programs experienced reductions in long-term care admissions (Leftwich Beales & Edes, 2009; Stall et al., 2014; Wajnberg et al., 2010). Hughes et al. (2000) found that, amongst terminally ill patients, receiving home-based primary care can improve health-related quality of life and, amongst non-terminally ill patients, it can increase satisfaction with their care.

The advantages of home-based primary care can be observed in the regard that it is held by those who receive it. For some Ontario-based clients, home-based primary care was seen as a necessity in their healthcare rather than a luxury, and as the only answer to their extreme health needs (Smith-Carrier et al., 2017). Some patients described that home-based primary did not replace office-based primary care, but emergency department visits: office-based medicine had become so inaccessible that, rather than struggle to contend with it, they relied solely on emergency services to receive medical attention (Smith-Carrier et al., 2017). Additionally, home-based primary care can lead to a safer, closer, more open relationship with providers, in which patients feel as though they are genuinely cared for (Smith-Carrier et al., 2017). Patients receiving home-based primary care describe peace of mind, confidence, security, and a sense of being fortunate, which have led to increased satisfaction and quality of life (Smith-Carrier et al., 2017). The satisfaction patients experience in home-based primary care programs extends to the care coordination they receive, a central component of home-based primary care (Schuchman et al., 2018; Shafir et al., 2016; Totten et al., 2016). The care coordination experienced by home-based primary care clients contributes to more seamless and continuous health care provision

(Gulliford et al., 2006), which further contributes to lower emergency department visits and lower risk of inpatient admissions (Amjad et al., 2016; Bayliss et al., 2015; McCusker et al., 2012).

Beyond the pragmatic improvements that can be expected through home-based primary care, there are also empathic benefits. Primarily, with regard to older adults, there is a strong desire among older adults to avoid admission to long-term care settings; in fact, in a survey of 2005 Canadians, 85% indicated that they would do anything they could to avoid moving into a long-term care facility, and, for Canadians aged 65 years old and above, this rises to 96% (Feil et al., 2021). Though this overwhelming majority in preference was discovered during the COVID-19 pandemic, a time in which long-term care facilities were seen with particular concern (Shin et al., 2021; Thompson et al., 2020), the notion that older adults may prefer to avoid long-term care facilities is not novel (Kane, 2001). The fact that older adults would rather not receive care in long-term care facilities is compounded by the fact that, within Canada, research has shown that anywhere between 12% and 37% of older adults in long-term care could be supported within the community, as opposed to long-term care (Doupe et al., 2012; Williams et al., 2009), with more recent estimates indicating that one in every nine newly admitted long-term care residents could have remained in their home had they received some form of home-based care (Canadian Institute for Health Information, 2020). The use of home-based primary care as an alternative to long-term care is compounded, in the same way as substituting primary care for home-based primary care, by the cost savings that could be expected (Deloitte, 2021; Williams et al., 2009).

## **1.6: Care Managers and Home-Based Primary Care**

Considering the fact that some older adults resort to long-term care as a last resort following breakdowns in fractured primary and community care settings (Campbell-Enns et al.,

2020), and that many not only desire to remain in the community (Feil et al., 2021), but are in actuality able to provided they are given appropriate resources and supports (Canadian Institute for Health Information, 2020), home-based primary care emerges as a promising alternative to both conventional primary care and long-term care. Care management and care coordination are a crucial component of high-quality home-based primary care (Totten et al., 2016), in which, through a team-based and patient-centred approach, patients and their supports are assisted in managing their medical conditions, often including care coordination for those with chronic illness (AHRQ, 2018). However, despite their place in home-based primary care and healthcare overall, little is known regarding the competencies necessary to fulfill the role effectively and efficiently in a home-based setting (Stark, 2020).

In Canada, the National Case Management Network of Canada has published guidelines for care management providers. The National Case Management Network of Canada outlines care manager competencies, assumptions, and practice contexts (NCMN, 2012). Though the National Case Management Network of Canada outlines some contexts in which care managers can expect to practice, they do not distinguish between these settings in their report and do not refer to practicing in a home-based primary care context (NCMN, 2012). Outside of Canada, associations including the American Case Management Association and the Case Management Society of America have produced standards of practice for care and case managers working in institutional, hospital-based, contexts (ACMA, 2020; Stark, 2020). Once more, these competencies focus solely on the provision of care management within an office-based primary care system and may not be entirely transferable to a care manager embedded within a home-based primary care team. Understanding the competencies of home-based primary care managers, as is the case with many other healthcare professionals (Combes & Arespachoga,

2012; Fukada, 2018), is essential due to their role in ensuring optimal performance within a position and the outcomes that stem from the fulfillment of that position (Karami et al., 2017). Additionally, as little implementation of home-based primary care has been accomplished in Canada (Sawchuk et al., 2022), this thesis will help to translate and verify existing knowledge in an Ontario-specific context.

## **2.0: Purpose and Specific Aims**

The purpose of this study is to identify what competencies a care manager should possess when working with older adults receiving home-based primary care in Ontario. Three specific aims have been created to guide this thesis. The specific aims of this thesis are:

1. To identify what is known within the literature regarding the necessary competencies of a care manager working with older adults in community and primary care settings.
2. To verify and contextualize these findings with healthcare professionals who are engaged in care management in home-based and community settings in Ontario.
3. To understand perspectives on why competencies are important in providing care management and home-based primary care to older adults.

### **3.0: Methods**

Three methodologies were selected to investigate the specific aims identified for this thesis. A scoping review was used to identify care manager competencies. To verify and contextualize the findings in the local context, a survey was administered to care providers who worked in home-based settings. To better understand the competencies, care providers involved in care management and home-based primary care were interviewed. The sequence of the selected methods, a scoping review, followed by a survey, followed by interviews, was done to progressively narrow and focus on competencies that are important for home-based primary care: first establishing all competencies for care managers across settings, then narrowing focus to those in home-based settings, and finally within home-based primary care specifically.

#### **3.1: Scoping Review**

##### **3.1.1: Identifying the Question**

A scoping review of peer-reviewed literature was performed according to Arksey and O'Malley's framework (2005) incorporating recommendations provided by Levac et al. (2010). Arksey and O'Malley (2005) suggest four purposes when undertaking a scoping review “1). to examine the extent, range, and nature of research activity, 2). to determine the value of undertaking a full systematic review, 3). to summarize and disseminate research findings, and 4). to identify gaps on the existing literature” (p21). The completion of this scoping review has fulfilled the third and fourth purposes given by Arksey and O'Malley, which is in line with the first specific aim of this thesis. The findings of this scoping review will be summarized and disseminated to a group of stakeholders interested in care management in home-based primary care. Additionally, this scoping review intended to identify gaps in the literature regarding the care manager role and care management. The question "what competencies must a professional have to fulfill the role of care manager?" was used to guide the scoping review. This question

was left intentionally broad to increase the number of articles identified for review, and to reduce the inadvertent omission of relevant articles (Arksey & O'Malley, 2005).

### **3.1.2: Search Strategy**

To identify necessary care manager competencies within the academic literature, a systematic search of relevant literature in relevant databases was undertaken (Arksey & O'Malley, 2005). A search strategy operationalizing the guiding question of the review was created with the aid of a librarian knowledgeable in the field of public health. Four distinct fields arose from this operationalization: Integrated care, care management, competencies, and care settings. Three electronic databases were selected for the full systematic search within the scoping review: PubMed, CINAHL, and Scopus. The search strategy was created using PubMed, and subsequently translated for use in the remaining databases to suit their particular search engines. This, once more, was completed with the aid of a librarian knowledgeable in public health literature. **Appendix A** shows the final search strategy used for the scoping review for each database used in the review, along with the number of results gathered by each search. No date limits were applied to the searches. The search strategy was set to produce articles in English. The articles retrieved from the systematic search were exported and subsequently uploaded to a reference manager, where they were stored. The exported articles were automatically de-duplicated. However, automatically removed articles were reviewed, and careful attention was given to identifying remaining duplicates before screening.

To find grey literature, and reduce publication bias (Paez, 2017), two of the four methods provided by Godin et al. (2015) were employed: customized Google searches and targeted website searches. Customized Google searches were created using plain language permutations of the original search strategy, with a limit of five unique searches and reviewing the first fifty

results of each of the five searches (Godin et al., 2015). The search terms used, the number of results, and the number of included results were recorded in the table shown in **Appendix B**. In consultation with a public health librarian, the limit of fifty results from five individual searches was selected due to Google searches displaying more relevant results with priority in the list of results. This method is also recommended by Godin et al. (2015), as it is impractical to review every result produced by a Google search. Next, the websites of organizations prominent in the care coordination and care management field were targeted for hand-searching (Godin et al., 2015). This was conducted in two steps: first, a Google search to identify organizations, followed by searching through the websites' homepages (Godin et al., 2015). The results of these searches have been recorded in the table shown in **Appendix C**.

### **3.1.3: Study Selection**

Following the removal of duplicate articles, eligible items were selected for inclusion (Arksey & O'Malley, 2005). To be eligible for inclusion within the review, prospective articles must have been written in English, considered the provision of healthcare, discussed the competencies of a care manager, and focused on older adults. No setting limit was placed on articles, so as not to omit competencies. **Appendix D** shows the inclusion and exclusion criteria used for study selection. Following the recommendations made by Levac et al. (2010), the study selection process, and the criteria used therein, were refined iteratively.

A random sample of 25 articles was selected and reviewed with a second reviewer using a preliminary set of inclusion criteria. The agreement between these two reviewers was calculated using Cohen's Kappa, any discrepancies in study selection were deliberated, and amendments were made to the inclusion and exclusion criteria to ensure appropriate criteria were used (Aromataris & Munn, 2020). Following this, using the updated criteria, a second sample of

articles was selected for review by both reviewers. Once more, the agreement between both reviewers was calculated and compared to the preliminary test. This process continued until a target agreement of  $k=0.75$  was met, which indicates excellent agreement beyond chance (Fleiss et al., 2003). Following this, the student researcher was the sole reviewer using the updated criteria established. Any changes made due to these refinement and verification processes were documented and reported.

Articles and grey literature were reviewed in two consecutive phases using the final criteria. To begin, all identified articles' titles and abstracts were reviewed according to the inclusion and exclusion criteria. Articles and grey literature included at the title and abstract level proceeded to full-text review, where the entire document was read and assessed using the inclusion criteria. At each phase, the number of included and excluded items was recorded. The rationale for study exclusion at the full-text level was recorded. All articles for full-text review were obtained through the University of Waterloo library. All articles that met the inclusion criteria following the full-text review were included in the scoping review.

#### **3.1.4: Data Charting**

After completing the selection process, all included items underwent data extraction and charting (Arksey & O'Malley, 2005). To accomplish this, a data extraction form was created, incorporating the key information described by Arksey and O'Malley (2005), that being: Author, year of publication, study location, study type and duration, the population included in the study (and demographic data), study aims, methodology used, outcomes or phenomena measured, and important results. Similar to the study selection criteria, the data extraction form was evaluated iteratively throughout the process of data extraction, such that the data extraction form was updated periodically to reflect changes in the type of data being derived (Levac et al., 2010). No

changes were made to the data extraction form during the process of data charting. **Appendix E** shows the data extracted from the included articles.

### **3.1.5: Reporting**

Once extraction and charting were completed, the extracted data were reported (Arksey & O'Malley, 2005). This was completed in three stages: analysis, reporting, and interpreting (Levac et al., 2010). The analysis phase of this stage compiled the included studies numerically and thematically (Levac et al., 2010). Key characteristics of the included studies were descriptively summarized, including the number of studies included, and bibliometric information such as year of publication and the country in which the study was conducted (Arksey & O'Malley, 2005; Levac et al., 2010). Next, extracted data were organized into conceptually similar groups (Levac et al., 2010). Qualitative analysis techniques facilitated this (Daudt et al., 2013; Levac et al., 2010). For this review, extracted data were grouped by both themes and competencies (Arksey & O'Malley, 2005). Several competencies which were initially extracted from articles were consolidated into single competencies along with similar competencies, reducing the number of competencies within the review without sacrificing detail. Similarly, some competencies were split, depending on the context in which they were discussed. Individual competencies were then sorted into groups of similar competencies, depending on the type of labour or attributes the competencies encompassed: patients, caregivers, and other healthcare providers. This resulted in several thematically similar groups in audience-specific groupings, which were then reported narratively (Arksey & O'Malley, 2005). Research gaps were then identified, in addition to those shown during the consultation, by assessing the lack of literature in the evidence base (Arksey & O'Malley, 2005).

## **3.2: Consultation**

Arksey and O'Malley (2005) recommend that SRs undergo a sixth and final, though optional, consultation step, in which stakeholders are invited to contribute to the SR. The purpose of this consultation process is to verify the findings of the SR with knowledgeable stakeholders, which is the second aim of this thesis. To accomplish this, a survey using the competencies identified within the SR was created and distributed to people with healthcare experience with older adults in the community. The survey allowed participants to indicate their perception of the importance of each competency, allowing for any recommendations made using the results of the SR to be verified by real-world experience. In addition to survey consultation, an interview consultation phase was planned to allow participants to add greater depth to the importance of competencies identified in the scoping review and verified in the survey, aligning with the third aim of this thesis.

### **3.2.1: Survey Consultation**

#### **3.2.1.1: Design**

A quantitative survey was generated to verify the importance of care manager competencies found in the SR. Qualtrics was used to design and administer the survey online. It used the same groupings and categories as was found in the SR and ultimately consisted of 136 questions. The survey asked participants to rate all individual competencies, as well as rank the importance of competency groupings. Ranking competency groups were posed in regard to one another, and ratings used Likert scaling. Likert scaling is a common scoring scheme used to appraise opinions and perceptions of a phenomenon (Bishop & Herron, 2015). As a bipolar scale, Likert scaling runs a continuum of disagreement to agreement at either endpoint with a neutral midpoint (Höhne et al., 2020). Conversely, unipolar scales run from a neutral endpoint to

a positive or negative endpoint (Höhne et al., 2020). As unipolar scaling would omit either the positive or the negative domain of a phenomenon, the decision was made to use a bipolar Likert scale and gather information between negative, neutral, and positive appraisals of importance (Cabooter et al., 2016). If a competency were deemed unimportant by participants, rather than ranging from neutral to important, a unipolar scale would not be capable of capturing those data. Likert scales are commonly formatted as five-, six-, or seven-point scales (Weijters et al., 2010). A seven-point format was used as it provides a balance between information recovery while not overburdening participants (Green & Rao, 1970). In the event of positive-skew, a seven-point scale would also produce a four-point unipolar scale from neutral to the positive endpoint. Full verbal labelling was used in place of scales fully labelled from negative to positive, as Qualtrics did not allow for individual responses to be represented on a negative to positive-scale. Negative to positive scales have the benefit of reducing the selection of extreme response options when compared to positive-only scales (Cabooter et al., 2016). Fully verbal labelling, though, does aid in reducing the burden on participants (Johnson et al., 2005; Moors et al., 2014; Weng, 2004), and aids participants in fully comprehending and answering questions meaningfully (Höhne et al., 2021; Tourangeau et al., 2004). Due to the large number of individual competencies identified, participants were asked to rank competency groups as opposed to individual competencies. This decision was made to reduce the cognitive load placed upon participants and reduce the time required to complete the survey.

The survey began with a brief overview of the research project and outlined what was being asked of participants. Following this, participants were asked whether they agreed to consent to participating in the research project. At this time, participants were able to review the letter of information for the research study, which had already been provided to them. If a

participant consented to participate, they were brought to the body of the survey for completion, however, had they not agreed to participate, the survey would cease. After ranking and rating competencies, some brief demographic information was collected from participants. This included: race or ethnicity, gender identity, age range, highest level of education, occupation, and experience with care management. Following the main survey, participants were asked to provide contact information for the purposes of remuneration, which will be discussed further, and follow-up. To maintain anonymity, this was unlinked from the main survey and collected in a separate survey to which the participant was automatically transitioned. The data collected from both surveys were stored separately, ensuring that contact information cannot be linked to a participant's responses. **Appendix F** shows the survey used for data collection.

### **3.2.1.2: Participants and Recruitment**

Participants were recruited purposively from across Ontario. Purposive sampling was selected to allow for the selection of participants who fulfill certain characteristics to help understand specific topics (Patton, 2014). In the case of this study, the required characteristics are that participants have experience working as or with care managers, that they have this experience working with older adults, and that they work in Ontario. These criteria were used to be inclusive of the perspectives of older adult patients who receive care management, their informal caregivers, physicians or other healthcare professionals who work in practices which employ or have contact with care managers, and care managers themselves. This broad array of perspectives, from across the continuum of care, would allow for the perspectives gathered to be as fulsome as possible. As the results of this thesis are intended to support the creation of a program which provides integrated care-managed home-based primary care in Ontario, participants were restricted from completing the survey if they worked outside of Ontario.

To facilitate consultation, organizations which provide community care and care management were contacted and asked whether they could aid in recruitment. To begin, the researcher sought public and private organizations that provide community and home care, as well as organizations that represent professionals who provide those services. A recruitment email, shown in **Appendix G**, was sent to the identified organizations, asking them for aid in connecting the research team with members of their organization who can comment on the importance of care manager competencies identified in the literature. Interested participants were asked to contact the research team indicating their desire to complete the survey. These participants were sent the letter of information and survey invitation, shown in **Appendix H** and **Appendix I** respectively, as well as a link to complete the survey anonymously online. During the data collection process, funds were provided by a homecare agency that allowed for the provision of an honorarium to participants. To accommodate the inclusion of remuneration, all of the organizations which were initially contacted for recruitment were resent updated materials indicating that time taken for participation could now be compensated. **Appendices J to L** show the updated email script, letter of information, and survey invitation letter. Organizations were once more asked for aid in recruiting participants who could speak to the importance of care manager competencies in community and home-based settings.

### **3.2.1.3: Survey Testing**

A cognitive interview was conducted to test the feasibility and clarity of the survey before administration, with guidance from Willis and Artino (2013). Think-aloud and probed completion of the survey were used simultaneously (Willis & Artino, 2013). Think-aloud test-taking allowed the fulsome expression of the respondent's thought process while completing the survey (Willis & Artino, 2013). Verbal probing, both made proactively and reactively, was used

to gain more detailed information about questions asked within the survey and aspects of the survey, such as presentation and layout (Willis & Artino, 2013). An academic with extensive work experience in the healthcare field was recruited to participate in the cognitive interview. This interviewee completed the survey and provided their interpretation of the questions asked within the survey. This process confirmed that most prompts and questions regarding competencies, as displayed in the survey, would be intelligible to participants who work in healthcare. It also provided the opportunity to clarify some questions that may not have been easily intelligible, allowing them to be corrected. The cognitive interview also provided an opportunity to gauge and confirm the cognitive burden and time taken to complete. In addition to gauging burden and duration, the cognitive interview also provided the opportunity to test which scales would be used for the survey. A 10-point unipolar scale and a seven-point Likert scale were sampled. The participant indicated that some competencies identified by the scoping review could be viewed as unimportant by participants, which provided further rationale for the use of a bipolar Likert scale.

Following the administration of the survey, its reliability was assessed by calculating Cronbach's alpha (Tavakol & Dennick, 2011). Reliability refers to how consistently a survey can produce the same results. Cronbach's alpha measures the internal consistency of a survey, a form of reliability, as the degree to which all the items in a test measure the same phenomena through their inter-correlation with one another (Tavakol & Dennick, 2011). Cronbach's alpha was calculated for the entire rating portion of the survey, and each competency group.

#### **3.2.1.4: Analysis**

Survey data were downloaded from Qualtrics into an Excel file. Competency rankings were analyzed by finding the mean rank assigned to each competency, with more important

competencies having a lower mean score. Ratings were analyzed by finding the mean rating of each competency and ranking them in order of mean importance across the sample. Means closer to negative three indicated lesser importance and means closer to positive three indicated greater importance, with zero as a neutral midpoint between importance and unimportance. Using means to report or interpret the results of Likert scales is not a technique ordinarily utilized (Sullivan & Anthony R. Artino, 2013). However, the decision was made to use means as it allows for greater interpretability responses when compared to medians and modes. Additionally, recent studies have employed means as a method to analyze Likert-scale surveys investigating attitudes and perceptions in the healthcare field (Carrascosa et al., 2017; Shadowen et al., 2021). The frequencies and proportions of competencies ranked and rated as having the highest importance were assessed, as well as the skewness of the data using the Pearson 2 skewness coefficient (Doane & Seward, 2011). For Pearson's 2 skewness coefficient, positive results indicate the data is skewed right, negative indicates the data is skewed left, and a result of 0 indicates a normally distributed dataset (Doane & Seward, 2011). Pairwise deletion has been utilized when a participant has omitted a response to a specific competency. Mean rankings and ratings are reported with their respective competencies and competency groups.

### **3.2.2: Interview Consultation**

#### **3.2.2.1: Approach and Theoretical Orientation**

A qualitative descriptive approach was used for the qualitative portion of the consultation phase. Qualitative description was selected as its use enables a rich and meaningful understanding of a phenomenon, to use information learned from participants to influence interventions (Bradshaw et al., 2017; Sandelowski, 2000; Sullivan-Bolyai et al., 2005). Additionally, qualitative description was selected for its emphasis on clearly and transparently

describing the phenomena under investigation while staying as close to the relayed information as possible (Sandelowski, 2000, 2010). The use of qualitative description necessitates the use of certain ontological and epistemological assumptions. Firstly, qualitative description is based on ontological relativism, which assumes reality is subjective and that variations exist in how individuals perceive reality (Bradshaw et al., 2017; Denzin & Lincoln, 2005). Secondly, qualitative description is based on epistemological subjectivism, meaning that knowledge and beliefs possessed by individuals are influenced by the individuals themselves (Denzin & Lincoln, 2005; Levers, 2013).

### **3.2.2.2: Recruitment and Data Collection**

Participants for the qualitative consultation phase of this thesis were recruited through the quantitative survey, where participants were asked whether they would be willing to participate in a follow-up interview after survey completion. All participants who indicated their willingness to be contacted were contacted through email, using the recruitment email shown in **Appendix M**. Respondents who wished to participate in a follow-up interview were sent a meeting invitation on a platform of their choosing.

Semi-structured interviews were used for qualitative data collection. The decision to use semi-structured interviews was selected as they allow interviewers to probe participants to gain a deeper understanding of the concepts being discussed (Saks & Allsop, 2012), while also maintaining greater focus (Brinkmann, 2020). Interviews were conducted with guidance from Gill et al. (2008). An interview guide using open-ended questions was created using the results of the scoping review (Gill et al., 2008). Open-ended questions were selected as they encourage full and untruncated responses from participants (Friborg & Rosenvinge, 2011; Gill et al., 2008; Srivastava & Thomson, 2009). The interview guide was reviewed by colleagues with qualitative

experience. Interviews were to be conducted online with video conferencing services participants were comfortable with using, and were recorded in their totality (Gill et al., 2008). The interview guide used for this study is shown in **Appendix N**. At the beginning of the interview, verbal consent was acquired from participants using the script shown in **Appendix O**, and the consent material was recorded in the log shown in **Appendix P**. After the interview participants were asked whether they would like to select a pseudonym for themselves. The interview data were stored on a password-protected and encrypted USB key, bought and used solely for this purpose. Following the interview, participants were sent the letter of appreciation shown in **Appendix Q**.

### **3.2.2.3: Analysis**

Recorded interviews were transcribed verbatim using an online transcription tool. Transcripts were then anonymized to remove any identifying information from the transcript, and any identifying information was replaced with pseudonyms. Transcripts were then coded according to the results of the scoping review, identifying excerpts that aligned with the identified competencies. Codes were created by assessing whether a section of the interview transcript contained references to competencies that were identified in the scoping review or survey or to competencies that the participant indicated were important but had not been identified. If an excerpt mentioned a competency, it was cross-referenced with a master list of competencies. The alignment of excerpts was based on the excerpt's content and its reference to competencies. After identifying aligned excerpts, the author condensed the message, producing a distilled interpretation which was reflective of the quote. The quotes, interpretations, and competencies with which they aligned were reviewed by a confidant close to the researcher to ensure accuracy and that the researcher's interpretation of the quotes was unbiased. Quotes, their competency alignment, and the author's interpretation are shown in **Appendix R**.

#### **3.2.2.4: Rigour**

Several techniques were employed by the researcher to ensure the rigour of the qualitative analysis employed in this thesis. The first method used to ensure rigour, in the form of dependability, was a dense description of the methods (Krefting, 1991). To accomplish this, the methods used for this thesis were described thoroughly, to the point where another researcher could follow the steps taken and generate results (Krefting, 1991). Additionally, to further improve the dependability of the qualitative findings, peer-examination was utilized by the author (Krefting, 1991). Peer examination was used to ensure that the author's findings reflect the data being analyzed (Krefting, 1991). Lastly, to improve the confirmability of the findings, the author analyzed data reflexively and scrutinized their position carefully to ensure that imposed bias was minimized, accounted for, and averted where possible (Krefting, 1991).

#### **3.2.2.5: Reflexivity and Positionality**

An investigator's positionality can impact their research (Bourke & Bourke, 2014). In both qualitative (Malterud, 2001) and quantitative (Foote & Bartell, 2011) investigations. The position of the researcher can influence the area a researcher investigates, the methods they employ, and how they choose to report their findings (Malterud, 2001). My position has already impacted this research, from its very formation, as an intrinsic motivator which first guided me into gerontology, and eventually into investigating how best to make a more equitable and efficient healthcare system for older adults. These stem from my own experiences being close to older adults with growing healthcare needs. Having not received care management or been proximate to anyone who has received care management, I needed to acknowledge this at each stage of the research process: my only experience with care management comes from a second-hand basis, and as such it was necessary to approach the topic with respect and deference to

those who do, and be wary of any bias that I could potentially introduce to the studies findings. This was accomplished by using reflexivity, which allowed me to account for potential biases in my processes and interpretations (Bourke & Bourke, 2014; Holmes, 2020). As a younger, western, male, novice researcher, conducting this research reflexively by acknowledging my positionality and scrutinizing how it might impact my findings aided in ensuring that the results of this thesis have as little bias as possible.

### **3.3: Funding and Remuneration**

Funds were made available by the SE Research Centre to remunerate those who participated in this thesis. Respondents were offered a \$15 gift card to Amazon.ca for participating in the survey. The figure of \$15 was decided upon, with consideration for a baseline of approximately \$50 per hour, which was suggested as the ideal amount of remuneration for those who work in the healthcare industry, and in light of the approximate 20-30 minutes required to complete the survey. This figure was decided upon in consultation with an experienced researcher with knowledge of recruiting members of the healthcare workforce as an amount which would adequately compensate participants for the time taken to complete the survey, without unduly influencing them into participating where they otherwise would not have. Participants were asked whether they would like to receive the remuneration and were asked to provide an email with which the gift card could be sent. A figure of \$40 was decided upon for interview participants, once more based on the approximation of \$50 per hour and the anticipated 45-minute duration of interviews.

### 3.4: Ethics

Careful consideration has been given to the ethics of this study. Paramount to this was obtaining informed consent from participants. The consent process ensured that participants were informed of the nature of the study before participating, and were given opportunities to seek clarification on their part in the study. A letter of information was given to every participant who considered participating in the study, as well as in the survey itself, to ensure they had ample opportunities to read it. Consent was gathered at the beginning of the survey, and participants were only allowed to proceed if they had consented. Skip patterns were integrated into the survey such that, should they indicate they were not willing to consent to participate, they would immediately be brought to the end of the survey. The researcher considered the ethical implications of remuneration at great length.

This study obtained ethics clearance through a review by the University of Waterloo Office of Research Ethics, ORE #45512. **Appendix S** shows documentation of ethics clearance.

## **4.0: Results**

### **4.1: Scoping Review Results**

#### **4.1.1: Bibliographic Information**

Before the full screening phase of the review, a co-review session was conducted to ensure that the inclusion and exclusion criteria of the study were applied correctly during single-reviewer screening. An initial sample of 25 randomly selected articles was independently reviewed at the title and abstract level with rationale for the inclusion and exclusion of each article recorded by both reviewers. The first co-review round resulted in a Cohen's  $k$  of 0.32, which was below the target agreement of  $k=0.75$ . A debrief session was held to identify discrepancies and incongruencies between the content expert and the researcher who would be responsible for the full single-reviewer phase. The debrief session identified a misunderstanding of the settings and personnel being screened for. A second round of co-review was initiated using the insights gained from the debrief session, with those insights being applied to solidify how the inclusion and exclusion criteria were applied. A second, new, sample of 25 randomly selected articles was screened by both reviewers, resulting in a Cohen's  $k=0.82$ , meeting and exceeding the predefined threshold for Cohen's  $k$ .

The academic search strategy uncovered 2901 journal articles: 1702 articles from Pubmed, 396 results from CINAHL, and 803 results from Scopus. A total of 629 articles were removed from screening due to being duplicates: 574 duplicates were removed automatically, and 55 were removed manually as screening took place. The remaining 2272 articles were screened at the title and abstract level for inclusion, and, following this, 1667 studies were deemed ineligible for inclusion. This resulted in 604 articles proceeding to full-text screening. Of these 604 articles, 539 did not meet the inclusion criteria: 352 articles did not discuss older adults, 88 did not discuss care or case manager competencies, 31 discussed care or case

managers, but did not discuss their competencies, 38 discussed competencies but did not discuss care or case managers, 15 were poster abstracts, 10 were periodicals and not journal articles, three were not provided in English, one was a book chapter, and one was a protocol for a study.

**Appendix T** shows the PRISMA flow diagram of the screening process.

The screening process resulted in 65 articles which met the study's inclusion criteria. The articles originated from 12 countries: USA (n=27), The United Kingdom (n=14), Canada (n=6), Australia (n=4), Germany (n=3), France (n=2), Italy (n=2), Japan (n=2), The Netherlands (n=2), Norway (n=1), Singapore (n=1), and Hong Kong (n=1). The earliest article was published in 1990, and the most recent was published in 2022. All included articles were published in English. **Appendix E** shows the data extraction table created for the screening process.

The grey literature search was divided into two distinct methods of item retrieval: custom Google searches and targeted website searches. Custom Google searches identified 250 items, of which 182 did not meet inclusion at title and abstract screening. Of the remaining 68 articles, 59 did not meet inclusion criteria: 51 did not discuss older adults, four did not discuss competencies, three were duplicates from previous Google searches, and one did not discuss care managers. Data were extracted from the remaining nine articles were included in the review, and their data extracted. Targeted website searches identified 6272 items, of which 6224 did not meet inclusion at title and abstract screening. Of the remaining 48 articles, 42 did not meet inclusion criteria at the full-text level: 15 did not discuss care management competencies, 13 did not discuss care management, nine did not discuss older adults, three did not provide full-text, and two were duplicates. The remaining six articles were included in the review. **Appendix U** shows a flow diagram of the screening process. The 15 grey literature articles which ultimately met the inclusion criteria originated from three countries: Nine articles originated from the USA, five

originated from Canada, and one was from The United Kingdom. **Appendix V** shows the data extraction table created for the included grey literature articles.

#### 4.1.2: Identified Competencies

A total of 125 individual competencies were extracted from the included articles. These competencies were subdivided into 13 competency groups: patient care management, healthcare systems and service provision, patient communication, personality traits, patient disease management, patient education, non-medical patient support, caregiver communication, caregiver support, communication within a practice, patient care delivery, operating within a practice, and medical ability. **Table 1** shows the list of individual competencies identified through the scoping review, arranged into competency groups and audience facets.

| <b>Patient-facing Competencies</b>         |                                          |                                         |
|--------------------------------------------|------------------------------------------|-----------------------------------------|
| <b>Patient Disease Management</b>          |                                          |                                         |
| Disease Knowledge                          | Disease management promotion             | Self-management promotion               |
| Activities of daily living (ADL) promotion | Clinical care                            | Medication prescriber                   |
| Addressing Deficits                        | Exploring barriers                       | Promoting function                      |
| <b>Non-Medical Patient Support</b>         |                                          |                                         |
| Person-centred approach                    | Advocacy                                 | General support                         |
| Emotional support                          | Psychosocial support                     | Independence support                    |
| Empowering                                 | Emotionally receptive                    | Problem-solving                         |
| Isolation breaking                         | Errands                                  | Observation, ability to detect problems |
| Transportation                             | Mobility and ability to make home visits | Able to act as a safety net             |
| <b>Patient Communication</b>               |                                          |                                         |
| Communication skills                       | Relationship and rapport-building        | Patient contact                         |
| Translation                                | Consulting                               | Negotiating                             |
| Being a confidant                          | Confidential                             | Counselling                             |

|                                                 |                                   |                                          |
|-------------------------------------------------|-----------------------------------|------------------------------------------|
| Buffering, conciliating, mediating              | Providing information             | Liaising                                 |
| <b>Healthcare Systems and Service Provision</b> |                                   |                                          |
| System and service knowledge                    | Health system navigation          | Arranging services                       |
| Gatekeeping services                            | Service broker                    | Collaborating                            |
| Service mobilizing                              |                                   |                                          |
| <b>Patient Education</b>                        |                                   |                                          |
| Educating                                       | Coaching                          | Advising                                 |
| <b>Patient Care Management</b>                  |                                   |                                          |
| Coordination                                    | Care planning                     | Patient identification and recruitment   |
| Patient screening                               | Care integration                  | Referral                                 |
| Care continuity                                 | Patient engagement                | Patient monitoring                       |
| Discharge planning                              | Patient follow-up                 |                                          |
| <b>Personality Traits</b>                       |                                   |                                          |
| Culturally sensitive                            | Attentive                         | Compassionate or empathic                |
| Open                                            | Willing to go above and beyond    | Proactive                                |
| Fluid and Flexible                              | Honest                            | Loyal                                    |
| Responsive                                      | Trust builder                     | Holistic, or mindful of the whole person |
| Objective of the patient's condition            | Cheerleader                       | Accessible or available                  |
| Visible                                         | Solution-oriented                 |                                          |
| <b>Caregiver-facing Competencies</b>            |                                   |                                          |
| <b>Caregiver Communication</b>                  |                                   |                                          |
| Communication skills                            | Relationship and rapport-building | Buffering and mediating                  |
| Counselling                                     | Information sharing               | Family engagement                        |
| <b>Caregiver Support</b>                        |                                   |                                          |
| Emotional support                               | Empathy                           | Transportation                           |
| Empowerment                                     | Support                           |                                          |
| <b>Practice-facing Competencies</b>             |                                   |                                          |
| <b>Medical Ability</b>                          |                                   |                                          |
| Assessment                                      | Diagnosing                        | Triaging                                 |
| Medical knowledge                               | Pharmacology knowledge            | Clinical expertise                       |
| Referrals                                       | Medical record interpretation     |                                          |

|                                        |                                    |                                   |
|----------------------------------------|------------------------------------|-----------------------------------|
| <b>Operating Within a Practice</b>     |                                    |                                   |
| Collaboration                          | Flexibility                        | Resource Management               |
| Time management                        | Ability to follow a leader         | Ability to lead                   |
| Knowledge of practice capabilities     | Experience with older adults       | Team facilitating and development |
| System building                        | Information technology (IT) skills | Resource mobilization             |
| <b>Communication Within a Practice</b> |                                    |                                   |
| Communication skills                   | Relationship building              | Liaising                          |
| Information sharing                    | Dialogue crafting                  | Networking                        |
| Mediating                              | Joint decision making              | Confidentiality                   |
| Being a confidant                      |                                    |                                   |
| <b>Patient Care Delivery</b>           |                                    |                                   |
| Care delivery                          | Evaluating care                    | Discharge planning                |
| Reviewing care packages                | Medication review                  | Evidence-based approaches         |
| Patient population knowledge           | Arranging services                 | Continuing education              |

**Table 1:** Individual competencies, arranged by group and facet.

#### **4.1.2.1 Patient-facing Competencies**

Articles featured competencies which directly impact and align with patients while they receive care and with patient care itself; these included: patient disease management, non-medical patient support, communication, systems and service knowledge, patient education, direct patient care management, and positive personality traits.

##### **4.1.2.1.1 Patient Disease Management**

###### **Disease Knowledge**

Disease knowledge was the most sought-after quality in a care manager in a survey of 175 people with type 2 diabetes (Dejesus et al., 2012). A report by the Veterans Advisory Council (2006) proposed that high-needs care managers should have expertise in disabilities associated with disease processes (Gerontological Advisory Council, 2006).

###### **Disease Management Promotion**

Disease management and promotion were considered a key aspect of the care manager role (Jones, 2015). Older adults who lived in the community described the care provided by care managers as being influential in their being able to manage their conditions (Manthorpe et al., 2012). When patients had multiple or co-existing medical conditions that would interfere with their recovery, care managers were able to aid in managing those conditions to improve overall health outcomes (Jennings-Sanders & Anderson, 2003). This broad support for all patients' medical conditions was appreciated by patients receiving care management (Jennings-Sanders & Anderson, 2003).

### **Self-management Promotion**

Care management aims to maintain the autonomy of older adults in the community (Black & Osman, 2005), and was suggested as a key component of care manager practice (Jones, 2015; Ross et al., 2011). Some care managers saw their role as supporting independent decision-making, and self-management of care (Wilfling et al., 2021), or increasing older adults' feelings of responsibility for their medical situation and fostering a sense of power to take control of their lives (Uittenbroek et al., 2018). Self-management support through empowerment and confidence development is one of the key goals for care managers who work with chronically ill patients (Ciccone et al., 2010). The relationship between care managers and their patients plays an important role in implementing self-management (Randall et al., 2014).

### **Activities of Daily Living (ADL) Promotion**

Nurse case managers being able to support ADLs of people with breast cancer was described positively by patients (Jennings-Sanders & Anderson, 2003).

### **Clinical Care**

In a pilot of the care management model, community matron care managers were responsible for providing clinical care to patients (Bentley, 2014). Community matrons, when doing care management were expected to perform physical examinations, chest examinations, order tests, check medications, prescribe medications, organize prescriptions, refer patients to specialized clinics, monitor blood pressure, and vaccinations, weigh patients, obtain specimens, wound care, and assessments (Sargent et al., 2007). One pilot of a care management program indicated that care managers were not responsible for direct clinical care provision, rather, they were responsible for coordinating their care (Uittenbroek et al., 2018). Another pilot emphasized the requirement for care managers in the community to deliver care, as well as monitor and instigate care (Hudson & Moore, 2006). Some care managers felt that providing direct care to patients was outside of their professional jurisdiction (You et al., 2016).

### **Medication Prescriber**

Care managers in a UK pilot of a model which sought to reduce hospital admissions were responsible for prescribing and reviewing medications for their older adult patients (Bentley, 2014). In community settings, care managers do not prescribe medications, and where care managers have a nurse practitioner background, physician oversight is not required (Luzinski et al., 2008).

### **Addressing Deficits**

In instances where treatment is impacted by deficits experienced by older patients, such as cognitive impairment and visual impairment, one article proposed that care managers should be prepared to address those deficits in such a way that they no longer impede client care (Logan, 2019).

### **Exploring Barriers**

Exploring and understanding barriers encountered by patients who receive care management in home or community settings was a facet of programs (Alexopoulos et al., 2016; Hayes & McCarthy, 2016).

### **Promoting Function**

An article by Black & Osman (2005) stated that care managers must have the goal of maintaining people in as high-functioning a state as possible while maintaining safety as much as possible.

#### **4.1.2.1.2: Non-medical Patient Support**

##### **Person-centred Approach**

Several articles synthesized in a review by Baird & Fraser (2018) described the need for care managers to be person-centered, as opposed to disease-centered. Patient-centred approaches were also identified as necessary in several articles (Aging Life Care Association, 2017; Canadian Home Care Association, 2005; Carrier & Newbury, 2016; Dodd et al., 2011; Griffin & Coburn, 2014; Guttman, 1999; Johansson & Harkey, 2014; Jones, 2015; Matsuda & Yamamoto, 2001; Minkman et al., 2009; Stowell Associates, 2022a; Uittenbroek et al., 2018; Waugh et al., 2013). Care managers, when shifting from other professional roles, describe their focus as changing from one which was task-oriented to one in which they were patient-oriented, allowing care managers to adopt the perspectives and preferences of the older adults whom they care for (Uittenbroek et al., 2018). In one study which investigated patient meetings with care managers, using a person-centred approach allowed care managers to plan care which was pertinent to the desires of their older adult patients: setting an overall goal that the older adult desired and using that to set subgoals for treatment outcomes (Kvæl & Olsen, 2022). When person-centred client-

directed care policies were initiated, care managers were under the impression that their model of healthcare delivery was already person-centred compared to other professionals in their approaches (You et al., 2015). Older community-dwelling patients felt that care managers addressed their priorities and took the time to understand their patients (Manthorpe et al., 2012).

### **Advocacy**

Advocacy for patients was identified as a key aspect of a care manager role in several articles (Aging Life Care Association, 2017; Canadian Home Care Association, 2005; Dant & Gearing, 1990; Hudson & Moore, 2006; Kelley & MacLean, 1997; Lawless et al., 2020; Luu & Liang, 2005; Mick & Ackerman, 2002; Minkman et al., 2009; Moroch, 2020; Ortiz & Horne, 2013; Public Health Agency of Canada, 2019; Ross et al., 2011; Sargent et al., 2007; You et al., 2016), though as separate from the role of a nurse (Manthorpe, 2012). Advocacy was a key component of programs which used care management in home and community settings (Alexopoulos et al., 2016). In primary care physician practices, Anker-Unnever & Netting (1995) assert that care managers should serve as professional advocates for their patients, ensuring prompt and appropriate care and service delivery. In home-based settings, care managers described being an advocate or representative of their client as being an essential component (Balard et al., 2016). When faced with patients who are not connected with a wider support network, such as familial support, care managers are especially responsible for advocating for their patients (Johansson & Harkey, 2014). Care managers, in addition to advocating for the clients, can promote self-advocacy by educating clients and connecting them with both in-office and community-based supports (Luzinski et al., 2008).

### **General Support**

Supporting patients was a key aspect of the care manager's role (Nothelle et al., 2021; Wilfling et al., 2021; You et al., 2016). Care managers, in a trial for community care management, provided support for individual patient needs (Wilfling et al., 2021). These supports included applying for funds, finding nursing homes, finding age-appropriate apartments, and encouraging recreation (Wilfling et al., 2021), as well as supporting patients in simplified medication regimens (Elwyn et al., 2008). Care managers described their role as one who supports patients with issues other members of the care team are not addressing (Nothelle et al., 2021).

### **Emotional Support**

Outside of direct care managing roles, care managers often must give considerable emotional support to older patients (Challis et al., 1991; Keystone Health, n.d.). Older adults valued the emotional support provided by professionals who did care management and found that that support aided in fostering their confidence (Brown et al., 2008). Patients described being able to get things off of their chest, and that care managers were able to provide encouragement and uplift them (Jennings-Sanders & Anderson, 2003).

### **Psychosocial Support**

The psychosocial support provided by care managers was emphasized as important to community-dwelling older adults and their informal caregivers (Manthorpe et al., 2012; Ross et al., 2011). Care managers, as part of a care management trial, encouraged patients to become involved in recreational activities for aged people in which they can meet other people (Wilfling et al., 2021). Patients and their caregivers described that the psychosocial support given to them by community matrons doing care management was equally as important as the clinical care which they also received, and that care managing community matrons made them feel cheerful (Sargent et al., 2007).

### **Independence Support**

Care managers must allow patients to maintain autonomy (Black & Osman, 2005), and work to provide services which increase independent functioning (Canadian Home Care Association, 2005; Ciccone et al., 2010; Evashwick & Cohn, 1999; Kelley & MacLean, 1997; Pilcher, 2021; You et al., 2016). In instances where patients were given greater authority over their financials, some care managers saw it as an opportunity to foster financial knowledge and independence for clients who lacked those skills (You et al., 2015). In similar instances, care managers saw their role as one of facilitating clients' independent decision-making and self-management (Wilfling et al., 2021; You et al., 2016).

### **Empowering**

Care managers, under a client-directed-care model, felt the need to focus on empowering clients to make their own decisions and perform daily activities independently (You et al., 2015). When care can no longer be provided in the home, it is the care manager's responsibility to empower decision-making (Johansson & Harkey, 2014). Some authors suggest that interventions done by care managers should increase patient empowerment by supporting their ability to effectively self-manage their health (Ciccone et al., 2010; Hayes & McCarthy, 2016; You et al., 2016).

Professionals within the NHS believed that empowering patients and their caregivers to identify and solve problems independently was a desirable skill for care managers working with people with dementia (Waugh et al., 2013).

### **Emotionally Receptive**

Care managers being emotionally receptive to their patients can be seen as a necessary skill, as being unresponsive can lead to lapses in communication where issues could otherwise be

addressed (Kvæl & Olsen, 2022). Along with rapport building, being emotionally receptive aids care managers in maintaining a presence in the lives of their patients (Luzinski et al., 2008).

### **Problem-Solving**

Problem-solving was discussed as a facilitating competency in several articles (Alexopoulos et al., 2016; Baird & Fraser, 2018; Balard et al., 2016; White et al., 1994; You et al., 2016). A randomized trial comparing community conventional care management to care management with the addition of problem-solving therapy found that both approaches improved patients' ability to solve problems (Alexopoulos et al., 2016). In this trial, older adult patients with depression were given problem-solving training to solve specific problems independently, and care managers were situated to intervene in addressing broader social problems beyond the patient's ability (Alexopoulos et al., 2016). Shared problem-solving was identified as a key function of care managers in a few articles (Baird & Fraser, 2018). Informal caregivers described care managers as problem solvers who could understand issues and find appropriate solutions (Balard et al., 2016). White et al. (1994) assert that care managers should act as liaisons between physicians and patients to identify and ameliorate problems which arise that may otherwise go unnoticed.

### **Isolation Breaking**

Older adults, though at times unable to describe the technical roles which care managers fulfill, often described them as someone who helped to break isolation and that, over time, care managers were thought of more so as friends than as healthcare professionals (Balard et al., 2016).

### **Errands**

Older adult women with breast cancer who were receiving care management described their care manager's ability to do errands for them while they were recovering as beneficial (Jennings-Sanders & Anderson, 2003).

### **Observation, ability to detect problems**

Observation of older adult patients is essential for care managers to detect existing problems and anticipate ones which may be upcoming (Uittenbroek et al., 2018). Care managers have a legal responsibility to report suspected maltreatment of older adults (Black & Osman, 2005). In the case of elder abuse, care managers are well-situated to detect and prevent further abuse, due to their role in monitoring and assessing patients (Luu & Liang, 2005). Due to their role as a central figure in an older adult's care team, they can do so from a plurality of settings (Luu & Liang, 2005).

### **Transportation**

Care managers may need to accompany and transport patients who may not be able to follow through on their own to services (Bane, 1997). Some physicians felt that care managers should be able to provide transportation for older patients to and from services in instances where services could not be provided in the home (Anker-Unnever & Netting, 1995).

### **Mobility and Ability to Make Home Visits**

A care manager's ability to make home visits was seen as beneficial by office-based primary care general practitioners, as they can identify issues which can be addressed before when they become medical necessities (Herzog et al., 2015; Keystone Health, n.d.).

### **Safety Net**

One of the perceived benefits of care managers, from the perspective of both patients and their caregivers, was a care manager's ability to act as a safety net (Iliffe et al., 2014).

#### **4.1.2.1.3: Patient Communication**

##### **Communication**

A care manager's ability to communicate was emphasized by several studies across different settings (Aging Life Care Association, 2017; Bane, 1997; Canadian Home Care Association, 2005; Hudson & Moore, 2006; Johansson & Harkey, 2014; O'Malley et al., 2017; Waugh et al., 2013; You et al., 2016). Bane (1997) suggests that care managers must facilitate communication with the patients whom they care for. Poor communication can produce numerous problems for community clients including increased stress, lack of choice, and a lack of information with which to make decisions (Allen et al., 2013). In client-directed-care systems, care managers were required to shift their outlook from that of working for patients to working with patients, requiring them to frequently communicate with clients and set goals (You et al., 2015). Care managers play a pivotal role in bridging communication gaps between older adults and their care teams (Lawless et al., 2020; Luzinski et al., 2008). Asking the right questions and understanding implications within responses was a key aspect of communication within the care manager role (Uittenbroek et al., 2018).

##### **Relationship and Rapport Building**

Building and maintaining relationships with patients was described as an important aspect of care manager practice (Anker-Unnever & Netting, 1995; Guttman, 1999; Iliffe et al., 2014; Jones, 2015; Kvæl & Olsen, 2022; Lim et al., 2018; Luzinski et al., 2008; Minkman et al., 2009; Uittenbroek et al., 2018; White et al., 1994). Care managers can use patient screening as an opportunity to proactively establish relationships with patients (Anker-Unnever & Netting, 1995). One study found that when initiating meetings with patients, a care manager who made

non-medical conversations with clients was able to achieve trust and respect (Kvæl & Olsen, 2022). This study also found that taking a moment for small talk before initiating meetings aided in building rapport (Kvæl & Olsen, 2022). Establishing warm and confident relationships with clients was a consistent aspect of eight programmes set up to provide care management to people with dementia (Minkman et al., 2009). Relationship building with patients is a key activity for care managers and is needed to meet their needs (Jones, 2015). Care managers described having to invest in relationships, and that it required time, attentiveness, and promise-keeping (Uittenbroek et al., 2018). Older adults appreciated the effort that care managers went through to build relationships with them (Lim et al., 2018; Randall et al., 2014), and valued the relationships that had been built with care managing professionals, regarding them as reliable friends when they were in need (Brown et al., 2008). Building relationships with older adults required creating a sociable atmosphere which enhanced feelings of connectedness (Uittenbroek et al., 2018).

### **Patient Contact**

Guttman (1999) suggests that care managers must maintain contact with patients regularly, as required by a patient's needs, to assess new health issues and monitor ones which already exist. The regular contact patients' experiences with care managers led to a feeling of safety, due to the fact they had someone listening, and that someone would always be available if they had any questions or concerns (Wilfling et al., 2021).

### **Translation**

Care managers were responsible for translating information into intelligible formats for each stakeholder involved in caring (Balard et al., 2016; Ohta et al., 2019). Patients endorsed that the ability to explain concepts to patients effectively is a quality they look for in care managers (Dejesus et al., 2012).

## **Consulting**

In the case of a short-term patient case, care managers may be required to consult with patients and their family caregivers instead of the typical suite of services they would ordinarily render (Wideman, 2012).

## **Negotiating**

The ability to negotiate was described as a required skill in an overview of care manager competencies in the UK (Ross et al., 2011), and one program established in the Netherlands (Minkman et al., 2009). Negotiating is an essential part of care planning on behalf of a patient and is performed frequently and across several activities expected from care managers (You et al., 2016).

## **Being a Confidant**

Care managers described their role with older adults in home settings as being one of a confidant, to such a degree that it takes precedence over interventional roles fulfilled by care managers such as evaluating, planning, and coordinating (Balard et al., 2016). Within this, care managers described being sensitive to the needs of an individual patient, and the frequency with which they spend time with older adults creates a form of intimacy with patients (Balard et al., 2016).

## **Confidential**

An awareness of confidentiality was proposed as an essential skill for care managers who work with older adults who have dementia (Waugh et al., 2013). In one study, care managers perceived that older adults viewed them as confidants, and that older adults shared personal information with them (Uittenbroek et al., 2018).

## **Counselling**

Dant & Gearing (1990) describe counselling as one of the three primary functions of care management, alongside advocacy and coordination, and that it should be done at various stages of the care management process with patients. Dant & Gearing (1990) also note that care managers received small amounts of training to aid with the demands related to counselling, as well as little support from clinical psychologists. Care managers initially intended to coordinate counselling services, however, the responsibility was eventually incorporated into their role due to their contact with patients and difficulties in arranging counselling services (Dant & Gearing, 1990).

### **Buffering, conciliating, or mediating**

When tensions arose between patients and their informal caregivers or physicians, care managers played the role of a buffer or conciliator (Balard et al., 2016).

### **Providing Information**

Within their role, care managers described themselves as being a central distributor of information and that, as a central link between older adult patients and the healthcare system, they operate as a dual interface for information sharing (Balard et al., 2016). Being an information relay was seen as a key component of care management (Gerontological Advisory Council, 2006; Jones, 2015). Concerning advanced care planning, care managers often saw themselves as information providers, in which they are responsible for guiding patients to community resources and personnel (Baughman et al., 2012). This role was preferred, in the case of advanced care planning, to that of an educator or the care provider responsible for documenting advanced care plans (Baughman et al., 2012).

### **Liaising**

Nurse care managers working with community-dwelling older adults felt liaising was not a part of their role as a nurse (Manthorpe et al., 2012), but an essential component of their work as a care manager (Elwyn et al., 2008; Manthorpe et al., 2012; Waugh et al., 2013; You et al., 2016). Community-based care management professionals are well suited to work within primary care offices, as they are able to quickly gain rapport and evaluate the complexity of patient's needs (White et al., 1994).

#### **4.1.2.1.4: Healthcare Systems and Service Provision**

##### **System and Service knowledge**

Several authors contend that, to improve integration, care providers and care managers need to be educated about available resources in the community for frail and medically complex older patients (Abrahams et al., 1992; Aging Life Care Association, 2017; Minkman et al., 2009; Waugh et al., 2013). Patients in a survey indicated that they turn to care managers for assistance in finding resources, though only 34% of a sample of 65 people largely above 85 (Ortiz & Horne, 2013). Advanced practice nurses, particularly, possess knowledge of the healthcare delivery system which would be advantageous in the role of a care manager (Mick & Ackerman, 2002). Care managers knowing local healthcare organizations and available community services was seen as beneficial (Uittenbroek et al., 2018). Hashi (2016) found that in instances where older adult patients may have economic instability, care managers should be aware of and be able to access lower-cost alternatives to what is needed. For instance, in situations where care managers are implementing the use of social media to curb loneliness in older adults, they should be cognizant of resources that provide computer technology through charities or second-hand purchases (Hashi, 2016).

## **Health System Navigation**

Aiding patients and their caregivers navigate the healthcare system was a widely discussed competency (Dolen, 1995; Evashwick & Cohn, 1999; Jennings-Sanders & Anderson, 2003; Nothelle et al., 2021; O'Malley et al., 2017; Pilcher, 2021; Senior Persons Living Together, n.d.; You et al., 2016). Community-based care manager's primary role is to ensure that a patient and their support group understand their care needs, and to match services to their needs within the community (Evashwick & Cohn, 1999). In instances where services are overlapping or confusing, it is the care manager's role to aid families in ensuring that appropriate services are selected (Dolen, 1995). The aid provided by care managers to people with breast cancer in navigating the healthcare system helped to avoid further stress (Jennings-Sanders & Anderson, 2003). Some care managers describe their role as being to connect patients with primary care clinicians whom they trust, and that asking patients about the quality of their relationship with their primary care provider was a frequent requirement of their role (Nothelle et al., 2021). Ensuring that patients have access to primary care providers was seen by care managers as a method to reduce hospitalizations (Nothelle et al., 2021).

## **Arranging Services**

Some studies identified that care managers must be able to match services to meet clients' needs (Baird & Fraser, 2018; Gerontological Advisory Council, 2006; Kelley & MacLean, 1997; Luzinski et al., 2008; Senior Persons Living Together, n.d.; White et al., 1994; Wideman, 2012), but also that patients felt care managers were well equipped to do so (Brown et al., 2008). Patients in a geriatric care management program described care managers as being able to assist with arranging institutional services, however, they less often sought that same assistance for accessing community support (Ortiz & Horne, 2013). Arranging services was seen as part of a

dual role for nurse case managers, in which providing direct care and service arrangements were their main objectives (Manthorpe et al., 2012).

### **Gatekeeping Services**

Some literature indicated that care managers do not see themselves as gatekeeping services, but rather as a part of a system that can link discrete elements within that system (Dolen, 1995). In Australia's community aged care system, care managers did not feel that gatekeeping was a requirement for their role, in that they did not obstruct clients from receiving the care which they required (You et al., 2016).

### **Service Broker**

Brokering appropriate services to clients is a key element of the care management model (Gallagher & Truglio-Londrigan, 2004). Service brokering was seen, though, as a method of resource management, especially in rural community settings (Kelley & MacLean, 1997). Some care managers viewed their responsibility of brokering with ambivalence and viewed the term itself as a poor representation of their role as service arrangers due to its connotation of imposing choices on clients (You et al., 2016).

### **Collaborating**

Care managers being able to work cooperatively with patients and their caregivers was noted as being facilitators in their role (Anker-Unnever & Netting, 1995).

### **Service Mobilizing**

In the absence of other professionals who were more able to mobilize services, such as transportation, housing, and food resources, care managers assumed the responsibility of mobilizing necessary services (Nothelle et al., 2021).

#### **4.1.2.1.5: Patient Education**

##### **Educating**

Educating patients about their disease was a key component of care management approaches (Alexopoulos et al., 2016; Bentley, 2014; Canadian Home Care Association, 2005; Casado et al., 2008; Elwyn et al., 2008; Guttman, 1999; Jennings-Sanders & Anderson, 2003; Jones, 2015; Sargent et al., 2007; You et al., 2016), and was identified as a key component of care managers' practice in several articles (Luu & Liang, 2005). The care manager's role as an educator would involve educating clients to gain health literacy and mental independence, and, under a client-directed-care system where clients have authority over their budgets, educating clients about individual budgets, financial responsibility, rules of budget management, and co-payment mechanisms (You et al., 2015), as well as how to appropriately use medications (Brown et al., 2008). A roundtable aimed at better understanding the case manager role found that education provided by care managers should be done to enhance health promotion, illness prevention, and risk mitigation, while emphasizing health-promoting behaviours (Canadian Home Care Association, 2005). In one study, though, care managers did not enjoy or feel qualified to assume the role of educator with regards to patient advanced care planning, though they did accept their role as educating patients on their rights to make their own medical decisions in end-of-life care (Baughman et al., 2012). Providing education was essential to patients with breast cancer during the pretreatment, treatment, and post-treatment phases of the disease, and made a positive difference in how they managed their disease (Jennings-Sanders & Anderson, 2003). Education provided to patients by care managers can include proper medication use and dosage (Logan, 2019), age-related chronic conditions, care management itself, and resources (You et al., 2016), and health promotion, disease education, and available services (Sargent et al., 2007).

## **Coaching**

Care managers, as part of their role in being advocates for older adults, have articulated that they are coaches for different persons, or a helper and companions (Balard et al., 2016). Coaching by a care manager may be done to aid older adult patients in achieving their goals (Luzinski et al., 2008), as well as managing and monitoring their disease (Hudson & Moore, 2006). Care managers interpreted their role as a coach to mean someone who provides encouragement and support to their patients while helping them maintain independence and responsibility for their care (Baughman et al., 2012).

## **Advising**

In a survey of 65 care recipients, the sample of which had a majority of respondents over the age of 85, 54% indicated that a care manager's role in some way includes that of an advisor (Ortiz & Horne, 2013). Encompassed within the advisor competency was a care manager's ability to share information with patients, explain how healthcare systems work, address client's questions, and offer advice to clients (You et al., 2016). One article suggested that the role of a care manager, for older adults, is to advise them as to what resources are available in the community (Dolen, 1995).

### **4.1.2.1.6: Patient Care Management**

#### **Coordination**

Coordinating patient services were as key component of approaches utilizing care management and care managers (Alexopoulos et al., 2016; Baird & Fraser, 2018; Bane, 1997; Bayard et al., 1997; Bentley, 2014; Canadian Home Care Association, 2005; Challis et al., 1991; Ciccone et al., 2010; Dant & Gearing, 1990; Dodd et al., 2011; Drennan & Goodman, 2004; Elwyn et al.,

2008; Gallagher & Truglio-Londrigan, 2004; Griffin & Coburn, 2014; Guttman, 1999; Hayes & McCarthy, 2016; Hudson & Moore, 2006; Jones, 2015; Kelley & MacLean, 1997; Keystone Health, n.d.; Luu & Liang, 2005; Luzinski et al., 2008; O'Malley et al., 2017; Public Health Agency of Canada, 2019; Randall et al., 2014; Ross et al., 2011; Sargent et al., 2007; Shapiro, 2002; Uittenbroek et al., 2018; Vasquez, 2008; Vedel et al., 2009; White et al., 1994; Wideman, 2012; You et al., 2016). Abrahams et al. (1992) posit that care managers must be able to coordinate between multiple settings. Close coordination and information interchange between case managers and primary physicians allowed for the successful maintenance of the home-based status of an older adult (Abrahams et al., 1992). As a central point between patients and providers, care managers' ability to sort and discriminate among information, was reflected in their role as coordinators (Balard et al., 2016). Patients appreciated the coordination they experienced in their care when receiving care management, comparing it positively to the poor or absent coordination they had received in prior models (Lim et al., 2018). The coordination done by care managers can help to overcome disparities in access to those who live in rural areas (Bane, 1997).

### **Care Planning**

Care and service planning were key components of care management approaches (Alexopoulos et al., 2016; Canadian Home Care Association, 2005; Dant & Gearing, 1990; Drennan & Goodman, 2004; Guttman, 1999; Hashi, 2016; Keystone Health, n.d.; Luu & Liang, 2005; Luzinski et al., 2008; MacKenzie et al., 1998; Matsuda & Yamamoto, 2001; Minkman et al., 2009; O'Malley et al., 2017; Public Health Agency of Canada, 2019; Ross et al., 2011; Vasquez, 2008; Vedel et al., 2009; Waugh et al., 2013; Wideman, 2012), and is a competency which care managers can possess to facilitate management in integrated delivery (Baird & Fraser, 2018).

Care managers collaboratively creating care plans with their patients was seen as beneficial (Anker-Unnever & Netting, 1995; O'Malley et al., 2017), and it was recommended that care managers strive to create a care plan which is not necessarily the least expensive or intensive, but one which works best for the patient (Dolen, 1995). It was suggested that care plans be based on a comprehensive assessment performed by care managers, determining a patient's clinical, psychosocial, and environmental needs, and bringing together both clinical and community resources to support an individual (Johansson & Harkey, 2014). In a Japanese long-term care and integrated care delivery model, care managers are given the responsibility of creating a care plan to meet the needs of their patients, according to the results of a needs assessment and the wishes of their clients (Matsuda & Yamamoto, 2001). Peckham et al. (2014) found that care managers consider care plans to encompass the needs of both patients and their informal caregivers, and that informal caregivers should be considered when care planning. Individualized care plans are considered living documents, which should be revisited and revised as a patient's needs change or become more complex (Public Health Agency of Canada, 2019).

### **Patient Identification and Recruitment**

Patient identification was found to have widespread agreement as a facilitator to case management (Challis et al., 1991; Drennan & Goodman, 2004; Guttman, 1999; Ross et al., 2011; Waugh et al., 2013; White et al., 1994), and was considered a key factor in a UK pilot of the model (Bentley, 2014). In one study, frail older adult patients were selected on the basis that they were at risk for health deterioration, and not necessarily that they were in crisis (Guttman, 1999).

### **Patient Screening**

Several authors found that care managers, when care is integrated, should provide early screening to target populations within a practice (Anker-Unnever & Netting, 1995; Canadian

Home Care Association, 2005; Casado et al., 2008; Mick & Ackerman, 2002), and ensure that clients meet program eligibility (Challis et al., 1991). Evashwick & Cohn (1999) assert that care managers should, in the community, connect at-risk patients with appropriate support for their identified problems to reduce the use of the formal healthcare system. In one program, where care managers were introduced to an existing physician roster of patients, care managers screened for self-reported ability to perform ADLs, fall risk, appointment with physicians, recent weight changes, use of emergency services, medication use, completion of an AD (advanced directive), the nature of their support system, sleep disorders, and indicators of depression (Anker-Unnever & Netting, 1995).

### **Care Integration**

Ensuring that the care a patient receives is integrated across the healthcare system is a key role of the care manager (Bayard et al., 1997; Griffin & Coburn, 2014; Guttman, 1999; Mick & Ackerman, 2002; White et al., 1994) Care managers with an advanced practice nurse background can utilize clinical pathways to integrate care (Mick & Ackerman, 2002). Care managers are responsible for ensuring care integration throughout the healthcare continuum due to them maintaining a role in patient care regardless of setting, for instance, maintaining their role if a patient who is cared for at home is admitted to a hospital (Guttman, 1999).

### **Referral**

One study which aimed to describe the roles of community-based healthcare providers found that care managers were ambivalent regarding their role in the direct referral of patients to services: some felt as though their role should not be medical, while others felt that their proximity to, and understanding of, their patients allows them to convey their concerns (Allen et al., 2013). Some organizations in the UK, though, acknowledge a care manager's ability to make referrals as a

direct part of their role in care planning (Ross et al., 2011). White et al. (1994) suggest that care managers should be able to work in tandem with other healthcare professionals to ensure that needed referrals are received. When receiving training on referral practices, care managers felt it was a more difficult skill to acquire than others, such as educating and patient screening (Casado et al., 2008).

### **Care Continuity**

Ensuring continuity of care was seen as a key aspect of the care manager role (Aging Life Care Association, 2017; Iliffe et al., 2014; Matsuda & Yamamoto, 2001; White et al., 1994). Patients who lived in the community emphasized the importance of care managers being able to enable continuity of care between services, and their ability to act as an intermediary between services (Manthorpe et al., 2012). The coordination provided by care managers was essential in reducing fragmentation of care and ensuring continuity at all levels of healthcare (Guttman, 1999).

Further, some literature suggested that care managers see themselves as linking discrete elements of a care plan that would otherwise be discontinuous or inconsistent (Dolen, 1995). The continuity of care experienced by patients when receiving care management was valued (Lim et al., 2018).

### **Patient Engagement**

Several authors suggest that care managers must train to engage with patients on a continuing basis (Black & Osman, 2005; Dant & Gearing, 1990; Waugh et al., 2013; You et al., 2016). The engagement done by care managers made it possible for clients to comply with health behaviours (Guttman, 1999). In co-designing a case manager role for the NHS, it was found that engagement done with older adult patients should be done to identify unmet needs and their major concerns (Waugh et al., 2013), and in a qualitative study of care managers themselves, it was found that

care managers should be done throughout the entirety of a patient's time within a care management program (You et al., 2016).

### **Patient Monitoring**

Patient monitoring was described as an essential aspect of the care manager role (Brown et al., 2008; Canadian Home Care Association, 2005; Challis et al., 1991; Drennan & Goodman, 2004; Gerontological Advisory Council, 2006; Guttman, 1999; Kelley & MacLean, 1997; MacKenzie et al., 1998; Matsuda & Yamamoto, 2001; Ross et al., 2011; Uittenbroek et al., 2018; Vasquez, 2008; White et al., 1994; Wideman, 2012). Abrahams et al. (1992) suggest that in instances where patients are maintained and cared for at home, care managers must contribute to active patient monitoring. This can include monthly telephone calls and in-home reassessments of the patient (Abrahams et al., 1992). Physicians who care for elderly patients and use care management reported that monitoring patient health status in the home and the degree to which they complied with the physicians' care was an area in which care managers can support their work (Anker-Unnever & Netting, 1995). Some care managers believed that their role in patient monitoring extended to monitoring their finances and their behaviours to ensure they use budgets suitably (You et al., 2015). Gallagher & Truglio-Londrigan (2004) recommended that it is beneficial for patient monitoring to include monitoring the services which a patient uses, and their satisfaction with their care, as well as their medication during the time following discharge from the hospital (Gerontological Advisory Council, 2006). Some patients who were newly admitted to a care management program found it puzzling that a care manager would monitor their health status, some even feeling it was unnecessary, however, as time went on, they began to value this task (Lim et al., 2018). Care managers report that the intensity with which they monitor patients is adjusted based on the older adult's situation (Uittenbroek et al., 2018).

## **Care Implementing**

A care manager's ability to perform as an implementor had buy-in as a key competency and was described as a facilitator (Baird & Fraser, 2018; Vedel et al., 2009; Wideman, 2012). Care managers are responsible for ensuring that care plans are implemented by creating the conditions that can be accomplished (Johansson & Harkey, 2014).

## **Discharge Planner**

Care managers can aid patients and their caregivers prepare for discharge from acute care institutions back into the community (Keystone Health, n.d.; O'Malley et al., 2017). Discharge planning requires the building of linkages and communication and referral between providers in multiple settings (Abrahams et al., 1992). Care managers' ability to manage transitions was a facilitator (Baird & Fraser, 2018).

## **Patient Follow-up**

Patient follow-up, via telephone, was considered essential for patient monitoring done by district nurses care managers (Uittenbroek et al., 2018). Patients described care managers following up with them after being admitted to acute care, as well as following their discharge back to the community (O'Malley et al., 2017).

### **4.1.2.1.7: Personality Traits**

#### **Culturally Sensitive**

A roundtable aiming to develop a common understanding of the role of care management identified sensitivity to and respect for culture and values as a guiding principle (Canadian Home Care Association, 2005). Care managers, in one study investigating end-of-life planning, believed they should be sensitive to the cultural norms and taboos of the patients with whom they

work (Kwak et al., 2014). In the context of discussing advanced care planning with ethnic minority low-income older adults, some of whom viewed death as a taboo topic, being culturally sensitive and gaining the trust and rapport of older adults was necessary to broach the topic (Kwak et al., 2014). According to care managers in another study, care planning should always be conducted in a culturally sensitive way and should utilize cultural competence wherever possible when working with ethno-racial communities (Peckham et al., 2014). Communication with patients from culturally or linguistically diverse communities held additional meaning, such as cultural recognition (You et al., 2016).

### **Attentive**

Being attentive to the needs of an older adult client was described as a component of care managers being able to become intimate confidants with patients (Balard et al., 2016). Older adult patients appreciated the personal attention given to them by care managers and viewed it as a strength of managed healthcare delivery models (Lim et al., 2018).

### **Compassionate or Empathic**

In a study of people with type 2 diabetes and their perception of desirable qualities in care managers, personal characteristics such as compassion were ranked second most important, behind being knowledgeable and ahead of their communication skills and their qualifications. (Dejesus et al., 2012). However, Dolen (1995) suggests that care managers must maintain objectivity while being compassionate.

### **Open**

Older adult patients in a care management trial described the openness of their care manager and a sense that they always cared, which contributed to satisfaction with the care they were receiving (Wilfling, 2021).

### **Willing to Go Above and Beyond**

In a study of older adult patient perceptions of care managing services, some patients noted that care managers were willing to go above and beyond what was expected of them given their role (Brown et al., 2008). Some such tasks were seen as inappropriate given the low-skilled nature of the tasks and the highly-trained and highly-paid status of the care manager, and were later delegated to other professionals or managed by the patients themselves (Brown et al., 2008).

### **Proactive**

Care managers being proactive in their role to prevent deterioration and avoid worsening illness was suggested as beneficial within some studies (Bentley, 2014; Ciccone et al., 2010; Uittenbroek et al., 2018). This is especially the case for community-dwelling seniors who live in rural areas, as they face barriers to accessing conventional healthcare (Kelley & MacLean, 1997). Contact with patients requires care managers to proactively and frequently engage with and contact clients (Guttman, 1999). The self-initiated contact done by care managers leads patients to feel supported (Guttman, 1999). Proactive prevention requires that care managers create an environment for care continuity (Guttman, 1999). In one program implementing primary care management, the proactive approach taken by care managers lessened the need for costly treatments and reduced the burden of the condition on enrolled patients (Ciccone et al., 2010). Some patients in one study felt that care managers should be able to take a more proactive role in negotiating with local services (Iliffe et al., 2014).

### **Fluid or Flexible**

A perceived advantage of care provided by care managers and their care teams is the flexibility with which they can provide services (Gerontological Advisory Council, 2006; Iliffe et al., 2014; Matsuda & Yamamoto, 2001) and responsive to change (Dodd et al., 2011). In rural settings,

Kelley & MacLean (1997) assert that care managers must be flexible enough, and have the authority to, create services and community resources to meet their patient's needs. Flexibility and creativity in planning activities for older adults were deemed essential by one care manager in a study by Uittenbroek et al. (2018), such that the activities were attuned to the daily schedules of their clients.

### **Honest**

When surveyed, people with type 2 diabetes indicated that honesty was a desirable attribute for care managers to possess (Dejesus et al., 2012). Some older adults described feeling motivated to contact their care manager due to the fact they knew they would receive honest and competent responses, also noting that they felt their concerns were not pushed back (Wilfling et al., 2021).

### **Loyal**

Care managers internal to a care team, as opposed to one hired externally, were preferred due to their perceived loyalty (Herzog et al., 2015).

### **Responsive**

Older adult patients appreciated that care managers responded to them promptly (Lim et al., 2018). Dodd et al. (2011) found, among older adult patients and healthcare providers, that the services provided by care managers in a care management service delivery model, were rapid and responsive. One of the perceived advantages of care management, from the perspective of care managers themselves, was the responsiveness they had to patient needs (Iliffe et al., 2014), which was echoed by a roundtable aimed at developing a common understanding of the role of a care manager (Canadian Home Care Association, 2005).

### **Trust Builder**

Anker-Unnever & Netting (1995) report that patients, after a short span, viewed care managers as trusted professionals who would help them remain in their homes. A review conducted by Lawless et al. (2020) to understand better which factors influence communication about frailty in primary care found that care managers play a pivotal role in creating trusting relationships between older adults and their healthcare professionals, services, and resources (Lawless, 2019).

### **Holistic, or mindful of the whole patient**

Care management has been rooted in providing care to patients which is holistic and individualized to the needs of a patient (Carrier & Newbury, 2016; Pilcher, 2021). Vasquez (2008) found that care managers must be able to look at the whole picture of a patient's situation and apply resources accordingly. Accurate assessment, while maintaining a holistic focus, is one of the key areas to developing relationships with patients (Carrier & Newbury, 2016).

### **Objective**

Though care managers must be compassionate, Dolen, (1995) stipulates that they must also maintain objectivity when working with patients.

### **Cheerleader**

Luzinski et al. (2008) assert that care managers behaving like a cheerleader can help their clients achieve their goals which cannot be addressed by conventional healthcare delivery models.

Luzinski et al. (2008) support this with an endorsement from a client satisfaction survey.

### **Accessible and Available**

Being available and accessible to older adults was reported as a key component to becoming a confidant (Balard et al., 2016; White et al., 1994). The availability and accessibility of care managers inspired confidence in their older adult patients, with help being readily and quickly available when it was needed (Brown et al., 2008). Some care management programs require

care managers to be available on an on-call basis during the early evenings and weekends (Guttman, 1999).

### **Visible**

Some models of physician office-based care with integrated care management emphasize the importance of the care manager being visible to patients (Randall et al., 2014; White et al., 1994). The visibility of care managers, such that they are seen by patients and informal caregivers as being in charge of their care, was seen as a key component of care management (Bentley, 2014). The visibility of care managers and patients knowing when and how to contact them, was acknowledged as important to both patients and their caregivers (Randall et al., 2014).

### **Solution-Oriented**

Balard et al. (2016) reported that care managers themselves believe that they are solution finders and view the tasks they perform in their role as care managers as facilitating solutions to patients' ailments and concerns, including coordinating, sharing information, and translating information.

#### **4.1.2.2: Caregiver-facing Competencies**

Articles featured competencies which directly impact and align with caregivers. Under the scope of this facet of care manager competencies were caregiver communication and caregiver support.

##### **4.1.2.2.1: Caregiver Communication**

#### **Communication Skills**

Communication with family caregivers was discussed in several articles (Allen et al., 2013; Canadian Home Care Association, 2005; Hudson & Moore, 2006; Ohta et al., 2019; You et al., 2016). Poor communication can lead to a lack of information, increased stress, confusion, lack of empowerment, and lack of choice, all of which can limit the ability of clients and family

caregivers to make decisions (Allen et al., 2013). Care managers reported difficulties in communicating users' needs with family members, as their needs may not be fully understood by members of their families (Ohta et al., 2019).

### **Relationship and Rapport Building**

Establishing and building relationships with the informal family caregivers of patients was discussed in several articles (Balard et al., 2016; Guttman, 1999; Minkman et al., 2009). Informal caregivers, when discussing care managers, described them as partners in caring for older adult patients (Balard et al., 2016). Frequent contact between informal caregivers and care management was noted in one instance as pivotal to an older adult's care when problems arose (Balard et al., 2016). Warm and confident relationships with social systems were unanimously agreed as being crucial to providing good care within care management programmes (Minkman et al., 2009). Relationship building by care managers, on behalf of patients, serves so they can better communicate with family caregivers (Luzinski et al., 2008).

### **Buffering and mediating**

Care managers were required to act as a buffer or conciliator between patients and their informal caregivers (Balard et al., 2016). Dolen posits that care managers should be conscious of several areas where conflict can arise when family members are involved with an older adult's care plan and be prepared to mediate between family members when conflicts arise (Dolen, 1995). Care managers viewed the mediating aspect of their role with ambivalence, and felt uncomfortable in the role (You et al., 2016).

### **Counselling**

Counselling has been described as one of the three primary functions of care management, alongside advocacy and coordination, and may be done at various stages of the care management

process with informal carers (Dant & Gearing, 1990). Family caretakers of those enrolled in care management programs appreciated being able to ask questions regarding legal or medical advice (Warkentin et al., 2022). Stowell Associates (2022b), a private provider of care and care management services in the United States, suggested that advising families was one aspect of the services clients could expect from their care manager. Some care managers, though, felt that counselling was outside of their professional boundaries and job description (You et al., 2016).

### **Information Sharing**

Dolen (1995) suggests that care managers must act as a central repository of information regarding the older adult patient, their informal caregivers, and the services they are receiving. Family caregivers valued having a contact person from whom they could seek information (Warkentin et al., 2022).

### **Family engagement**

Ensuring engagement and partnership with a client's family was identified by several authors (Baird & Fraser, 2018; Canadian Home Care Association, 2005; Guttman, 1999; Waugh et al., 2013; You et al., 2016). Some care management programs provide training to families and caregivers (Minkman et al., 2009). A private organization providing care management services noted that care managers work directly with the families to manage and make decisions regarding the care that the older adult in their care should receive (Stowell Associates, 2023). In one study, care managers were able to engage with family caregivers of older adults whom they cared for (Warkentin et al., 2022), an example of which was that caregivers were able to benefit from physical activity training given to patients (Warkentin et al., 2022). Being the same age, caregivers were able to participate and experience benefits through their engagement (Warkentin et al., 2022). Care managers can include family caregivers in engagement to identify unmet

needs and concerns (Waugh et al., 2013), and do so at all points of a patient's time in a care management program (You et al., 2016).

#### **4.1.2.2.2: Caregiver Support**

##### **Emotional Support**

Challis et al. (1991) assert that care managers often must give considerable amounts of emotional support to elderly patients and their families. In one study, the emotional support provided to families of those undergoing treatment for chronic conditions was essential in decreasing their fears and anxiety levels (Jennings-Sanders & Anderson, 2003). Some care management programs included caregiver emotional support, for a limited duration, following the death of a patient (Minkman et al., 2009).

##### **Empathy**

Family caregivers felt positively about care managers being willing to listen to their issues and anxieties, and that this engendered a sense of being taken seriously and that their concerns mattered (Warkentin et al., 2022). Additionally, family caregivers felt safe knowing they had a person, the care manager, whom they could contact in case of need (Warkentin et al., 2022).

##### **Transportation**

Family caregivers often felt burdened by the responsibilities they encountered when caring for older adults with chronic conditions, such as organizing and transportation to services (Warkentin et al., 2022). In instances where services could not be provided in the homes of older adult patients, some physicians felt it would be beneficial for care managers to provide transportation (Anker-Unnever & Netting, 1995).

##### **Empowerment**

In instances where informal caregivers could not or were not equipped to cope with issues arising from an older adult under their care, care managers acted as a method to resolve issues while the informal caregiver was able to step aside (Balard et al., 2016; Hayes & McCarthy, 2016).

## **Support**

Supporting informal caregivers of patients enrolled in a care management program was seen as essential for care managers (Abrahams et al., 1992; Aging Life Care Association, 2017; Balard et al., 2016; Jennings-Sanders & Anderson, 2003; Kelley & MacLean, 1997; Peckham et al., 2014; Senior Persons Living Together, n.d.; Warkentin et al., 2022). Support for an informal care system established by the care manager helps to ensure the continued ability of the patient's home-based status (Abrahams et al., 1992). The support provided to the families of those receiving care management included advocacy and education on how to care for their patients (Jennings-Sanders & Anderson, 2003). Family caregivers perceived the counselling and information-providing capacity of care managers as a support to them (Warkentin et al., 2022). In rural settings where resources may be limited, Kelley & MacLean (1997) suggest that care managers must construct and support informal caring networks. Informal caregivers described care managers as breaking their isolation and solitude (Balard et al., 2016). Care managers themselves saw the need to support informal caregivers, regardless of whether they lived in the same home as their patients (Peckham et al., 2014). This was done due to the assumption that, even if they do not live in the same home as the patient, caregivers would still be, to some extent, providing crucial support to the patient (Peckham et al., 2014).

#### **4.1.2.3: Practice-facing Competencies**

Articles featured competencies which directly impact and align with the practices in which care managers work. Under the scope of this facet of care manager competencies were medical ability, operation within a practice, communication within a practice, and practice-related patient care delivery.

##### **4.1.2.3.1: Medical Ability**

###### **Assessment**

Assessment was commonly agreed upon as a facilitating competency of care managers (Aging Life Care Association, 2017; Baird & Fraser, 2018; Bane, 1997; Bentley, 2014; Canadian Home Care Association, 2005; Casado et al., 2008; Challis et al., 1991; Dant & Gearing, 1990; Dodd et al., 2011; Elwyn et al., 2008; Gallagher & Truglio-Londrigan, 2004; Hashi, 2016; Hayes & McCarthy, 2016; Kelley & MacLean, 1997; Keystone Health, n.d.; Logan, 2019; Luu & Liang, 2005; Luzinski et al., 2008; MacKenzie et al., 1998; Matsuda & Yamamoto, 2001; Minkman et al., 2009; Pilcher, 2021; Public Health Agency of Canada, 2019; Ross et al., 2011; Shapiro, 2002; Vasquez, 2008; Vedel et al., 2009; Wideman, 2012; Wilfling et al., 2021), and, in one study, was the most commonly done task of care managers who work with older adults in the community (Jacobs et al., 2006). Comprehensively assessing an older adult's physical, mental, medical, environmental and functional needs is a central component of care manager practice (Dolen, 1995; Hashi, 2016; Johansson & Harkey, 2014; Logan, 2019). Abrahams et al. (1992) suggest that care managers must be able to use standard assessment procedures to determine eligibility for services and benefits, however, Dolen (1995) also suggests that they must balance these assessments with the context of the legal and financial implications of those assessments. In one qualitative study, a practicing care manager noted that the full unit of care, a patient and

their caregiver should be considered when doing assessments (Peckham et al., 2014).

Additionally, assessments should be sensitive to changes in patient circumstances, allowing for rapid and flexible alterations in service provision (Dodd et al., 2011). In care planning for a Japanese model of long-term and integrated care, patient services are determined by a needs assessment and modified by their wishes for their care (Matsuda & Yamamoto, 2001), though, in rural Japan, there were discrepancies in how care managers and physicians assess symptoms (Ohta et al., 2019). Assessments done by care managers, in one program, were expressly conducted to establish baselines of health and behaviour measures for the purpose of monitoring treatment progress (Ciccone, 2010). When being trained in patient assessment and screening, care managers felt it was an easier skill to acquire compared to others (Casado et al., 2008).

### **Diagnosing**

Care managers with an advanced practice nursing background can augment the role through their ability to perform differential diagnoses (Mick & Ackerman, 2002).

### **Triaging**

Luzinski et al. (2008) assert that care managers must be able to prioritize treatments that heighten the quality of life of their patients due to the existence of constraints that could interfere with a care plan.

### **Medical Knowledge**

In a qualitative study conducted by Uittenbroek et al. (2018), 11 district nurses and social workers doing care management agreed that basic medical knowledge regarding aging was needed by care managers. Due to the nature of the training that some care managers in Japan received, though, they were not confident in their ability to use their medical knowledge (Ohta et

al., 2019). This lack of medical knowledge made some care managers anxious when assessing patients (Ohta et al., 2019).

### **Pharmacology Knowledge**

Care managers who come from an advanced practice nurse background can utilize their knowledge of pharmacology in their role when caring for patients (Mick & Ackerman, 2002). Logan (2019) asserts that care managers should educate and instruct patients on their medication's purpose, side effects, label, identification, and naming. When part of a care team, care managers can be able to assist in simplifying medication regimens (Elwyn et al., 2008), and ensure that they are appropriate (Ross et al., 2011).

### **Clinical Expertise**

The medical and clinical expertise of nurse case managers was described as a godsend by the family caregivers of older adults who lived in the community (Manthorpe et al., 2012). Care managers with advanced degrees in social work or nursing can leverage their clinical expertise to develop, coordinate, and implement a care plan (Luzinski et al., 2008).

### **Referrals**

In the context of new practices or practices which are adopting an integrated case management approach to providing care to older adults, (Abrahams et al. (1992) and Anker-Unnever & Netting (1995) agree that case managers must be able to develop referral procedures and formats for information exchange, particularly regarding patient characteristics, needs, and care plans. Additionally, concerning referrals, (Abrahams et al., 1992) further contend that care managers must be able to educate care teams about these referral procedures, as well as appropriate referrals and eligibility criteria for referral to services. A care manager's ability to make referrals,

from the perspective of physicians, was valuable, as it allowed some relief from high workloads (Anker-Unnever & Netting, 1995).

### **Medical Record Interpretation**

Waugh found, through the co-design of a care manager role, that care managers should be able to interpret the medical records of their patients, while also being able to take note of gaps and identify areas for involvement of support, and that when gaps in records are identified, care managers should be able to fill them in physician records (Waugh et al., 2013). When recruiting patients, a care manager's ability to access and interpret medical records for deteriorating health conditions was instrumental in rapid baseline and ongoing information regarding their condition (Guttman, 1999). Care managers viewed electronic medical records favourably (Nothelle et al., 2021).

#### **4.1.2.3.2: Operating Within a Practice**

##### **Collaboration**

Collaboration with care providers or other professionals was seen as a useful quality for care managers to provide (Aging Life Care Association, 2017; Dejesus et al., 2012; Dolen, 1995; Minkman et al., 2009; Uittenbroek et al., 2018; Vedel et al., 2009), though minor compared to others qualities (Dolen, 1995). Care planning (Anker-Unnever & Netting, 1995), and discharge planning (Dodd et al., 2011), when inclusive of the care manager's input, should be collaborative processes with all involved in patient care. When collaborating within a care team, care managers felt it was their role to act as a representative of their older adult patients (Uittenbroek et al., 2018). The collective responsibility of care managers to create coordinated and continuous care was a well-represented competency within the literature (Baird & Fraser, 2018). In long-

term care, care managers foster collaboration between the diverse array of professionals deployed in the setting (Johansson & Harkey, 2014). Different standards of medical care between care managers and other professionals involved in caring for patients impeded collaboration (Ohta et al., 2019). One study found that, among primary care providers, geriatricians, and care managers, collaboration was developed in three phases: initiating, developing two-way collaboration, and developing interdisciplinary teamwork (De Stampa et al., 2013). Care managers and geriatricians were able to collaborate well throughout the whole process, however, care managers and primary care providers were only able to collaborate in later stages, and even then only through the intervention of geriatricians (De Stampa et al., 2013).

### **Flexibility**

Anker-Unnever & Netting (1995) suggest that care managers, in instances where they report to or work with multiple professionals, should be flexible in their working style: tailoring how they operate within a practice to the professionals they work with Anker-Unnever & Netting (1995). In an overview of the Japanese system of integrated care utilizing care management for older adults, Matsuda & Yamamoto (2001) state that the care plans developed by care managers must allow for some fluidity and flexibility.

### **Resource Management**

Care managers are responsible for allocating services for clients under budgetary caps (Abrahams et al., 1992; Gerontological Advisory Council, 2006; Johansson & Harkey, 2014; MacKenzie et al., 1998; You et al., 2016), as well as ensuring that services are provided cost-effectively (Vasquez, 2008; You et al., 2016). Care managers were hesitant towards methods of care in which clients would have authority over their budgets, fearing they would become

financial administrators who concentrate on collecting invoices and writing financial reports, however, some maintained that they would still play a crucial financial role (You et al., 2015). You et al. (2016) identified four facets of the care manager's responsibility in managing budgets: managing budgets wisely to meet expectations, limited authority over budgets, flexibility within budgets, and the care manager's ability to transfer budgets within a caseload to ensure all client's needs are being met. As the tension between limited budgets and required services has increased, care managers have faced ethical dilemmas (Canadian Home Care Association, 2005).

### **Time Management**

In settings where collaboration is imperative to render services, such as care planning, care managers included in a qualitative study investigating the obstacles to interprofessional collaboration felt that they must be able to manage not only their own time, but consciously manage the time of other professionals (Ohta et al., 2019). This same overview indicated that care managers need to possess exceptional time management skills to engage with other professionals (Ohta et al., 2019).

### **Ability to Follow a Leader**

Care managers across care settings identified primary care physicians as leaders of a healthcare team and indicated that when given conflicting information regarding patient care they would defer to the recommendations given by the leading primary care physician (Nothelle et al., 2021). When working in a team, some care managers describe struggling with managing the diverse views held by other professionals on how best to care for patients (Ohta et al., 2019).

### **Ability to Lead**

Shared accountability was identified as a key competency in the literature (Baird, 2018; Randall, 2014). As part of a synthesis resulting from the home care theme area of the Health Transition

Fund, a project that sought to test and evaluate healthcare delivery services, care managers were encouraged to adopt leadership roles in collaboration with hospitals and home care managers to address issues impeding the use of resources (Shapiro, 2002). A study evaluating a novel service model for healthcare in which care managers led a complex care team was able to save a total of £148,000 over the course of one year by reducing hospital admissions and reducing bed days, while improving care quality (Dodd et al., 2011). Some care managers viewed leadership as associated with coordination (Dodd et al., 2011), as well as the necessity to lead by example in situations where a care team may not be well-versed (Dodd et al., 2011). In instances like this, it is incumbent on the care manager to lead by doing what others may think is undoable (Dodd et al., 2011).

### **Knowledge of Practice Capabilities**

In one study, general practitioners felt that care managers, when working within care teams, should be knowledgeable of the services that their care team is capable of providing to patients (Herzog et al., 2015).

### **Experience with Older Adults**

Experience working with and caring for older adults is seen as essential to the care manager role (Anker-Unnever & Netting, 1995; Dejesus et al., 2012; Uittenbroek et al., 2018). A novel program aiming to provide care management to chronically ill older adults hired care managers with a minimum of two years of experience, and who had experience in areas which the physicians they worked with identified as areas of need (Anker-Unnever & Netting, 1995). These areas included preadmission planning, follow-up, patient education and support, and initiating advance directives (Anker-Unnever & Netting, 1995). Providers, when asked, felt that

care managers who manage patients with chronic diseases should have knowledge and experience working with chronically ill patients (Dejesus et al., 2012).

### **Team Facilitating and Development**

Both inter- and intra-professional partnerships were deemed as key competencies for care managers working in integrated systems (Baird & Fraser, 2018). Guttman (1999) suggests that nurse care managers should place themselves strategically as pivotal members of a healthcare team, and, in doing so, facilitate the development of a team-based care plan (Guttman, 1999). Through a qualitative study designed to understand the clinical collaboration process among general practitioners, case managers, and geriatricians, it was found that care managers should make efforts to develop team-based collaboration with other care professionals, even if some professionals may be reluctant to operate in such a way (De Stampa et al., 2013).

### **System Building**

Abrahams et al. (1992) suggested that case managers should be prepared to build systems of communication with other professionals to support individual patients under their care. This was echoed by (Waugh et al., 2013), wherein system-building capabilities were deemed desirable by NHS staff who co-designed the role of a care manager.

### **Information Technology (IT) Skills**

Care managers should have basic information technology skills, as well as knowledge of local systems and experience in using these technologies, such as electronic medical records (Waugh et al., 2013). These skills were deemed essential by NHS staff who co-designed the role of a care manager (Waugh et al., 2013).

### **Resource Mobilizer**

Abrahams et al. (1992) suggest that care managers should utilize and mobilize informal support systems that are available before escalating to formal supports such as in-home care and, as a last resort, nursing home placement. Care managers should be able to access resources (Dant & Gearing, 1990; Gerontological Advisory Council, 2006) and mobilize the right services and resources at the correct time (Dodd et al., 2011; Gerontological Advisory Council, 2006). In settings where resources may be limited, such as in rural settings, care managers are expected to adapt what is available to the benefit of the patient (Ohta et al., 2019).

#### **4.1.2.3.3: Communication Within a Practice**

##### **Communication Skills**

Several articles indicated the importance of communication with physicians and other healthcare professionals for care manager practice (Abrahams et al., 1992; Aging Life Care Association, 2017; Allen et al., 2013; Canadian Home Care Association, 2005; Gerontological Advisory Council, 2006; Hudson & Moore, 2006; Logan, 2019; Luzinski et al., 2008; Ortiz & Horne, 2013; Public Health Agency of Canada, 2019; You et al., 2016). Patients report seeking assistance from care managers when communicating with other healthcare professionals (Ortiz & Horne, 2013). Abrahams et al. (1992) stated that care managers must confer with physicians and other medical staff, and communication strategies should focus on the needs and desires of older adults receiving care (Allen et al., 2013; Nothelle et al., 2021). Effective communication strategies for care managers included faxes, letters, phone calls, and communication books, however, face-to-face was preferred (Allen et al., 2013), though all communication intended for physicians or practices should be tracked (White et al., 1994). The Public Health Agency of Canada emphasizes that care managers should communicate with specialists within the care team

(Public Health Agency of Canada, 2019). Care management was seen as a key strategy for addressing lapses or deficiencies in communication and cooperation within primary and community settings (Lawless et al., 2020). Some care managers felt an aversion towards communicating with physicians due to biases previously established while working in the healthcare field, and at times struggled to communicate with them due to different degrees of experience and knowledge (Ohta et al., 2019), or due to a lack of shared communication platforms (Nothelle et al., 2021).

### **Relationship Building**

Some authors indicated that care managers must be able to develop working relationships with other care providers and community agencies (Bane, 1997; Evashwick & Cohn, 1999).

Communicating with the general practitioners involved in the care of older adults receiving care management in the community is often challenging (Allen et al., 2013). Care managers preferred face-to-face communication, as it allowed not only the exchange of information with other providers, but also the opportunity for rapport and relationship building between providers (Allen et al., 2013). Where resources are limited, such as in rural settings, care managers were expected to be able to consult extensively with care specialists who reside outside of their geographical location (Kelley & MacLean, 1997). Relationship building by care managers, on behalf of patients, serves so they can better communicate with providers (Luzinski et al., 2008).

### **Liaising**

Liaising with physicians and other professionals is part of the care manager's role (Anker-Unnever & Netting, 1995; Canadian Home Care Association, 2005; Challis et al., 1991; MacKenzie et al., 1998; Waugh et al., 2013; You et al., 2016). Care managers are well equipped to act as liaisons in primary care physicians' offices, where they can provide in-person and rapid

consultation and resources (White et al., 1994). White et al. (1994) suggested that liaising care managers must work closely with physicians and office staff to identify patients who are at elevated risk and assist with acquiring resources.

### **Information Sharing**

According to Abrahams et al. (1992), communication linkages must be established between hospital and community partners to facilitate information sharing. These linkages and communication mechanisms are seen as the building blocks of coordinated networks of care (Abrahams et al., 1992). Care managers can support physicians by reporting patient status (Anker-Unnever & Netting, 1995). Care managers describe themselves as being positioned between patients and primary care practices concerning information sharing: interfacing from user to system and from system to user (Balard et al., 2016). The activities conducted by care managers, such as assessment, planning and coordination, enhanced information exchange (Lawless et al., 2020). The medical information sharing done between care managers and general practitioners served to increase appreciation and confidence (Uittenbroek et al., 2018).

### **Dialogue Crafting**

Abrahams et al. (1992) contend that discharge planning done with care managers requires the building of linkages and communication and referral between providers in multiple settings (Abrahams et al., 1992). In a study investigating the challenges to interprofessional collaboration, some care managers in rural Japan felt that it is the care manager's responsibility to craft dialogues between patients and physicians regarding patient's conditions and feelings (Ohta et al., 2019). Encompassed in this role is the care manager's ability to seek agreements on data sharing (Waugh et al., 2013).

### **Networking**

A qualitative study that sought to explore care managers' perceptions of their role found that care managers need and are required to network with people frequently, and as such, networking was deemed an important quality for them to possess (You et al., 2016). In the absence of formal services, such as in the case of rural settings, Kelley & MacLean (1997) suggest that care managers must create networks of care which meet the needs of older adults and fill gaps left by the absence of formal services.

### **Mediating**

Balard et al. (2016) identified that care managers at times had to operate as conciliators between patients and other healthcare professionals when tensions arose. This arose from their umbrella role as a solution finder (Balard et al., 2016)

### **Joint Decision-Making**

Shared decision-making was identified as a competency in several articles (Baird & Fraser, 2018). Care managers, when working in an intermediate care setting, should be present with the patient, family, and care team to enable decision-making (Kvæl & Olsen, 2022). Care managers felt that case conferences were an effective tool for coordinating and planning (Allen et al., 2013; Anker-Unnever & Netting, 1995), however, difficulties are present due to physicians lacking time (Allen et al., 2013).

### **Confidentiality**

In instances where patients have a cognitive impairment, a care manager's ability to maintain confidentiality was rated as an essential competency when co-designing the role of a dementia care manager (Waugh et al., 2013).

### **Being a Confidant**

A qualitative explorative study conducted by Balard et al. (2016) in which, during a 6-month case management program, older adults, informal caregivers, and care managers were asked to describe the role of a care manager found that being a confidant to older adults superseded other roles, such as evaluator, planner, or coordinator.

#### **4.1.2.3.4: Patient Care Delivery**

##### **Care Delivery**

Care delivery as a primary process was identified as a facilitating competency (Baird & Fraser, 2018; Bayard et al., 1997; Canadian Home Care Association, 2005; Hashi, 2016; Minkman et al., 2009; Shapiro, 2002; Vedel et al., 2009; Wideman, 2012). Luzinski et al. (2008) suggest that care managers can implement several interventions to enhance the physiological status of older adult patients, including direct communication with providers, assistance with medication management, coordination and transportation. Hashi (2016) suggests that the interventions implemented by care managers should be cost-effective, and, as such, should consider the economic status of older adult patients. Care managers should be careful when deciding to either enrich services to one target or to expand their practice's reach to serve more people, as there can be unintended consequences of inadvertently underserving populations (Shapiro, 2002).

##### **Evaluating Care**

A care manager's ability to evaluate patients and the care they receive was a well-documented facilitator (Aging Life Care Association, 2017; Baird & Fraser, 2018; Canadian Home Care Association, 2005; Hashi, 2016; Kelley & MacLean, 1997; Keystone Health, n.d.; Luu & Liang, 2005; MacKenzie et al., 1998; Minkman et al., 2009; Vasquez, 2008). Vasquez (2008) contends that this process must be done on an individual and ongoing basis. A pilot study of care

management in Hong Kong found that, although evaluations were deemed key responsibilities of a care manager, the process of recording patient assessments made evaluations of patient progress difficult (MacKenzie et al., 1998). Hashi (2016) suggests that evaluations done by care managers should identify and utilize appropriate measures for that intervention.

### **Discharge Planner**

Some care managers felt as though inpatient-based professionals communicate insufficiently with community-based supports, complicating and negatively impacting patient discharge (Allen et al., 2013). Transition planning was described as facilitating patient care, but a review of the extent to which core care manager standards were researched found that it was poorly investigated in the literature (Baird & Fraser, 2018). Despite this, the Canadian Home Care Association endorsed discharge, disengagement, and service completion as key elements of care management (Canadian Home Care Association, 2005). Dodd et al. (2011), in describing a service model for patients with complex care needs, indicated that discharge planning should be done collaboratively and should commence as soon as possible after the patient's admission (Dodd et al., 2011).

### **Reviewing Care Packages**

Reviewing and monitoring patient care plans was considered a key activity for care managers (Challis et al., 1991; Drennan & Goodman, 2004). Challis et al. (1991) suggest that this process should be conducted in consultation with a multidisciplinary team.

### **Medication Review**

When transitioning from hospital to home, nurse care managers may be required to conduct a medication review of all prescriptions taken before admission, medications prescribed at discharge, and allergies to medications (Logan, 2019). Care managers must also, in addition to

reviewing the medications prescribed to a patient, aid them in managing their medication (Luzinski et al., 2008; Ross et al., 2011).

### **Evidence-Based Approach**

Johansson & Harkey (2014) assert that care managers should take an evidence-based approach to achieve desirable clinical, financial, satisfaction, and quality outcomes, by the standard desired by their patients and support systems (Aging Life Care Association, 2017; Johansson & Harkey, 2014). The Canadian Home Care Association (2005) similarly found that care managers should purposefully incorporate evidence-based practices.

### **Patient Population Knowledge**

The Canadian Home Care Association found through a roundtable that the incorporation of population health and the determinants of health were guiding principles of care management (Canadian Home Care Association, 2005). Advanced practice nurses, who know specific patient populations and illness patterns therein, can utilize that knowledge to enhance their role as care managers (Mick & Ackerman, 2002). In one pilot program, care managers felt they could work best when they had a clearly defined population with whom to work (Carrier & Newbury, 2016).

### **Service Arranger or Accessor**

Anker-Unnever & Netting (1995) suggest that care managers should be able to arrange community services and benefits for patients; this is a competency which several articles identified (Baird & Fraser, 2018). In rural settings, Kelley & MacLean (1997) contends that care managers must be able to assume the role of service providers themselves within the domains of other professionals.

### **Continuing Education**

Some authors proposed the need for care managers to continually train and gain new skills (Black & Osman, 2005; Dejesus et al., 2012; Gallagher & Truglio-Londrigan, 2004; Landi et al., 1996; Waugh et al., 2013). Patients felt that care managers should have disease-specific training when working with patients who have chronic diseases (Dejesus et al., 2012). Through a program designed to train future care managers in assessment, it was demonstrated that training improved the skills of studying professionals to be in concordance with experienced professionals (Landi et al., 1996). Improvements were seen in all aspects of care management besides the assessment of social resources (Landi et al., 1996). The training done was based on the Resident Assessment Instrument, an instrument designed for nursing home residents (Landi et al., 1996). Black and Osman (2005) suggest that not only do care managers require continuing training on clinical and core care management competencies, but also training that enhances their rapport and relationship-building skills. Gallagher & Truglio-Londrigan (2004), suggest that new nurses should be taught using the “Seven A’s” framework to train competence in the community care management role. The framework identifies seven facets of care management which professionals can utilize to develop care management competencies: awareness, accessibility, affordability, appropriateness, adequacy, acceptability, and availability.

## **4.2: Survey Results**

### **4.2.1: Demographics**

**Table 2** describes the sample of survey respondents. In total, 20 individuals completed the survey. The majority of respondents reported their ethnicity as European/White (85%), and 90% reported being women. In terms of experience, 65% of the sample had experience with care management through being a healthcare provider (n=13), and 35% had experience as a care or

case manager directly (n=7). The majority of respondents had received a university certificate, diploma or degree at the bachelor level or above (90%). The most commonly reported occupation of respondents was nursing (35%), followed by personal support workers (15%), care managers (10%), social workers (10%), nurse practitioners (5%), administrative nurses (5%), nurse coordinator (5%), occupational therapists (5%), chiropractors (5%), and physicians (5%). The mean time taken to complete the survey was 19 minutes, ranging from 11.5 minutes to 58 minutes.

| Demographic                     | Response                                                             | n  | %   |
|---------------------------------|----------------------------------------------------------------------|----|-----|
| Race or Ethnicity               | European/White                                                       | 17 | 85% |
|                                 | Other                                                                | 2  | 10% |
|                                 | Prefer not to answer                                                 | 1  | 5%  |
|                                 |                                                                      |    |     |
| Gender                          | Woman                                                                | 18 | 90% |
|                                 | Man                                                                  | 2  | 10% |
|                                 |                                                                      |    |     |
| Age                             | 25-34                                                                | 3  | 15% |
|                                 | 35-44                                                                | 8  | 40% |
|                                 | 45-54                                                                | 5  | 25% |
|                                 | 55-64                                                                | 4  | 20% |
|                                 |                                                                      |    |     |
| Experience with care management | Healthcare provider                                                  | 13 | 65% |
|                                 | Care/case manager                                                    | 7  | 35% |
|                                 |                                                                      |    |     |
| Education                       | University certificate, diploma or degree at bachelor level or above | 18 | 90% |
|                                 | University certificate or diploma below bachelor level               | 1  | 5%  |
|                                 | College, CEGEP or other non-university certificate or diploma        | 1  | 5%  |
|                                 |                                                                      |    |     |
| Occupation                      | Nurse                                                                | 7  | 35% |
|                                 | Personal support worker                                              | 3  | 15% |
|                                 | Care manager                                                         | 2  | 10% |
|                                 | Social worker                                                        | 2  | 10% |
|                                 | Nurse practitioner                                                   | 1  | 5%  |
|                                 | Nurse (Administrator)                                                | 1  | 5%  |

|  |                        |   |    |
|--|------------------------|---|----|
|  | Nurse (Coordinator)    | 1 | 5% |
|  | Occupational therapist | 1 | 5% |
|  | Chiropractor           | 1 | 5% |
|  | Physician              | 1 | 5% |

**Table 2:** Sample descriptives for survey respondents.

#### 4.2.2: Survey Testing

The internal consistency of the competency rating portion of the survey was measured using Cronbach's alpha. The value for Cronbach's alpha for the whole survey was 0.93, which, according to the criteria suggested by George & Mallery (2003), could indicate excellent internal consistency. Of the 13 competency groups, two had values above 0.80, which indicated good internal consistency, six had alphas above 0.70, which indicated acceptable consistency, four were above 0.60, indicating questionable consistency, and one had a value below 0.50, which indicated its internal consistency was unacceptable (George & Mallery, 2003). **Table 3** shows the values calculated for Cronbach's alpha.

| Competency Group                         | Cronbach's alpha ( $\alpha$ ) | Number of items |
|------------------------------------------|-------------------------------|-----------------|
| Patient Disease Management               | 0.69                          | 9               |
| Patient Care Management                  | 0.69                          | 12              |
| Healthcare Systems and Service Provision | 0.73                          | 7               |
| Patient Education                        | 0.75                          | 3               |
| Personality Traits                       | 0.78                          | 17              |
| Non-Medical Patient Support              | 0.68                          | 15              |
| Patient Communication                    | 0.71                          | 12              |
| Caregiver Communication                  | 0.73                          | 6               |
| Caregiver Support                        | 0.41                          | 5               |
| Operating Within a Practice              | 0.78                          | 12              |
| Medical Ability                          | 0.64                          | 8               |
| Communication in a Practice              | 0.83                          | 10              |
| Patient care delivery                    | 0.86                          | 9               |
| <b>Total</b>                             | <b>0.93</b>                   | <b>125</b>      |

**Table 3:** Internal consistency (Cronbach's alpha) of the whole survey and competency groups.

#### 4.2.3: Competency Ratings and Rankings

The survey incorporated all 125 competencies identified by the scoping review, arranged into 13 competency groups and three audience-facing facets. **Table 4** shows the competencies

identified in the review, organized by the ranked importance of the competency group and rated importance of competencies within each group. Mean ratings assigned to competencies by participants closer to positive three indicate greater perceived importance, whereas mean ratings closer to negative three indicate greater unimportance, with zero being a neutral point of being neither important nor unimportant. Mean rankings assigned to competency groups by participants closer to one indicate greater importance, whereas mean rankings closer to 13 indicate lower importance.

| Competency                                                                      | Mean Rating<br>(-3 to +3) | Standard<br>Deviation | Min | Max |
|---------------------------------------------------------------------------------|---------------------------|-----------------------|-----|-----|
| <b>Patient Care Management (Mean ranking=2.80, SD = 2.46)</b>                   |                           |                       |     |     |
| Care planning                                                                   | 2.75                      | 0.43                  | 2   | 3   |
| Care continuity                                                                 | 2.75                      | 0.43                  | 2   | 3   |
| Patient engagement                                                              | 2.7                       | 0.46                  | 2   | 3   |
| Coordination                                                                    | 2.5                       | 0.74                  | 1   | 3   |
| Patient follow-up                                                               | 2.4                       | 0.80                  | 1   | 3   |
| Patient monitoring                                                              | 2.35                      | 0.65                  | 1   | 3   |
| Care implementing                                                               | 2.1                       | 0.94                  | 0   | 3   |
| Discharge planning                                                              | 1.9                       | 0.99                  | -1  | 3   |
| Patient screening                                                               | 1.8                       | 0.98                  | 0   | 3   |
| Referral                                                                        | 1.7                       | 1.58                  | -3  | 3   |
| Care integration                                                                | 1.65                      | 1.71                  | -3  | 3   |
| Patient identification and recruitment                                          | 1.1                       | 1.18                  | -2  | 3   |
| <b>Healthcare Systems and Service Provision (Mean ranking= 4.85, SD = 3.12)</b> |                           |                       |     |     |
| System and service knowledge                                                    | 2.8                       | 0.40                  | 2   | 3   |
| Collaborating                                                                   | 2.65                      | 0.48                  | -3  | 3   |
| Health system navigation                                                        | 2.55                      | 0.50                  | 2   | 3   |
| Arranging services                                                              | 2.5                       | 0.67                  | 2   | 3   |
| Service mobilizing                                                              | 2.25                      | 0.62                  | 1   | 3   |
| Gatekeeping services                                                            | 1.3                       | 1.55                  | 1   | 3   |
| Service broker                                                                  | 1.3                       | 1.62                  | -2  | 3   |
| <b>Patient Communication (Mean Ranking = 5.35, SD = 3.12)</b>                   |                           |                       |     |     |

|                                                                 |      |      |    |   |
|-----------------------------------------------------------------|------|------|----|---|
| Relationship and rapport-building                               | 2.9  | 0.30 | 2  | 3 |
| Confidential                                                    | 2.9  | 0.30 | 2  | 3 |
| Communication skills                                            | 2.8  | 0.40 | 2  | 3 |
| Providing information                                           | 2.65 | 0.48 | 2  | 3 |
| Liaising                                                        | 2.6  | 0.49 | 2  | 3 |
| Patient contact                                                 | 2.45 | 0.74 | 1  | 3 |
| Negotiating                                                     | 2.2  | 0.60 | 1  | 3 |
| Buffering, conciliating, or mediating                           | 2.1  | 0.54 | 1  | 3 |
| Consulting                                                      | 2    | 0.63 | 1  | 3 |
| Counselling                                                     | 1.85 | 0.57 | 1  | 3 |
| Translation                                                     | 1.7  | 1.41 | -2 | 3 |
| Being a confidant                                               | 1.5  | 1.07 | -1 | 3 |
| <b>Personality Traits (Mean Ranking = 5.65, SD =4.42)</b>       |      |      |    |   |
| Compassionate or Empathic                                       | 2.85 | 0.36 | 2  | 3 |
| Holistic, or mindful of the whole patient                       | 2.85 | 0.36 | 2  | 3 |
| Culturally sensitive                                            | 2.65 | 0.46 | 2  | 3 |
| Honest                                                          | 2.65 | 0.48 | 2  | 3 |
| Attentive                                                       | 2.5  | 0.50 | 2  | 3 |
| Responsive                                                      | 2.45 | 0.50 | 2  | 3 |
| Trust builder                                                   | 2.45 | 0.50 | 2  | 3 |
| Objective of the patient's condition                            | 2.45 | 0.50 | 2  | 3 |
| Proactive                                                       | 2.35 | 0.48 | 2  | 3 |
| Loyal                                                           | 2.35 | 0.48 | 2  | 3 |
| Accessible and available                                        | 2.25 | 0.43 | 2  | 3 |
| Solution-oriented                                               | 2.25 | 0.43 | 2  | 3 |
| Fluid and flexible                                              | 2.15 | 1.01 | -1 | 3 |
| Open                                                            | 2.1  | 0.99 | -1 | 3 |
| Willing to go above and beyond                                  | 2.05 | 0.50 | 1  | 3 |
| Visible                                                         | 1.9  | 0.94 | 0  | 3 |
| Cheerleader                                                     | 1.85 | 0.57 | 1  | 3 |
| <b>Patient Disease Management (Mean ranking=5.90, SD =3.66)</b> |      |      |    |   |
| Exploring barriers                                              | 2.65 | 0.48 | 2  | 3 |
| Activities of Daily Living (ADL) promotion                      | 2.45 | 0.92 | 0  | 3 |
| Addressing deficits                                             | 2.35 | 0.79 | 1  | 3 |
| Promoting Function                                              | 2.3  | 1.10 | -2 | 3 |
| Self-management promotion                                       | 2.25 | 0.94 | 0  | 3 |

|                                                                        |       |      |    |   |
|------------------------------------------------------------------------|-------|------|----|---|
| Disease knowledge                                                      | 2.15  | 0.96 | -1 | 3 |
| Clinical care                                                          | 2     | 0.95 | 0  | 3 |
| Disease management promotion                                           | 1.95  | 1.24 | -1 | 3 |
| Medication prescriber                                                  | -0.25 | 1.76 | -3 | 3 |
| <b>Caregiver Communication (Mean Ranking = 6.85, SD =2.74)</b>         |       |      |    |   |
| Relationship and rapport-building                                      | 2.8   | 0.40 | 2  | 3 |
| Communication skills                                                   | 2.7   | 0.64 | 1  | 3 |
| Information sharing                                                    | 2.65  | 0.48 | 2  | 3 |
| Family engagement                                                      | 2.5   | 0.50 | 2  | 3 |
| Buffering and mediating                                                | 2     | 0.63 | 1  | 3 |
| Counselling                                                            | 1.65  | 0.79 | -1 | 3 |
| <b>Patient Education (Mean Ranking = 6.90, SD = 3.01)</b>              |       |      |    |   |
| Coaching                                                               | 2.2   | 0.68 | 1  | 3 |
| Educating                                                              | 2.05  | 0.80 | 0  | 3 |
| Advising                                                               | 2.05  | 0.97 | -1 | 3 |
| <b>Caregiver Support (Mean Ranking = 7.55, SD = 2.69)</b>              |       |      |    |   |
| Empathy                                                                | 2.5   | 0.5  | 2  | 3 |
| Support                                                                | 2.4   | 0.49 | 2  | 3 |
| Empowerment                                                            | 2.3   | 0.46 | 2  | 3 |
| Emotional support                                                      | 2     | 0.45 | 1  | 3 |
| Transportation                                                         | 0.9   | 1.41 | -3 | 3 |
| <b>Non-Medical Patient Support (Mean Ranking = 8.4, SD =3.00)</b>      |       |      |    |   |
| Problem-solving                                                        | 2.85  | 0.36 | 2  | 3 |
| Advocacy                                                               | 2.75  | 0.43 | 2  | 3 |
| Person-centred approach                                                | 2.65  | 0.48 | 2  | 3 |
| Mobility and ability to make home visits                               | 2.55  | 0.67 | 1  | 3 |
| Support                                                                | 2.5   | 0.67 | 1  | 3 |
| Empowering                                                             | 2.45  | 0.50 | 2  | 3 |
| Observation, ability to detect problems                                | 2.4   | 0.49 | 2  | 3 |
| Independence support                                                   | 2.15  | 0.85 | 0  | 3 |
| Psychosocial support                                                   | 2.1   | 0.70 | 1  | 3 |
| Emotional support                                                      | 2     | 0.77 | 1  | 3 |
| Emotionally receptive                                                  | 2     | 0.63 | 1  | 3 |
| Isolation breaking                                                     | 1.95  | 0.80 | 0  | 3 |
| Able to act as a safety net                                            | 1.85  | 0.85 | 0  | 3 |
| Transportation                                                         | 1.45  | 1.20 | -2 | 3 |
| Errands                                                                | -0.2  | 1.40 | -2 | 2 |
| <b>Communication Within a Practice (Mean Ranking = 8.7, SD = 3.41)</b> |       |      |    |   |

|                                                                    |      |      |   |   |
|--------------------------------------------------------------------|------|------|---|---|
| Confidentiality                                                    | 2.85 | 0.36 | 2 | 3 |
| Information sharing                                                | 2.7  | 0.46 | 2 | 3 |
| Communication skills                                               | 2.6  | 0.49 | 2 | 3 |
| Relationship building                                              | 2.6  | 0.66 | 1 | 3 |
| Liaising                                                           | 2.55 | 0.50 | 2 | 3 |
| Joint decision making                                              | 2.45 | 0.50 | 2 | 3 |
| Mediating                                                          | 2.2  | 0.68 | 0 | 3 |
| Dialogue crafting                                                  | 2.15 | 0.73 | 1 | 3 |
| Being a confidant                                                  | 1.85 | 0.91 | 0 | 3 |
| Networking                                                         | 1.8  | 0.75 | 0 | 3 |
| <b>Patient Care Delivery (Mean Ranking = 8.95, SD = 3.60)</b>      |      |      |   |   |
| Arranging services                                                 | 2.65 | 0.57 | 1 | 3 |
| Reviewing care packages                                            | 2.45 | 0.59 | 1 | 3 |
| Evidence-based approaches                                          | 2.45 | 0.50 | 2 | 3 |
| Evaluating care                                                    | 2.4  | 0.58 | 1 | 3 |
| Discharge planning                                                 | 2.25 | 0.70 | 1 | 3 |
| Patient population knowledge                                       | 2.25 | 0.70 | 1 | 3 |
| Continuing education                                               | 2.15 | 0.48 | 1 | 3 |
| Medication review                                                  | 2.05 | 0.86 | 0 | 3 |
| Care delivery                                                      | 1.95 | 0.67 | 1 | 3 |
| <b>Operating Within a Practice (Mean Ranking = 9.4, SD = 2.48)</b> |      |      |   |   |
| Collaboration                                                      | 2.7  | 0.46 | 2 | 3 |
| Time management                                                    | 2.6  | 0.49 | 2 | 3 |
| Knowledge of practice capabilities                                 | 2.6  | 0.49 | 2 | 3 |
| Resource management                                                | 2.5  | 0.74 | 1 | 3 |
| Experience with older adults                                       | 2.4  | 0.80 | 1 | 3 |
| Team facilitating and development                                  | 2.35 | 0.57 | 1 | 3 |
| Flexibility                                                        | 2.25 | 0.77 | 1 | 3 |
| Ability to lead                                                    | 2.25 | 0.62 | 1 | 3 |
| Resource mobilization                                              | 2.25 | 0.54 | 1 | 3 |
| Ability to follow a leader                                         | 1.9  | 1.04 | 0 | 3 |
| System building*                                                   | 1.84 | 0.81 | 0 | 3 |
| Information technology (IT) skills                                 | 1.8  | 0.60 | 1 | 3 |
| <b>Medical Ability (Mean Ranking = 9.7, SD = 3.15)</b>             |      |      |   |   |
| Medical record interpretation                                      | 2.45 | 0.59 | 1 | 3 |
| Assessment                                                         | 2.25 | 0.54 | 1 | 3 |
| Triaging                                                           | 2.25 | 0.54 | 1 | 3 |
| Pharmacology knowledge                                             | 2.15 | 0.65 | 1 | 3 |

|                    |      |      |    |   |
|--------------------|------|------|----|---|
| Medical knowledge  | 2.05 | 0.67 | 1  | 3 |
| Clinical expertise | 1.95 | 0.74 | 0  | 3 |
| Referrals          | 1.8  | 0.87 | -1 | 3 |
| Diagnosing         | 0.95 | 1.24 | -2 | 3 |

\*System building only received 19 ratings, all other competencies were rated by all 20 participants

**Table 4:** All identified competencies, arranged by descending mean group ranking and descending mean rating for competencies within groups.

With regard to mean rating, the most important individual competencies were patient-facing relationship and rapport building (2.90), patient-facing confidentiality (2.90), problem-solving (2.85), compassion or empathy (2.85), being holistic or mindful of the whole person (2.85), practice-facing confidentiality (2.85), system and service knowledge (2.80) patient-facing communication skills (2.80), caregiver-facing relationship and rapport building (2.80), care planning (2.75), care continuity (2.75), and advocacy (2.75). The least important individual competencies were transportation (0.9), diagnosing (0.95), patient identification (1.1), service broker (1.3), gatekeeping services (1.3), transportation (1.45), patient-facing being a confidant (1.5), caregiver-facing counselling (1.65), care integration (1.65), referral (1.7), and translation (1.7). Only two competencies received mean ratings which indicated unimportance, being medication prescriber (-0.25) and errands (-0.20). In addition to a hierarchy of rated importance within a competency group, **Table 4** also provides a hierarchy of ranked importance for competency groups. Ranking data indicated that the patient care management competency group had the greatest perceived importance among participants with a mean ranking of 2.80, this was followed by healthcare systems and service provision (4.85), patient communication (5.35), personality traits (5.65), patient disease management (5.90), caregiver communication (6.85), patient education (6.90), caregiver support (7.55), non-medical patient support (8.40),

communication within a practice (8.70), patient care delivery (8.95), operating within a practice (9.40), and medical ability (9.70).

In the highest-ranked competency group, patient care management, the highest-rated competency was care planning, and the lowest-rated was patient identification and recruitment. In the second highest-ranked competency group, health systems and service provision, the highest-rated competency was system and service knowledge, and the lowest-rated was service brokering. In the lowest-ranked competency group, medical ability, the highest-rated competency was medical record interpretation, and the lowest-rated was diagnosing. In the second lowest-ranked competency group, operating within a practice, the highest-rated competency was collaboration, and the lowest-rated was information technology (IT) skills.

**Table 5** summarizes the highest and lowest-rated competencies within each competency group.

| Competency                                                           | Mean Rating<br>(-3 to +3) | Standard<br>Deviation | Min | Max |
|----------------------------------------------------------------------|---------------------------|-----------------------|-----|-----|
| <b>Patient Care Management (Mean ranking=2.80)</b>                   |                           |                       |     |     |
| Care planning                                                        | 2.75                      | 0.43                  | 2   | 3   |
| Patient identification and recruitment                               | 1.1                       | 1.18                  | -2  | 3   |
| <b>Healthcare Systems and Service Provision (Mean ranking= 4.85)</b> |                           |                       |     |     |
| System and service knowledge                                         | 2.8                       | 0.4                   | 2   | 3   |
| Service broker                                                       | 1.3                       | 1.61                  | -2  | 3   |
| <b>Patient Communication (Mean Ranking = 5.35)</b>                   |                           |                       |     |     |
| Relationship and rapport-building                                    | 2.9                       | 0.3                   | 2   | 3   |
| Being a confidant                                                    | 1.5                       | 1.07                  | -1  | 3   |
| <b>Personality Traits (Mean Ranking = 5.65)</b>                      |                           |                       |     |     |
| Compassionate or Empathic                                            | 2.85                      | 0.36                  | 2   | 3   |
| Cheerleader                                                          | 1.85                      | 0.57                  | 1   | 3   |
| <b>Patient Disease Management (Mean ranking=5.90)</b>                |                           |                       |     |     |
| Exploring barriers                                                   | 2.65                      | 0.5                   | 2   | 3   |
| Medication prescriber                                                | -0.25                     | 1.76                  | -3  | 3   |
| <b>Caregiver Communication (Mean Ranking = 6.85)</b>                 |                           |                       |     |     |

|                                                             |      |      |    |   |
|-------------------------------------------------------------|------|------|----|---|
| Relationship and rapport-building                           | 2.8  | 0.4  | 2  | 3 |
| Counselling                                                 | 1.65 | 0.79 | -1 | 3 |
| <b>Patient Education (Mean Ranking = 6.90)</b>              |      |      |    |   |
| Coaching                                                    | 2.2  | 0.78 | 1  | 3 |
| Advising                                                    | 2.05 | 0.97 | -1 | 3 |
| <b>Caregiver Support (Mean Ranking = 7.55)</b>              |      |      |    |   |
| Empathy                                                     | 2.5  | 0.5  | 2  | 3 |
| Transportation                                              | 0.9  | 1.41 | -3 | 3 |
| <b>Non-Medical Patient Support (Mean Ranking = 8.4)</b>     |      |      |    |   |
| Problem-solving                                             | 2.85 | 0.36 | 2  | 3 |
| Errands                                                     | -0.2 | 1.4  | -2 | 2 |
| <b>Communication Within a Practice (Mean Ranking = 8.7)</b> |      |      |    |   |
| Confidentiality                                             | 2.85 | 0.36 | 2  | 3 |
| Networking                                                  | 1.8  | 0.75 | 0  | 3 |
| <b>Patient Care Delivery (Mean Ranking = 8.95)</b>          |      |      |    |   |
| Arranging services                                          | 2.65 | 0.57 | 1  | 3 |
| Care delivery                                               | 1.95 | 0.67 | 1  | 3 |
| <b>Operating Within a Practice (Mean Ranking = 9.4)</b>     |      |      |    |   |
| Collaboration                                               | 2.7  | 0.48 | 2  | 3 |
| Information technology (IT) skills                          | 1.8  | 0.6  | 1  | 3 |
| <b>Medical Ability (Mean Ranking = 9.7)</b>                 |      |      |    |   |
| Medical record interpretation                               | 2.45 | 0.59 | 1  | 3 |
| Diagnosing                                                  | 0.95 | 1.24 | -2 | 3 |

**Table 5:** Summary of highest and lowest-rated individual competencies in each competency group.

#### 4.2.4: Response Frequencies

**Table 6** shows a breakdown of the number of competencies within each rating category for each competency group. Of the 125 competencies identified in the scoping review and verified by participants, 90 were rated as being very important. The remaining 35 were rated as important or below. The majority of the competencies not rated as very important, 31 in total, were rated as being important. The remaining four competencies were rated as being slightly important and being neither important nor unimportant, with two in each category respectively. Almost all competencies, 121 out of the identified 125, received ratings indicating some degree of importance. The competency group with the highest proportion of competencies ranked as

being very important was patient education (100%), followed by patient care delivery (89%), and personality traits (88%). Those with the lowest proportion of competencies ranked as being very important were patient care management (58%), medical ability (63%), and caregiver support and non-medical patient support (60%).

|                                          | <b>No (%)</b>         |                  |                           |                 |                             |                    |                         |
|------------------------------------------|-----------------------|------------------|---------------------------|-----------------|-----------------------------|--------------------|-------------------------|
| <b>Competency Group</b>                  | <b>Very Important</b> | <b>Important</b> | <b>Slightly Important</b> | <b>Neither*</b> | <b>Slightly Unimportant</b> | <b>Unimportant</b> | <b>Very Unimportant</b> |
| Patient Care Management                  | 7 (58)                | 5 (42)           | 0 (0)                     | 0 (0)           | 0 (0)                       | 0 (0)              | 0 (0)                   |
| Healthcare Systems and Service Provision | 5 (71)                | 2 (29)           | 0 (0)                     | 0 (0)           | 0 (0)                       | 0 (0)              | 0 (0)                   |
| Patient Communication                    | 8 (67)                | 4 (33)           | 0 (0)                     | 0 (0)           | 0 (0)                       | 0 (0)              | 0 (0)                   |
| Personality Traits                       | 15 (88)               | 2 (12)           | 0 (0)                     | 0 (0)           | 0 (0)                       | 0 (0)              | 0 (0)                   |
| Patient Disease Management               | 6 (67)                | 2 (22)           | 0 (0)                     | 1 (11)          | 0 (0)                       | 0 (0)              | 0 (0)                   |
| Caregiver Communication                  | 4 (67)                | 2 (33)           | 0 (0)                     | 0 (0)           | 0 (0)                       | 0 (0)              | 0 (0)                   |
| Patient Education                        | 3 (100)               | 0 (0)            | 0 (0)                     | 0 (0)           | 0 (0)                       | 0 (0)              | 0 (0)                   |
| Caregiver Support                        | 3 (60)                | 1 (20)           | 1 (20)                    | 0 (0)           | 0 (0)                       | 0 (0)              | 0 (0)                   |
| Non-Medical Patient Support              | 9 (60)                | 5 (33)           | 0 (0)                     | 1 (7)           | 0 (0)                       | 0 (0)              | 0 (0)                   |
| Communication Within a Practice          | 8 (80)                | 2 (20)           | 0 (0)                     | 0 (0)           | 0 (0)                       | 0 (0)              | 0 (0)                   |
| Patient Care Delivery                    | 8 (89)                | 1 (11)           | 0 (0)                     | 0 (0)           | 0 (0)                       | 0 (0)              | 0 (0)                   |
| Operating Within a Practice              | 9 (75)                | 3 (25)           | 0 (0)                     | 0 (0)           | 0 (0)                       | 0 (0)              | 0 (0)                   |
| Medical Ability                          | 5 (63)                | 2 (25)           | 1 (12)                    | 0 (0)           | 0 (0)                       | 0 (0)              | 0 (0)                   |
| <b>Total</b>                             | <b>90 (72)</b>        | <b>31 (24)</b>   | <b>2 (2)</b>              | <b>2 (2)</b>    | <b>0 (0)</b>                | <b>0 (0)</b>       | <b>0 (0)</b>            |

\*Neither Important nor Unimportant

**Table 6:** Competency groups with the number of individual competencies within each rating category.

The response frequencies to individual competencies are shown in **Appendix W**. For most of the competencies, responses were clustered at the positive end of the scale, indicating the perceived importance of a competency. The full range of possible responses was used for only a

few competencies. Medication prescriber, referral, service brokering, gatekeeping services, and caregiver-facing transportation received ratings at both ends of the scale: being rated as very unimportant and very important by different participants. Compassion and empathy, being holistic, problem-solving, patient and practice confidentiality, and patient relationship and rapport building, were both endorsed as very important by more than 85% of participants. The skewness of all responses, as measured by the Pearson 2 skewness coefficient, was 0.69, indicating and supporting a right skew to the survey's data.

#### **4.2.4: Emergent Competencies**

Within the survey, participants were given the opportunity to provide additional competencies which they felt were important for a care manager to possess but which were not identified in the review. Three competencies emerged from this: critical thinking, engaging in difficult conversations, and conflict management. These competencies could not be added to the survey, and as such could not be given an appraisal by participants.

#### **4.3: Interview Piloting**

The interview process described in this thesis was intended to go beyond the consultation process suggested by Arksey and O'Malley (2005). In line with the third specific aim, it was designed to gain a better understanding of why competencies identified by the scoping review and verified through the survey are important. Recruitment for the interview portion of the thesis was not sufficient to conduct a full qualitative investigation. Rather, the opportunity was taken to pilot the research procedure and interview guide for a more fulsome qualitative investigation at a later point. The methods described in section 3.2.2 were utilized as described.

#### 4.3.1: Participant Background

Of the 20 survey respondents, four indicated that they would be willing to be contacted for a follow-up interview, and one agreed to participate. The interview participant, referred to now as “Dianna” was a healthcare professional who was part of a community outreach program for an integrated healthcare team. On this team, Dianna and her colleagues were responsible for caring for patients with multiple chronic conditions as a method of reducing emergency room admissions and providing care to people who were not receiving adequate primary care. The care Dianna and their team provided was done in their patients' homes. They had been in that role for more than a decade. Dianna described herself as a care manager, stating that their team had adopted a team-based approach to care management in which each member of the outreach team was responsible for ensuring that patients received managed care. Most of Dianna’s patients were seniors, and those who were not were described as having the health age of a senior. Dianna’s interview lasted 61 minutes.

#### 4.3.2: Selected Excerpts

The interview conducted with Dianna uncovered noteworthy details regarding the importance of several competencies identified in the scoping review. It provided details as to why they are important in the context of a care manager who provides home-based primary care to older adults. **Table 7** shows all competencies which were covered in the interview. Below are excerpts selected from the interview which demonstrate the richness of the information which can still be gathered, as well as further slight endorsement for the importance of those competencies.

| <b>Patient-facing</b> | <b>Caregiver-facing</b> | <b>Practice-facing</b> |
|-----------------------|-------------------------|------------------------|
| Mobility              | Family engagement       | Communication          |
| Flexibility           | Caregiver support       | Care plan review       |

|                   |  |                         |
|-------------------|--|-------------------------|
| Communication     |  | Collaboration           |
| Rapport-building  |  | Reviewing care packages |
| Trust-builder     |  |                         |
| Disease knowledge |  |                         |

**Table 7:** Competencies discussed in Dianna's interview.

### **Personality Traits - Willing to Go Above and Beyond**

Dianna emphasized that, as a personality trait, in performing their role as a care manager, they and their team go above and beyond for the patients whom they care for. They further explained that, even if a client wishes to receive services no longer, they are still willing to go out of their way for their patients.

We often try hard, for these patients. So I know we've had conversations where. not burned out, but like, where we feel like we're really trying a lot harder than the patients. And then you hear people saying, well, you don't try harder than your patients. But our team is sometimes motivated to go above and beyond, like, really trying to find different solutions for these issues that are arising or, yeah, or different methods or approaches or different team members. It's just that we don't, we don't quit, we don't quit. Even when someone sometimes fires us, we'll leave it for a few months and go back and knock on their door. And more often than not we're welcomed back in. We just know that because of the different personalities, or maybe brain injuries or whatever, that we've worked with, that things aren't always the way they seem. So we're willing to keep trying, like... Yeah, we don't give up easy and we do genuinely care for, for these patients. And for their well-being.

### **Caregiver Communication - Family Engagement**

Dianna endorsed the value of engaging with the families of those whom they care for and added nuance to the benefits of family engagement. They indicated that as a care manager, family engagement can aid in maintaining the treatment plan, and that this help given by families can have significant impacts.

But we try to utilize them if we can, to help facilitate the treatment plan. Because a lot of these patients, they may lack of motivation or something may be preventing them from following through with any of the advice that's given to them either from their family doctor or the hospital or the pharmacy or whoever. So if we can get the the, the family member to help, it can be significant.

### **Medical Ability - Pharmacology Knowledge**

Dianna endorsed the concept of care managers having an understanding of medications and how they may impact older adults, as this understanding can help to avoid potential complications which can arise from improper medication regimens.

I don't know if it's 100% essential, but I do know it makes a difference because when you're talking about seniors, I can't remember it's like 25%, or maybe up to 50% of like hospital visits for seniors is medication related, whether they've taken medication inappropriately, or they're lacking medication that they need, or a medication has caused an adverse effect, like a fall, or, you know, sometimes medication changes as people age, age, there's like the there's like a narrow therapeutic index with certain high-risk medications, which can cause severe adverse effects leading to hospitalizations. So I know, in seniors, medication is a big thing. So it would be great for someone to at least have, you know, a basic level of medication knowledge too.

### **4.3.3: Emergent Competencies**

Though the pilot process consisted of only one interview, it did identify competencies that had not been identified by either the scoping review or by participants during the survey consultation phase. Dianna indicated that care managers working in home-based primary care with older adults should know how to de-escalate situations where their patients may be experiencing mental health issues, aid their patients with accessing appropriate housing, as well as have an awareness of their patient's finances. Once more, these competencies could not be added to the survey or further discussed in additional interviews.

## **5.0: Discussion**

### **5.1: Summary**

This thesis sought to identify competencies which are necessary for care managers who work with chronically ill older adults in a home-based primary care healthcare delivery model. To achieve this, a scoping review was performed, including the sixth consultation step described by Arksey and O'Malley (2005). The scoping review uncovered 65 academic articles and 15 pieces of grey literature, from which 125 competencies for care managers who worked with older adults were identified. These competencies were organized into 13 groups (patient care management, healthcare systems and service provision, patient communication, personality traits, patient, disease management, patient education, non-medical patient support, caregiver communication, caregiver support, communication within a practice, patient care delivery, operating within a practice, and medical ability) representing three audience-facing facets (patient-facing, caregiver-facing, and practice-facing).

To accomplish the consultation step of the Arksey and O'Malley framework (2005) the competency groups identified through the scoping review were used to create a survey. This was administered to people with experience with home-based healthcare provision and care management for verification. A total of 20 participants completed this survey, providing ratings for individual competencies as well as rankings for competency groups. Lastly, this thesis attempted to gain a better understanding of why the identified competencies were important in home-based primary care through semi-structured interviews with care managers and healthcare providers. Though the interview process could not sufficiently recruit participants for a full qualitative interview, it did allow for the interview procedure and interview guide to be piloted, as well as some additional endorsement of the competencies which were discussed.

## 5.2: Key Findings

Of the highest-rated competencies, only two, care planning and care continuity, belonged in the highest-ranked competency group, patient care management, while only one of the highest-rated competencies, system and service knowledge, belonged to the second highest-ranked competency group, healthcare systems and service provision. The dissonance between the highest-rated competencies and the rankings of their competency groups potentially indicates that the importance of competency groups themselves differs from the importance of individual competencies held within them: the whole being different from the sum of its parts. This dissonance warrants additional investigation, and potential refinement of the survey in preparation for future administration.

Regarding the survey itself, the high degree of internal consistency, as measured through Cronbach's alpha, could indicate a high degree of reliability. This, though, is not necessarily the case. As surveys increase in length, Cronbach's alpha typically increases as well (Tavakol & Dennick, 2011). The calculated Cronbach's alpha of 0.93 for the whole survey itself could be due to the survey's length. Some authors suggest that, for decision-making purposes, an alpha value of 0.90 is minimally acceptable, but that alpha values of 0.95 are ideal (Nunnally, 1978). Others, though, suggest that alpha values above 0.90 may indicate some degree of redundancy in the scale (Streiner, 2003). The majority of competency groups, eight, did have alphas which indicate at the very least good internal consistency, with four being questionable and only one having a Cronbach's alpha below the acceptable level. This unacceptably internally consistent competency group, caregiver support, possessed the competency rated as having the lowest importance (without being rated as unimportant), caregiver-facing transportation. If that competency were deleted from the scale, the corrected Cronbach's alpha would rise to 0.78, as

**Appendix X** shows. As Cronbach's alpha relies on a scale's homogeneity and unidimensionality of a latent construct, the caregiver-facing transportation competency may be heterogeneous to the latent construct represented by caregiver support (Hagell, 2014). Consideration should be given to the deletion or rewording of that competency in future survey administrations.

The Pearson 2 skewness coefficient was calculated to detect the skewness of the data. For the data collected, a coefficient of 0.69 was calculated from the whole dataset, indicating that the data were right-skewed. This means that rather than being normally distributed between importance and unimportance, the competencies appraised by participants were largely given positive, important, ratings. The decision was made at the outset of this thesis to utilize a bipolar scale to capture potential ratings of importance and unimportance, which was also supported by the cognitive interview used to test the validity of the survey. Future administrations of the survey may wish to utilize an asymmetric Likert scale to maintain sensitivity to perceptions of competencies being unimportant while increasing the number of response options for importance to better avoid the ceiling effect (Voutilainen et al., 2016; Ware & Hays, 1988).

Both the qualitative and quantitative phases of the consultation uncovered competencies which had not been identified by the scoping review. In the quantitative portion, participants were provided opportunities in the survey to input competencies which were not included that they thought had been overlooked. From this process, respondents suggested three new competencies: critical thinking, engaging in difficult conversations, and conflict management. Literature in the nursing field (Fesler-Birch, 2005), as well as in healthcare education more broadly (Huang et al., 2014; Sharples et al., 2017), support the notion of critical thinking being a key competency. Similarly, being able to engage family caregivers and patients in difficult conversations has been acknowledged as a component of relational and communication skills

(Baer & Weinstein, 2013; Meyer et al., 2009). The presence of these competencies in the wider healthcare literature, and not in the care management literature, could indicate that these skills are foundational enough to be presumed as present in care managers. Regardless, these competencies should be added to the survey during future administrations, to verify and contextualize their importance.

Dianna's interview also revealed several competencies that they perceived as valuable to care managers, yet these had not been explicitly identified in the literature. With regards to care management in home-based settings generally, Dianna suggested that care managers must know how to de-escalate situations where their patients may be experiencing mental health issues. With regards to older adults, Dianna also suggested that care managers should be able to aid their patients with accessing appropriate housing, as well as awareness of their patient's finances, though this was an aspect included within the patient monitoring competency. Though these competencies were not identified by the scoping review or grey literature search, subsequent survey administrations will consider their inclusion given that knowledgeable stakeholders perceived them as valuable in practice.

Conversely to the consultation portion of this thesis, the grey literature component of the scoping review, though it yielded 15 included articles from over 6000 screened items, did not provide any additional competencies that had not already been identified by the scoping review. The articles included did, however, add weight to the competencies which had been identified in the review of the academic literature, providing further support for 40 individual competencies across all three of the audience-facing facets. This potentially indicates that the academic literature has not lagged behind what is known in practice, or that some competencies which are known by professionals who work in care management, as identified by the consultation process

or by those who work in other fields, may have yet to make it into either the academic or professional care management literature despite their existence in other areas of the broader healthcare literature.

Though the grey literature search yielded no new competencies, the scoping review in itself identified a greater number of competencies than the number endorsed by professional organizations. The latest edition of the American Case Management Association Standards of Practice and Scope of Services (ACMA, 2023) includes 25 competencies for professionals, and earlier editions feature as few as six (NCMN, 2009). These suggested competencies, though, are not in reference to older adults, and are not about a home-based care setting, which were criteria for inclusion within the review.

The scoping review identified competencies for family caregivers which were unique to those identified for patients. In neither the latest Canadian nor American professional literature are informal caregivers considered as a unique audience with whom a care manager may need to interact. The material provided by an American professional organization includes family and caregivers in competencies which address patients: considering patients' expectations during care planning, for instance, to include the perspectives of their family and caregivers (ACMA, 2023). The Canadian professional material only considers the incorporation of a caregiver in instances where the patient is a dependent, in which case the competencies they recommend are extended to the dependent patient's primary caregiver or caregiver network (NCMN, 2009). The scoping review identified several competencies concerning caregivers that were distinct from those identified for older adult patients, particularly with regard to caregiver support. Informal caregivers, despite being key supports for older adults (Brémault-Phillips et al., 2016) and experiencing health deficits (Capistrant et al., 2012; Sallim et al., 2015; Von Känel et al., 2006)

and burnout (Gérain & Zech, 2019) as a result of their labour, are often overlooked (Riedel et al., 2016). The scoping review identified some techniques that care managers can use to support family caregivers, such as: engaging them in physical activity regimens (Warkentin et al., 2022), supporting them emotionally (Peckham et al., 2014), and empowering them through aid in decision-making (Balard et al., 2016; Hayes & McCarthy, 2016). The concept of supporting older adults by targeting the health and well-being of their caregiver was not only supported by literature in areas of the healthcare field (Giosa et al., 2014; Holroyd-Leduc et al., 2016), but was also an aspect of caregiver support endorsed by Dianna:

If it like, if the caregiver is so overburdened or stressed out, they can't care for themselves anymore, so how can they care? So we tried to prevent, like burnout and crisis situation, I try to provide them with options earlier on in the care process than later.

The importance and benefits of communicating with caregivers in the care of older adults have been observed elsewhere in the healthcare literature (Glenny et al., 2013; Holroyd-Leduc et al., 2016). In a qualitative study by Glenny et al. (2013), both family caregivers and healthcare providers acknowledged the benefits of communication and involvement of caregivers. Despite seeing the benefits, their communication was hampered, with both groups describing their role as receiving information, rather than mutual information sharing (Glenny et al., 2013). Some care providers indicated that they only saw a need to speak with family caregivers when their patients were impaired, despite caregivers having important information to share with providers (Glenny et al., 2013). Care managers in home-based settings may be able to bridge the communication gap between caregivers and care providers when such gaps occur as an aspect of their competency as an information sharer with caregivers and within their practice. This review and consultation, overall, supports engaging with caregivers to improve the care that can be provided to older adult loved ones, whether by caregivers or professionals.

An additional competency group which was present in the review but absent in the professional literature are the personality traits of care managers who work with older adults. There is a body of literature supporting the importance of soft and interpersonal skills in the healthcare field (Ayonrinde, 2003; Chichirez & Purcărea, 2018a; Jemal et al., 2023; Murakami et al., 2010; Thompson, 1985; Zolkefli, 2018). Their identification by the scoping review, as well as their positive average rankings, affirms their relevance and importance to care management for older adults receiving care in home-based settings. The identification and high average rating of cultural sensitivity, in the context of southern Ontario, is especially relevant due to the higher levels of diversity in the province when compared to other provinces (Shooshtari et al., 2020).

Two competencies identified by the scoping review received average negative, unimportant, ratings by survey participants: errands (AVG=-0.20) and medication prescriber (AVG=-0.25). Though a care manager's ability to perform errands may be unimportant to their role given its rating, the qualitative consultation conducted with Dianna introduced some nuance to the importance of prescribing. Dianna, when asked which professional group would be best suited to fulfilling the role of a care manager, stated that:

So yeah, if you just have one [care manager], it might just be, you know, ideal to have like a nurse practitioner or someone as a prescriber. But if you can't get a prescriber, if you can have that multidisciplinary approach, it kind of makes up for it.

If an integrated care team only has one care manager, in Dianna's opinion, it is ideal for that care manager to be able to prescribe. However, having a professional who can be on a team with a care manager can compensate for the care manager's lack of ability to prescribe. Further qualitative investigation, though, is required to understand the importance of a care manager's ability to prescribe. Similarly, the ability of a care manager to diagnose received low endorsement by survey participants (AVG=0.95). Despite the fact that many roles may not be

capable of prescribing and diagnosing, certain professionals such as nurse practitioners are capable of both prescribing and diagnosing (Canadian Nurses Association, n.d.) and there is precedent for these professional groups to be care managers (Glettler & Leen, 1996; Micheels et al., 1995; Miguélez-Chamorro et al., 2019). Though the literature included within this review endorses the importance of those groups having the competency to diagnose and prescribe (Luzinski et al., 2008; Mick & Ackerman, 2002), further consultation is needed to endorse their importance with less ambiguity in the context of southern Ontario. Some of the articles which identified competencies included in the review indicated that care managers may view them with some disfavour. Both service brokering and service gatekeeping were disapproved of by participants in two studies (Dolen, 1995; You et al., 2016). In this study, both competencies were rated as being between slightly important and important, with both being rated as an average of 1.30, potentially supporting ambivalence towards these competencies in home-based settings. Future interviews should seek to gain a better understanding of why these competencies may be viewed with disfavour in home-based settings by care managers.

The ability of a care manager to provide transportation was identified as a competency in community and primary care settings for both patients and their caregivers (Anker-Unnever & Netting, 1995; Bane, 1997; Warkentin et al., 2022). A care manager's ability to transport patients to services, in a home-based primary care delivery model, may be unnecessary, as service provision is brought to the patient's residence (Sawchuk et al., 2022). Survey participants seemed to support this given the relatively lower ratings assigned to both patient-facing (AVG=1.45) and caregiver-facing (AVG=0.90) competencies. However, their non-negative ratings may indicate that there may still be some necessity for care managers to provide transportation in some circumstances.

Population aging is likely to affect different areas at different rates. In Canada, rural areas age faster than urban or suburban areas: the proportion of people who live in rural areas that are seniors is approximately 18%, whereas in urban and suburban areas the proportion of seniors is 15% and 17%, respectively (Channer et al., 2021). Rural areas of Canada typically have poorer access to healthcare providers and services, in terms of scope and number (CIHI, n.d.), and rural patients report poorer experiences with healthcare systems, such as inefficiencies and lack of informational continuity (Wong & Regan, 2009). Though it did uncover some articles which explicitly considered rural settings (Griffin & Coburn, 2014; Kelley & MacLean, 1997; Ohta et al., 2019), the consultation phase of the project did not seek to verify the identified competencies with an emphasis on a rural context. Further consultation may be necessary to ascertain the importance of the competencies with more specificity to rural southern Ontario.

It is worth noting once more that the qualitative findings of this study, limited in quantity as they may be, were considered carefully, and careful consideration was given to the rigour of the qualitative phase. The peer examination and reflexivity conducted, in particular, are especially noteworthy, as they allowed for the qualitative phase's interpretations to be scrutinized to minimize bias that the researcher may have introduced. Nevertheless, the researcher who conducted this study's position, as a younger western cis-male researcher with no lived experience providing or receiving home-based primary care, is likely to have impacted interpretations. During future qualitative data collection, scrutiny, from within and without, should be maintained to ensure that bias being introduced to the study's findings is minimized.

Good communication is broadly regarded as a necessary competency within the healthcare field (Chichirez & Purcărea, 2018b; Kourkouta & Papathanasiou, 2014; Svenningsson et al., 2021; Vermeir et al., 2015). Poor communication in healthcare provision diminishes

continuity of care, compromises safety and satisfaction, and can lead to inefficient uses of resources (Vermeir et al., 2015). This review identified communication as a facilitating competency that care managers must possess when working with patients and caregivers, and within a practice. Studies emphasized the negative effects that poor communication can have on community-dwelling older adults (Allen et al., 2013), and noted that care managers play a pivotal role in bridging communication gaps between patients and their providers (Lawless et al., 2020; Luzinski et al., 2008). Within practices, care managers and care management were seen as a method for ameliorating lapses in communication (Lawless et al., 2020). Communication as a competency for care managers, additionally, was highly endorsed by survey participants across all three facets, with patient communication receiving a rating of 2.80, followed by 2.70 and 2.60 for caregivers and practices respectively. As one of the only competencies to be identified across all three audiences, this review also emphasized the importance of multi-faceted communication by care managers. The only other competencies to be identified across all three audience facets by this review were relationship building, which received equally high endorsements from participants (Patient AVG=2.90, Caregiver AVG=2.80, Practice=2.60), and information sharing (Patient AVG=2.65, Caregiver AVG=2.65, Practice=2.70). Though highly endorsed as important competencies for care managers, little information could be synthesized regarding their relationship to one another. Given communication's importance within the healthcare field for both information sharing (Haidet & Paterniti, 2003; Lawn et al., 2015) and relationship building (Jones et al., 1997; Raso, 2014), further consultation will be necessary to understand better the relationship they share within home-based care management with older adults.

### 5.3: Limitations

Though efforts were made to ensure the rigour of this thesis, some limitations still exist which warrant discussion. Firstly, regarding the scoping review, only a single reviewer could be used to screen the majority of articles. Systematic screening done by a single reviewer, in place of a typical double-reviewer screening, introduces the possibility that potentially relevant articles would be omitted from a review, with studies showing as much as 13% of relevant articles being omitted (Gartlehner et al., 2020; Waffenschmidt et al., 2019). Two techniques were used to mitigate these potential omissions. Firstly, a sample of articles were screened with a second screener to refine and confirm the correct application of the screening criteria. Across a sample of 25 articles screened with a second reviewer, an eventual agreement of  $k=0.82$  was had, indicating high agreement between two reviewers using the same selection criteria (McHugh, 2012). This confirmatory screening phase produced a set of criteria which were used during single-reviewer screening. As a second technique to reduce inappropriately omitted articles, the screening criteria at the title and abstract level were applied broadly, which allowed for a greater number of articles to be reviewed more thoroughly at the full-text level. Nevertheless, there still exists the possibility that potentially relevant articles were omitted from the review, and thus the competencies extracted from the final set of included articles may not fully represent what is known in the literature.

Other limitations exist in the scoping review portion of this thesis, particularly in the screening process, which did not include a form of standardized quality assessment. Quality assessments in systematic review studies are done to ensure the included studies are of adequate quality on which to base conclusions: where the data source of the study is other studies themselves, the quality of those sources becomes crucial (Negarandeh & Beykmirza, 2020). In

scoping reviews, though, this critical appraisal step is optional (Arksey and O'Malley, 2005), and its exclusion is not out of the ordinary (Pham et al., 2014). The decision, ultimately, was made to omit the critical appraisal step as the purpose of the scoping review was to identify competencies which had already been discussed in the literature for further verification with people who have experience with care management and home-based primary care. The quality of the literature, in turn, would not impact the verification process, and removing competencies due to their studies being of poor quality would only reduce the amount of potentially important competencies from the verification process.

Due to the omission of the quality assessment phase, through, some articles included within the review were of lower quality. Several competencies were identified in articles which reported the perception of authors rather than reporting the results of a study. These papers were typically older, and were written by authors with experience in care management and gerontology. Once more, as these articles were to provide competencies, or provide further support for competencies which had already been identified, and would be further verified by informants knowledgeable about care management, they were included so as not to omit competencies unduly. However, competencies such as promoting function, transportation, collaborating with patients, objectivity, and triaging, which are supported by such articles, should be given further verification to ensure that they are still relevant and applicable to care management in a home-based primary care delivery model with older adults. Similarly, some competencies included within the review received little support in the literature yet were too distinct to be amalgamated with other competencies. Once again, though they did not have a robust evidence base in the literature, they were included in the review for verification with participants.

Some limitations are present with regard to the survey specifically. Demographically, the survey participants were homogeneous, being largely white, educated women. It is possible that the average appraisals of competencies and competency groups may have been different had there been more diversity in the sample, which would impact the recommendations for training and onboarding this thesis could provide. To remedy this, further survey administration should aim to increase the size and diversity of the sample. Additionally, though one form of reliability was assessed via internal consistency, this thesis could not assess any other. As this was a self-report survey, test-retest reliability would be an appropriate measure of reliability (Koo & Li, 2016; Streiner et al., 2015). Due to the limitations of master's level research, recruiting such a sample to calculate test-retest reliability was unfeasible, however, future survey administrations could do so.

Another considerable limitation of this thesis is the small sample recruited for qualitative consultation. The qualitative consultation process in this thesis was intended to be used as a method to add further context-specific depth and nuance to the competencies identified and verified by the scoping review and survey, respectively, and was aligned with the third specific aim of this thesis. To improve recruitment, the study was amended to include an honorarium for participation, with the hope that compensating for participants' time would encourage the completion of the survey as well as interviews. However, despite this, qualitative recruitment could not be adequately increased during the data collection period. Since too little qualitative consultation could be conducted to contextualize the results, the single qualitative interview which could be conducted was used primarily as an opportunity to provide further endorsement of the importance of individual competencies, in place of the full qualitative analysis that had been proposed. Additionally, the interview was used as a pilot test of the interview guide for

further contextualization. Relating to the sampling, the survey phase of the consultation was not able to recruit older adults who received care management in home-based settings, rather, only professionals doing care management and healthcare providers. The inclusion of older adults in healthcare research is imperative at all stages (Goodwin et al., 2023), and as such, future investigation should be done which focuses on verifying and contextualizing the importance of care manager competencies with older adults specifically, as their appraisal of importance as those receiving care would surely add nuance distinct from the information provided by healthcare and care managing professionals.

#### **5.4: Contributions:**

The completion of this thesis has made several contributions to the wider literature. Firstly, to the knowledge of the author, this thesis is the first review to attempt to fully integrate the competencies required by care managers who work with older adults. In doing so, this thesis provides a comprehensive list of competencies which can be utilized for care manager training and program development. In addition to this, this thesis also attempted to verify the importance of the identified competencies. This verification process produced a hierarchical list of competencies, which can be used to prioritize training and hiring of care managers. As the articles included in the scoping review were from a variety of care settings, the survey also served to contextualize the identified competencies in a home-based setting. This thesis was also, in a small way, able to demonstrate the depth of information available regarding the importance of care manager competencies in home-based primary care, as well as providing a method which could now be used to attain that knowledge from professionals who work in the field. Finally, this thesis has added to the body of literature which already exists on the importance of certain competencies when working with older adults. Lastly, this thesis was able to add further support

to the importance of competencies which other areas of the healthcare field have identified as being crucial in the provision of care to older adults, especially concerning supporting and communicating with their caregivers.

### **5.5: Recommendations**

Several recommendations can be made using the results of this thesis. Firstly, when employing care managers, professionals should consider broader aspects of their role beyond purely their ability to perform core care management tasks. Care management, for patients, should still be given the highest priority, but competencies related to patient communication should be given greater priority than competencies related to other competency groups, such as medical ability or non-medical patient support. Competencies related to their personality traits, though not acknowledged by professional organizations, were ranked highly and should be leveraged to improve patient care. Secondly, people planning home-based programs may wish to give greater and more intentional consideration to supporting and communicating with the caregivers of their older adult patients, rather than engaging with them when it is only necessary. As including caregivers can improve the care provided to older adults, care managers and the program designers who utilize them should be aware of how best to support them. People planning programs should acknowledge the role informal caregivers can play in providing care for older adults, and efforts should be made to ensure that they are well enough to continue caring for older adult patients, but also that their own needs are met. Care managers are well positioned to not only support caregivers but also facilitate the communication they have with healthcare providers. Thirdly, researchers investigating care management with older adults should consider emphasizing the impact of a rural setting on a care manager's role. Lastly, those deciding what training should be given to care managers may also wish to consider a broader

range of competencies which can impact their ability to perform their role. The training given to care managers should be done strategically, prioritizing competencies which were appraised as having higher importance. Additionally, as continuing education in itself was identified as an important competency, training for care managers should be done on a continuous and ongoing basis.

## **6.0: Conclusions**

This thesis identified and verified competencies which went beyond those which professional organizations had already endorsed. The breadth of care manager competencies uncovered exceeded those which professional organizations endorsed, and included a wider range of competencies than those that related to direct care management practice. The majority of competencies were endorsed as having some degree of importance, even the few that the literature indicated as being potentially unnecessary. One follow-up interview was conducted, but this was not sufficient to gain a deeper understanding of the importance of identified competencies. The interview participant did endorse willingness to go above and beyond, family engagement, and pharmacology knowledge as important competencies in their provision of home-based primary care and in their role as a healthcare provider who also does care management. Further consultation is necessary to understand better the importance of identified competencies in the provision of home-based primary care and care management to older adults. Practitioners, program developers, and care managers themselves should be conscious of the potential breadth of competencies a care manager may have to possess to work effectively with older adults in home-based settings, especially those pertaining to caregivers and personality traits, as these have yet to be endorsed as important by professional organizations. Training and hiring based on these competencies should focus on prioritizing those which were appraised as being of higher importance with respect to other competencies.

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## Appendices

### Appendix A: Final search strategy

| Database | Pubmed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | CINAHL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Scopus                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| String   | ("integrated care"[tw] OR<br>"Coordinated Care"[tw]<br>OR "Delivery of Health<br>Care, integrated"[MeSH]<br>OR "comprehensive<br>health care"[Tw] OR<br>"coordination of care"[tw]<br>OR "continuity of patient<br>care"[MeSH] OR<br>"comprehensive health<br>care"[MeSH] OR<br>"cooperative<br>behavior"[Mesh]) AND<br>("Case Management"[tw]<br>OR "Care<br>Management"[tw] OR<br>"Case managers"[mesh]<br>OR "Case<br>Management"[MeSH] OR<br>"care coordinat*"[tw] OR<br>"Care Manager"[tw])<br>AND<br>("Clinical<br>competence"[mesh] OR<br>"skills"[tw] OR<br>"competenc*"[tw] OR<br>"Role"[tw] OR<br>"responsibility"[tw]) AND<br>("Home"[tw] OR "Home<br>care Services"[MeSH] OR<br>"Community" [TW] OR<br>"community-based"[tw]<br>OR "Primary care"[TW]<br>OR "independent<br>living"[mesh] OR "home-<br>based"[tw] OR "home-<br>based care"[tw] OR<br>"homebound"[tw] OR<br>"office-based care"[tw]<br>OR "office based<br>care"[tw] OR "office<br>care"[tw]) | TX ( "integrated care"<br>OR "Coordinated<br>Care" OR (MH<br>"Delivery of Health<br>Care, integrated" +)<br>OR "comprehensive<br>health care" OR<br>"coordination of care"<br>OR (MH "continuity of<br>patient care" +) OR<br>"comprehensive<br>health care") OR (MH<br>"cooperative<br>behavior" +) ) AND<br>TX ( "Case<br>Management" OR<br>"Care Management"<br>OR (MH "Case<br>managers" +) OR (MH<br>"Case Management"<br>+) OR "care<br>coordinat*" OR "Care<br>Manager" ) AND<br>TX ( (MH "Clinical<br>competence" +) OR<br>"skills" OR<br>"competenc*" OR<br>"Role" OR<br>"responsibility" ) AND<br>TX ( "Home" OR (MH<br>"Home health<br>Services" +) OR<br>"Community" OR<br>"community-based"<br>OR "Primary care" OR<br>(MH "community<br>living"+) OR "home-<br>based" OR "home-<br>based care" OR<br>"homebound" OR | TX ( "integrated care" OR<br>"Coordinated Care" OR<br>(MH "Delivery of Health<br>Care, integrated" +) OR<br>"comprehensive health<br>care" OR "coordination of<br>care" OR (MH "continuity<br>of patient care" +) OR<br>"comprehensive health<br>care") OR (MH<br>"cooperative behavior"<br>+) ) AND<br>TX ( "Case Management"<br>OR "Care Management"<br>OR (MH "Case<br>managers" +) OR (MH<br>"Case Management" +)<br>OR "care coordinat*" OR<br>"Care Manager" ) AND<br>TX ( (MH "Clinical<br>competence" +) OR<br>"skills" OR<br>"competenc*" OR "Role"<br>OR "responsibility" ) AND<br>TX ( "Home" OR (MH<br>"Home health Services"<br>+) OR "Community" OR<br>"community-based" OR<br>"Primary care" OR (MH<br>"community living"+) OR<br>"home-based" OR<br>"home-based care" OR<br>"homebound" OR "office-<br>based care" OR "office<br>based care" OR "office<br>care" ) |

|                |      |                                                                     |     |
|----------------|------|---------------------------------------------------------------------|-----|
|                |      | "office-based care"<br>OR "office based care"<br>OR "office care" ) |     |
| <b>Results</b> | 1702 | 396                                                                 | 803 |

## Appendix B: Google searches

| Search # | Search terms                                              | Number of results | Number of included results TIAB | Number of included results Full-text | Link to results                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------|-----------------------------------------------------------|-------------------|---------------------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1        | integrated care management skills in the community “pdf”  | 225,000,000       | 12                              | 2                                    | <a href="https://www.google.com/search?q=integrated+care+management+skills+in+the+community+%E2%80%9Cpdf%E2%80%9D&amp;rlz=1C1GCEA_enCA1056CA1056&amp;oq=integrated+care+management+skills+in+the+community+%E2%80%9Cpdf%E2%80%9D&amp;aqs=chrome.0.69i59.1093j0j4&amp;sourceid=chrome&amp;ie=UTF-8">https://www.google.com/search?q=integrated+care+management+skills+in+the+community+%E2%80%9Cpdf%E2%80%9D&amp;rlz=1C1GCEA_enCA1056CA1056&amp;oq=integrated+care+management+skills+in+the+community+%E2%80%9Cpdf%E2%80%9D&amp;aqs=chrome.0.69i59.1093j0j4&amp;sourceid=chrome&amp;ie=UTF-8</a>             |
| 2        | Coordinated care management competencies home-based “pdf” | 122,000,000       | 2                               | 0                                    | <a href="https://www.google.com/search?q=Coordinated+care+management+competencies+home-based+%E2%80%9Cpdf%E2%80%9D&amp;rlz=1C1GCEA_enCA1056CA1056&amp;oq=Coordinated+care+management+competencies+home-based+%E2%80%9Cpdf%E2%80%9D&amp;aqs=chrome.0.69i59j69i60.16j0j9&amp;sourceid=chrome&amp;ie=UTF-8">https://www.google.com/search?q=Coordinated+care+management+competencies+home-based+%E2%80%9Cpdf%E2%80%9D&amp;rlz=1C1GCEA_enCA1056CA1056&amp;oq=Coordinated+care+management+competencies+home-based+%E2%80%9Cpdf%E2%80%9D&amp;aqs=chrome.0.69i59j69i60.16j0j9&amp;sourceid=chrome&amp;ie=UTF-8</a> |
| 3        | Case manager competencies for home-based primary care     | 136,000,000       | 17                              | 0                                    | <a href="https://www.google.com/search?q=Case+manager+competencies+for+home-based+primary+care&amp;rlz=1C1GCEA_enCA1056CA1056&amp;oq=Case+manager+competencies+for+home-based+primary+care&amp;aqs=chrome.69i57j69i60.2356j0j9&amp;sourceid=chrome&amp;ie=UTF-8">https://www.google.com/search?q=Case+manager+competencies+for+home-based+primary+care&amp;rlz=1C1GCEA_enCA1056CA1056&amp;oq=Case+manager+competencies+for+home-based+primary+care&amp;aqs=chrome.69i57j69i60.2356j0j9&amp;sourceid=chrome&amp;ie=UTF-8</a>                                                                                 |

|   |                                                           |               |    |   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---|-----------------------------------------------------------|---------------|----|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | Care manager roles and skills in comprehensive healthcare | 523,000,000   | 19 | 0 | <a href="https://www.google.com/search?q=Care+manager+roles+and+skills+in+comprehensive+healthcare&amp;rlz=1C1GCEA_enCA1056CA1056&amp;oq=Care+manager+roles+and+skills+in+comprehensive+healthcare&amp;aqs=chrome..69i57j940j0j9&amp;sourceid=chrome&amp;ie=UTF-8">https://www.google.com/search?q=Care+manager+roles+and+skills+in+comprehensive+healthcare&amp;rlz=1C1GCEA_enCA1056CA1056&amp;oq=Care+manager+roles+and+skills+in+comprehensive+healthcare&amp;aqs=chrome..69i57j940j0j9&amp;sourceid=chrome&amp;ie=UTF-8</a>                 |
| 5 | Competencies for care managers who work with older adults | 1,080,000,000 | 18 | 7 | <a href="https://www.google.com/search?q=Competencies+for+care+managers+who+work+with+older+adults&amp;rlz=1C1GCEA_enCA1056CA1056&amp;oq=Competencies+for+care+managers+who+work+with+older+adults&amp;aqs=chrome..69i59j69i60l2.571j0j9&amp;sourceid=chrome&amp;ie=UTF-8">https://www.google.com/search?q=Competencies+for+care+managers+who+work+with+older+adults&amp;rlz=1C1GCEA_enCA1056CA1056&amp;oq=Competencies+for+care+managers+who+work+with+older+adults&amp;aqs=chrome..69i59j69i60l2.571j0j9&amp;sourceid=chrome&amp;ie=UTF-8</a> |

### Appendix C: Targeted website search

| Website                                                      | URL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Agency for healthcare research and quality                   | <a href="https://search.ahrq.gov/advanced-search?search-leastone=Care+manager+competencies+for+older+adult+care&amp;search-fileformat-search-boolean=1&amp;search-fileformat=application%2Fpdf&amp;search-occurrence=title&amp;search-domain-search-boolean=1&amp;search-domain=www.ahrq.gov">https://search.ahrq.gov/advanced-search?search-leastone=Care+manager+competencies+for+older+adult+care&amp;search-fileformat-search-boolean=1&amp;search-fileformat=application%2Fpdf&amp;search-occurrence=title&amp;search-domain-search-boolean=1&amp;search-domain=www.ahrq.gov</a> |
| National Association of Professional Geriatric Care Managers | <a href="https://stowellassociates.com/national-association-of-professional-geriatric-care-management/">https://stowellassociates.com/national-association-of-professional-geriatric-care-management/</a>                                                                                                                                                                                                                                                                                                                                                                             |
| Public Health Agency of Canada                               | <a href="https://www.canada.ca/en/sr/srb.html?q=care+manager+competencies+for+older+adults&amp;wb-srch-sub=#wb-land">https://www.canada.ca/en/sr/srb.html?q=care+manager+competencies+for+older+adults&amp;wb-srch-sub=#wb-land</a>                                                                                                                                                                                                                                                                                                                                                   |
| Public Health Ontario                                        | <a href="https://www.publichealthontario.ca/en/Search#q=care%20manager%20role%20older%20adults&amp;sort=%40calculatedpublisheddate82423%20ascending">https://www.publichealthontario.ca/en/Search#q=care%20manager%20role%20older%20adults&amp;sort=%40calculatedpublisheddate82423%20ascending</a>                                                                                                                                                                                                                                                                                   |
| American Case Management Association                         | <a href="https://www.acmaweb.org/#addsearch=care%20manager%20role%20older%20adult">https://www.acmaweb.org/#addsearch=care%20manager%20role%20older%20adult</a>                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Appendix D: Inclusion and Exclusion Criteria

| Inclusion Criteria                                                                                                                                                                                                                                                                                       | Exclusion Criteria                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Written in English</li> <li>Includes the provision of healthcare</li> <li>Focus on older adults</li> <li>Discusses care managers or management</li> <li>Discusses attributes/competencies of care managers that facilitate/impece successful provision</li> </ul> | <ul style="list-style-type: none"> <li>Written in a language other than English</li> <li>Does not discuss care managers or care management</li> <li>Does not discuss competencies</li> </ul> |

## Appendix E: Scoping review extracted data

| Author, Year, Location            | Study Type & Methods     | Aims                                                                                     | Setting                              | Population                                        | Competencies                                                                                                                                                                                                                                                                                      |
|-----------------------------------|--------------------------|------------------------------------------------------------------------------------------|--------------------------------------|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Abrahams, R<br>1992<br>America    | Review                   | To describe the experience from a social HMO                                             | Social HMOs, community and inpatient | Older adults who use Social HMOs                  | -System and Service Knowledge<br>-Coordinator<br>-Patient Monitor<br>-Discharge Planner<br>-Support (Caregiver)<br>-Assessment<br>-Referral<br>-Resource and Budget Management<br>-System Building<br>-Resource Mobilizer<br>-Communication (Practice)<br>-Dialog Crafting<br>-Information Sharer |
| Alexopoulos, G<br>2015<br>America | Randomized control trial | To test whether clinical case management integrated with problem solving therapy is more | Home, Community                      | Low-income, disabled elders with major depression | -Exploring Barriers<br>-Advocacy<br>-Problem Solving<br>-Educating<br>-Coordinator<br>-Care Planning                                                                                                                                                                                              |

| Author, Year, Location              | Study Type & Methods                                       | Aims                                                                                                  | Setting                          | Population                                                                          | Competencies                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                     |                                                            | effective than CCM alone in reducing depression, and whether problem solving skill mediate depression |                                  |                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Allen, J<br>2012<br>Australia       | Descriptive exploratory qualitative research. Focus groups | To describe the roles of community-based practitioners in communication of older client's information | Community                        | District nurse, practice nurses, aged care case managers who work with older adults | <ul style="list-style-type: none"> <li>-Communication (Patient)</li> <li>-Referral</li> <li>-Communication (Caregiver)</li> <li>-Communication (Practice)</li> <li>-Relationship and Rapport Building (Practice)</li> <li>-Joint Decision Making</li> <li>-Discharge Planner</li> </ul>                                                                                                                         |
| Anker-Unnever, L<br>1995<br>America | Overview                                                   | To describe the coordinated care partnership program operated by the St Joseph healthcare system      | Primary care physician practices | Elderly people                                                                      | <ul style="list-style-type: none"> <li>-Advocacy</li> <li>-Transportation (Patient)</li> <li>-Relationship and Rapport Building (Patient)</li> <li>-Collaborating (Patient)</li> <li>-Care Planning</li> <li>-Patient Screening</li> <li>-Patient Monitor</li> <li>-Trust Building</li> <li>-Transporter (Caregiver)</li> <li>-Referral</li> <li>-Collaborator (Practice)</li> <li>-Fluid (Practice)</li> </ul> |

| Author, Year, Location | Study Type & Methods | Aims                                                                                                                                                                                                                                                                                                                                                                                                   | Setting   | Population                                    | Competencies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        |                      |                                                                                                                                                                                                                                                                                                                                                                                                        |           |                                               | <ul style="list-style-type: none"> <li>-Experienced</li> <li>-Liaison (Practice)</li> <li>-Joint Decision Making</li> <li>-Information Sharer</li> <li>-Service Arranger or Accessor</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Baird, L 2018 Canada   | Scoping review       | To examine the extent, range, and nature of available research that describes how home care case managers (HCCMs) provide integrated care for older adults with multiple chronic conditions (MCCs); identify how case management standards of practice correspond with functions of integrated care; identify facilitators and barriers to case management and integrated care delivery; and propose a | Home care | Older adults with multiple chronic conditions | <ul style="list-style-type: none"> <li>-Person-centered Approach</li> <li>-Problem Solving</li> <li>-Arranging Services</li> <li>-Coordinator</li> <li>-Care Planning</li> <li>-Patient Identification and Recruitment</li> <li>-Care Implementing</li> <li>-Discharge Planner</li> <li>-Engage Clients Family</li> <li>-Assessment</li> <li>-Collaborator (Practice)</li> <li>-Leadership</li> <li>-Team Development</li> <li>-Joint Decision Making</li> <li>-</li> <li>-Facilitator/Implementor (Practice)</li> <li>-Evaluator</li> <li>-Discharge Planner</li> <li>-Service Arranger or Accessor</li> </ul> |

| Author, Year, Location | Study Type & Methods    | Aims                                                                                                                   | Setting | Population                                                                           | Competencies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------|-------------------------|------------------------------------------------------------------------------------------------------------------------|---------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        |                         | framework to describe how HCCMs can use case management standards to provide integrated care to older adults with MCCs |         |                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Balard, F 2016 France  | Qualitative exploratory | To provide knowledge about the failings of the PRISMA-FRANCE program                                                   | Home    | Older adults 60 and above who live at home, their caregiver, and their case managers | <ul style="list-style-type: none"> <li>-Advocacy</li> <li>-Problem Solving</li> <li>-Isolation Breaker</li> <li>-Translation</li> <li>-Being a Confidant (Patient)</li> <li>-Buffering (Patient)</li> <li>-Providing Information</li> <li>-Coaching</li> <li>-Coordinator</li> <li>-Attentive</li> <li>-Accessible</li> <li>-Relationship and Rapport Building (Caregiver)</li> <li>- Buffer/Mediator/Conciliator (Caregiver)</li> <li>-Support (Caregiver)</li> <li>-Empowering (Caregiver)</li> <li>-Buffer (Practice)</li> <li>-Being a Confidant (Practice)</li> <li>-Information Sharer</li> </ul> |

| Author, Year, Location               | Study Type & Methods      | Aims                                                                                                                                | Setting             | Population                                                                       | Competencies                                                                                                                                               |
|--------------------------------------|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bane, S<br>1997<br>America           | Review                    | To understand the barriers and facilitators to older adults accessing mental health services, and its implications for older adults | Community           | Older adults                                                                     | -Transportation (Patient)<br>-Communication (Patient)<br>-Coordinator<br>-Assessment<br>-Relationship and Rapport Building (Practice)                      |
| Baughman, K<br>2012<br>America       | Qualitative, focus groups | To better understand how community-based long-term care providers define advance care planning and their role                       | Community-based     | Care managers who work with Medicaid recipients, some of which were older adults | -Providing Information (Patient)<br>-Educating<br>-Coaching                                                                                                |
| Bayard, J<br>1997<br>America         | Overview                  | To outline the development and utilization of a care coordinator nurse in a community hospital setting                              | Community, Hospital | Older adults                                                                     | -Coordinator<br>-Care Integration<br>-Facilitator/Implementor                                                                                              |
| Bentley, A<br>2014<br>United Kingdom | Overview                  | To review the evidence, implementation, and evolution of case management within the role of the community matron                    | Community           | Older adults                                                                     | -Clinical Care<br>-Medication Prescriber<br>-Educating<br>-Coordinator<br>-Patient Identification and Recruitment<br>-Proactive<br>-Visible<br>-Assessment |

| Author, Year, Location               | Study Type & Methods                                | Aims                                                                                                                                                                       | Setting                 | Population                                                                                  | Competencies                                                                                                                                                                            |
|--------------------------------------|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Black, K<br>2005<br>America          | Overview                                            | To provide considerations when working with elders with questionable decision making capacity and precarious living situations                                             | Community               | Older adults with questionable decision making capacity and precarious living situations    | -Self-Management Promotion<br>-Promoting Function<br>-Independence Support<br>-Observation<br>-Patient Engagement<br>-Continuing Education                                              |
| Brown, K<br>2008<br>United Kingdom   | Qualitative study with one-on-one interviews        | To explore experiences and attitudes of older people who have a community matron to gain a better understand of the successes and failures of this form of case management | Community               | People on a community matrons case load who could provide informed consent, age range 74-91 | -Emotional Support (Patient)<br>-Relationship and Rapport Building (Patient)<br>-Arranging Services<br>-Educating<br>-Patient Monitor<br>-Willing to Go Above and Beyond<br>-Accessible |
| Carrier, J<br>2016<br>United Kingdom | Overview                                            | To provide an overview of how to manage long-term conditions in primary and community care                                                                                 | Primary care, Community | People with long-term conditions in primary and community care, age 60 included             | -Person-Centered Approach<br>-Holistic<br>-Patient Population Knowledge                                                                                                                 |
| Casado, B<br>2008<br>America         | Evaluation of program implementation, survey, focus | To describe the implementation of the Healthy IDEAS program and assess feasibility                                                                                         | Community agencies      | Older adults who used the Healthy IDEAS program and managers                                | -Educating<br>-Patient Screening<br>-Referral<br>-Assessment                                                                                                                            |

| Author, Year, Location               | Study Type & Methods   | Aims                                                                                                                                                                         | Setting             | Population                                                                             | Competencies                                                                                                                                                                                                                                                                                                          |
|--------------------------------------|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                      | groups, agency reports |                                                                                                                                                                              |                     |                                                                                        |                                                                                                                                                                                                                                                                                                                       |
| Challis, D<br>1991<br>United Kingdom | Evaluation             | To describe a service model where case managers were located in a geriatric multidisciplinary team to provide an alternative for patients who needed long stay hospital care | Community, Hospital | Older adults                                                                           | <ul style="list-style-type: none"> <li>-Emotional Support (Patient)</li> <li>-Coordinator</li> <li>-Patient Finding and Recruitment</li> <li>-Patient Screening</li> <li>-Patient Monitor</li> <li>-Emotional Support (Caregiver)</li> <li>-Assessment</li> <li>-Liaison</li> <li>-Reviewing Care Packages</li> </ul> |
| Ciccone, M<br>2010<br>Italy          | Feasibility assessment | To evaluate the impact of a disease and care management model and the introduction of care manager nurses trained in the role in the primary healthcare system               | Primary care        | People aged over 19, average age 64, who had CVD, CVD risk, Diabetes, or heart failure | <ul style="list-style-type: none"> <li>-Self-Management Promotion</li> <li>-Independence Support</li> <li>-Empowering (Patient)</li> <li>-Coordinator</li> <li>-Proactive</li> <li>-Assessment</li> </ul>                                                                                                             |
| Dant, T<br>1990<br>United Kingdom    | Overview               | To consider how responses to service provision to the elderly at risk of failing to cope can be met                                                                          | Community           | Elderly people at risk of failing to cope                                              | <ul style="list-style-type: none"> <li>-Advocacy</li> <li>-Counselling (Patient)</li> <li>-Coordinator</li> <li>-Care Planning</li> <li>-Patient Engagement</li> <li>-Counsellor (Caregiver)</li> <li>-Assessment</li> </ul>                                                                                          |

| Author, Year, Location            | Study Type & Methods                                                | Aims                                                                                                                                                                                           | Setting                              | Population                                                                                                         | Competencies                                                                                                                                       |
|-----------------------------------|---------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|--------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
|                                   |                                                                     |                                                                                                                                                                                                |                                      |                                                                                                                    | -Resource Mobilizer                                                                                                                                |
| DeJesus, R<br>2012<br>America     | Open ended questionnaire                                            | To ask patients and providers what qualities they look for in a care manager                                                                                                                   | Academic-based primary care practice | Patients and providers who've worked with care managers                                                            | -Disease Knowledge<br>-Translation<br>-Compassionate<br>-Honest<br>-Collaborator<br>-Team Follower<br>-Experienced<br>-Continuing Education        |
| de Stampa. M<br>2012<br>Canada    | Qualitative with semi-structured interviews                         | The purpose of the study was to understand better the clinical collaboration process among primary care physicians (PCPs), case managers (CMs), and geriatricians in integrated models of care | Community                            | PCPs, CMs, geriatricians from integrated care models who care for frail elderly patients                           | -Collaboration<br>-Team Development                                                                                                                |
| Dodd, J<br>2011<br>United Kingdom | Service delivery evaluation . Qualitative and quantitative analysis | To evaluate a service model for delivering care closer to home                                                                                                                                 | Home, Community                      | Patients, social workers, GPs, nurses, practice managers, and capacity managers. Patients in the program are older | -Person-Centered Approach<br>-Coordinator<br>-Fluid or Flexible (Patient)<br>-Responsive<br>-Assessment<br>-Collaborator (Practice)<br>-Leadership |

| Author, Year, Location            | Study Type & Methods | Aims                                                                                                                                                                                                                                                                    | Setting            | Population                                                         | Competencies                                                                                                                                                                                                                                     |
|-----------------------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                   |                      |                                                                                                                                                                                                                                                                         |                    | adults AVG age 83                                                  | -Resource Mobilizer<br>-Discharge Planner                                                                                                                                                                                                        |
| Dolen, L 1995<br>America          | Overview             | To overview the role of a geriatric case manager                                                                                                                                                                                                                        | Primary, Community | Geriatric care managers                                            | -Health System Navigation<br>-Gatekeep Services<br>-Advising<br>-Care Planning<br>-Care Continuity<br>-Compassionate<br>-Objective<br>-Buffer (Caregiver)<br>-Reporter/Information Sharer (Caregiver)<br>-Assessment<br>-Collaborator (Practice) |
| Drennan, V 2004<br>United Kingdom | Review               | The aim of this article is to provide an overview of service models that use a case management approach and the current evidence for their effectiveness. We will then describe current examples of nurse-led case management in the UK and discuss some key issues for | Community          | Older adults who receive managed care or nurse-led case management | -Coordinator<br>-Care Planner<br>-Patient Identification and Recruitment<br>-Patient Monitor<br>-Reviewing Care Packages                                                                                                                         |

| Author, Year, Location             | Study Type & Methods                            | Aims                                                                                                                                                                                   | Setting             | Population                                                                                 | Competencies                                                                                                              |
|------------------------------------|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
|                                    |                                                 | nurses in primary care and their patient's                                                                                                                                             |                     |                                                                                            |                                                                                                                           |
| Elwyn, G<br>2008<br>United Kingdom | Qualitative analysis of data from an evaluation | To know how case managers describe their work and how they perceived benefits for patients and for other service providers                                                             | Primary care        | Case managers who provide care for frail older adults                                      | -Support (Patient)<br>-Liaising (Patient)<br>-Educating<br>-Coordinator<br>-Assessment<br>-Pharmacology                   |
| Evashwick, C<br>1999<br>America    | Overview                                        | To highlight program examples of collaboration between the aging network providers and managed care organizations for case management, screening, assisted living, and adult day care. | Community           | Older adults                                                                               | -Independence Support<br>-Health System Navigation<br>-Patient Screening<br>-Relationship and Rapport Building (Practice) |
| Gallagher, L<br>2004<br>America    | Overview                                        | This paper presents the "Seven A's" as a framework for students to gain an understanding of and engage in the role and process                                                         | Academic, Community | Nursing students who will provide case management in the community, older adults inclusive | -Service Broker<br>-Coordinator<br>-Patient Monitor<br>-Assessment<br>-Continuing Education                               |

| Author, Year, Location       | Study Type & Methods                            | Aims                                                                                                                                                  | Setting   | Population                                       | Competencies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                              |                                                 | of case management in the community                                                                                                                   |           |                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Guttman, R<br>1999<br>Canada | Case series with observations                   | to describe the characteristics and advantages of a unique case management approach to manage the healthcare of frail elderly living in the community | Community | Frail elderly                                    | <ul style="list-style-type: none"> <li>-Person-Centered Approach</li> <li>-Relationship and Rapport Building (Patient)</li> <li>-Patient Contact</li> <li>-Educating</li> <li>-Coordinator</li> <li>-Care Planning</li> <li>-Patient Identification and Recruitment</li> <li>-Care Integration</li> <li>-Care Continuity</li> <li>-Patient Engagement</li> <li>-Patient Monitor</li> <li>-Proactive</li> <li>-Accessible</li> <li>-Relationship and Rapport Building (Caregiver)</li> <li>-Engage Clients Family</li> <li>-Medical Record Interpretation</li> <li>-Team Development</li> </ul> |
| Hashi, I<br>2016<br>America  | Informational/training/professional development | To explain the role case managers can have to promote the use of social media by the                                                                  | Community | CMs who work with socially isolated older adults | <ul style="list-style-type: none"> <li>-System and Service Knowledge</li> <li>-Care Planning</li> <li>-Assessment</li> <li>-Facilitator/Implementor</li> <li>-Evaluator</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                             |

| Author, Year, Location            | Study Type & Methods                   | Aims                                                                                                                                                            | Setting      | Population                                                                    | Competencies                                                                                                                                             |
|-----------------------------------|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                   |                                        | elderly, as a means to decrease their loneliness and isolation                                                                                                  |              |                                                                               |                                                                                                                                                          |
| Herzog, A 2015<br>Germany         | qualitative semi-structured interviews | To explore how GPs view their professional mandates and capacities to provide comprehensive care for older people with complex health problems                  | Community    | GPs who care for community-dwelling older adults with complex health problems | -Mobility<br>-Loyalty<br>-Internal Practice Knowledge                                                                                                    |
| Hudson, AJ 2006<br>United Kingdom | Case series                            | To discuss the context for change, explore and appraise the development of a new role and evaluate an educational partnership developed with a local university | Community    | Case managers nurses who work with older adults in the Evercare model         | -Clinical Care<br>-Advocacy<br>-Communication (Patient)<br>-Coaching (Patient)<br>-Coordinator<br>-Communication (Caregiver)<br>-Communicator (Practice) |
| Iliffe, S 2014<br>United Kingdom  | Mixed Methods case studies             | To adapt a US model of primary-case based case management for people with dementia and test it in general practice                                              | Primary care | Older adults with dementia                                                    | -Safety Net<br>-Relationship and Rapport Building (Patient)<br>-Care Continuity<br>-Proactive<br>-Fluid or Flexible (Patient)<br>-Responsive             |

| Author, Year, Location                 | Study Type & Methods                 | Aims                                                                                                                                                                                                                                  | Setting             | Population                                          | Competencies                                                                                                                                                                                   |
|----------------------------------------|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Jacobs, S<br>2006<br>United Kingdom    | Diary Analysis                       | To explore the differences in the approach taken to care management in three distinct social services settings, community based older adults, hospital social work for older people, community for adults with mental health problems | Community, Hospital | Older adults and adults with mental health problems | -Assessment                                                                                                                                                                                    |
| Jennings-Sanders, A<br>2003<br>America | Content analysis of data from an RCT | To describe how older breast cancer patients perceive community-based nurse case managers                                                                                                                                             | Community           | Older women with breast cancer                      | -Disease Management Promotion<br>-ADL Support<br>-Emotional Support (Patient)<br>-Errands<br>-Health System Navigation<br>-Educating<br>-Emotional Support (Caregiver)<br>-Support (Caregiver) |
| Johansson, B<br>2014<br>America        | Overview                             | To provide an overview of the case managers role in long-term support services                                                                                                                                                        | LTC, Community      | Case managers                                       | -Patient-Centered Approach<br>-Advocacy<br>-Empowering<br>-Communication (Patient)<br>-Care Planning                                                                                           |

| Author, Year, Location      | Study Type & Methods | Aims                                                                                                                                 | Setting   | Population                      | Competencies                                                                                                                                                                                                                                                                                                          |
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|                             |                      |                                                                                                                                      |           |                                 | <ul style="list-style-type: none"> <li>-Care Implementing</li> <li>-Assessment</li> <li>-Collaborator (Practice)</li> <li>-Resource and Budget Management</li> <li>-Evidence Based Approach</li> </ul>                                                                                                                |
| Jones, S<br>2015<br>Canada  | Evaluation report    | To chronicle a review of the implementation , expansion, and evaluation of the outreach diabetes case manager model in New Brunswick | Community | Outreach diabetes case managers | <ul style="list-style-type: none"> <li>-Disease Management Promotion</li> <li>-Self-Management Promotion</li> <li>-Person-Centered Approach</li> <li>-Relationship and Rapport Building (Patient)</li> <li>-Providing Information (Patient)</li> <li>-Educating</li> <li>-Coordinator</li> <li>-Accessible</li> </ul> |
| Kelley, M<br>1997<br>Canada | Survey               | Propose a specialized case management approach for older adults in rural areas                                                       | Community | Older adults in rural areas     | <ul style="list-style-type: none"> <li>-Advocacy</li> <li>-Independence Support</li> <li>-Arranging Services</li> <li>-Service Broker</li> <li>-Coordinator</li> <li>-Patient Monitor</li> <li>-Proactive</li> <li>-Fluid or Flexible (Patient)</li> <li>-Support (Caregiver)</li> <li>-Assessment</li> </ul>         |

| Author, Year, Location     | Study Type & Methods                                                            | Aims                                                                                                                                | Setting                  | Population                                                  | Competencies                                                                                                                            |
|----------------------------|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
|                            |                                                                                 |                                                                                                                                     |                          |                                                             | -Relationship and Rapport Building (Practice)<br>-Networking<br>-Evaluator<br>-Service Arranger or Accessor                             |
| Kvæl, L<br>2022<br>Norway  | Qualitative observation, analysed using the four habits framework               | To explore how patient participation is framed and negotiated within family meetings in IC services using the FHM                   | Intermediate care        | Older adults patients, their relatives, and their care team | -Person-Centered Approach<br>-Emotionally Receptive (Patient)<br>-Relationship and Rapport Building (Patient)<br>-Joint Decision Making |
| Kwak, J<br>2014<br>America | Qualitative in-depth interview and focus groups analyzed with thematic analysis | To examine care managers' perspectives on facilitating advanced care planning with diverse elderly people in managed long-term care | Long-term care           | Care managers who care for diverse elders in long-term care | -Culturally Sensitive                                                                                                                   |
| Landi, F<br>1996<br>Italy  | Evaluation of a case manager training module                                    | To verify that a program provides students with adequate skills to become a case manager                                            | Academic                 | Case managers in training who will work with older adults   | -Continuing Education                                                                                                                   |
| Lawless, M<br>2019         | Scoping review                                                                  | To summarise the available                                                                                                          | Community, Primary Care, | Frail older adults                                          | -Advocacy                                                                                                                               |

| Author, Year, Location | Study Type & Methods   | Aims                                                                                                                                                             | Setting             | Population                                                                                | Competencies                                                                                                                      |
|------------------------|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Australia              |                        | evidence on the factors influencing communication about frailty in the primary care setting                                                                      | Acute, General,     |                                                                                           | -Communication (Patient)<br>-Trust Building<br>-Communication (Practice)<br>-Information Sharer (Practice)                        |
| Lim, Y 2018 Singapore  | Exploratory case study | To explore patients' initial experience of shared chronic disease care in a private family practice setting                                                      | Hospital, Community | People with stable chronic disease, people with complex care needs, all above 18 (AVG=64) | -Relationship and Rapport Building (Patient)<br>-Coordinator<br>-Care Continuity<br>-Patient Monitor<br>-Attentive<br>-Responsive |
| Logan, D 2019 America  | Overview/information   | To discuss the barriers to taking medications as prescribed and directed, importance of reconciliation, and strategies to promote adherence to medications plans | Community           | Older adults                                                                              | -Addressing Deficits<br>-Educating<br>-Assessment<br>-Pharmacology<br>-Communication (Practice)<br>-Medication Review             |
| Luu, A 2005 America    | Review                 | To describe types of abuse and settings, responses to abuse, and the role of case managers in addressing elder abuse                                             | Hospital, Community | Older adults, case managers                                                               | -Advocacy<br>-Observation<br>-Educating<br>-Coordinating<br>-Care Planning<br>-Assessment<br>-Evaluator                           |

| Author, Year, Location            | Study Type & Methods                    | Aims                                                                                                 | Setting   | Population   | Competencies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------|-----------------------------------------|------------------------------------------------------------------------------------------------------|-----------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Luzinski, C<br>2008<br>America    | program overview                        | To describe the PVH CCM program                                                                      | Community | Elderly      | <ul style="list-style-type: none"> <li>-Medication Prescriber</li> <li>-Advocacy</li> <li>-Emotionally Receptive (Patient)</li> <li>-Communication (Patient)</li> <li>-Relationship and Rapport Building (Patient)</li> <li>-Arranging Services (Patient)</li> <li>-Coaching</li> <li>-Coordinator</li> <li>-Care Planning</li> <li>-Cheerleader</li> <li>-Relationship and Rapport Building (Caregiver)</li> <li>-Assessment</li> <li>-Triaging</li> <li>-Clinical Expertise</li> <li>-Communication (Practice)</li> <li>-Relationship and Rapport Building (Practice)</li> <li>-</li> <li>Facilitator/Implementor</li> <li>-Medication Review</li> </ul> |
| MacKenzie, L<br>1998<br>Hong Kong | Qualitative interviews , count analysis | To evaluate the process of the introduction of case management for elderly people into the community | Community | Older adults | <ul style="list-style-type: none"> <li>-Care Planning</li> <li>-Patient Monitor</li> <li>-Assessment</li> <li>-Resource and Budget Management</li> <li>-Liaison (Practice)</li> <li>-Evaluator</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

| Author, Year, Location                 | Study Type & Methods                                 | Aims                                                                                                                                                                                                                                                                                                                                       | Setting   | Population                                         | Competencies                                                                                                                                                                                                                                                                                    |
|----------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                        |                                                      | nursing services in HK                                                                                                                                                                                                                                                                                                                     |           |                                                    |                                                                                                                                                                                                                                                                                                 |
| Manthorpe, J<br>2012<br>United Kingdom | Policy evaluation , survey, case studies, interviews | To understand the effects of Nurse Case Managers (NCMs) working in primary care in the English National Health Service (NHS) from multiple perspectives and how this new role impacts on social workers, this paper reports and discusses findings from a multi-level study of the role of NCMs working in primary care in the English NHS | Community | Older people and their carers, nurse case managers | <ul style="list-style-type: none"> <li>-Disease Management Promotion</li> <li>-Person-Centered Approach</li> <li>-Advocacy</li> <li>-Psychosocial Support</li> <li>-Liaising (Patient)</li> <li>-Arranging Services (Patient)</li> <li>-Care Continuity</li> <li>-Clinical Expertise</li> </ul> |
| Matsuda, S<br>2001<br>Japan            | Overview                                             | To explain the background factors of establishing the LTCI scheme, its detail and ongoing structural change in the Japanese health system                                                                                                                                                                                                  | LTC       | Older adults                                       | <ul style="list-style-type: none"> <li>-Person-Centered Approach</li> <li>-Care Planning</li> <li>-Care Continuity</li> <li>-Patient Monitor</li> <li>-Fluid or Flexible (Patient)</li> <li>-Assessment</li> <li>-Fluid (Practice)</li> </ul>                                                   |

| Author, Year, Location            | Study Type & Methods | Aims                                                                                                                                                                                     | Setting   | Population           | Competencies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-----------------------------------|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mick, D<br>2002<br>America        | Overview             | Strategies necessary for successful interdisciplinary collaboration are identified, and the APN's role in planning for aged patients' successful and safe discharge to home is described | Community | Older adults         | <ul style="list-style-type: none"> <li>-Advocacy</li> <li>-System and Service Knowledge</li> <li>-Patient Screening</li> <li>-Care Integration</li> <li>-Diagnosing</li> <li>-Pharmacology</li> <li>-Patient Population Knowledge</li> </ul>                                                                                                                                                                                                                                                       |
| Minkman, M<br>2009<br>Netherlands | Multiple case study  | (1) What are the characteristics of Dutch case management programmes in dementia care? and (2) What are the success and failure factors for the implementation of the programmes?        | Community | People with dementia | <ul style="list-style-type: none"> <li>-Person-Centered Approach</li> <li>-Advocacy</li> <li>-Relationship and Rapport Building (Patient)</li> <li>-Negotiating</li> <li>-System and Service Knowledge</li> <li>-Care Planning</li> <li>-Relationship and Rapport Building (Caregiver)</li> <li>-Engage Clients Family</li> <li>-Emotional Support (Caregivers)</li> <li>-Assessment</li> <li>-Collaborator (Practice)</li> <li>-</li> <li>-Facilitator/Implementor</li> <li>-Evaluator</li> </ul> |

| Author, Year, Location         | Study Type & Methods                                    | Aims                                                                                                                                                 | Setting      | Population                                                     | Competencies                                                                                                                                                                                                                     |
|--------------------------------|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Nothelle, S<br>2020<br>America | Qualitative interviews analysed with grounded theory    | To describe the perspectives of care managers who work across the health care continuum on their experience interacting with primary care clinicians | Primary care | Care managers who work in primary care                         | -Support (Patient)<br>-Health System Navigation<br>-Service Mobilizing<br>-Medical Record Interpretation<br>-Team Follower or Member<br>-Communicator (Practice)                                                                 |
| Ohta, R<br>2019<br>Japan       | Qualitative interviews and thematic analysis            | To inquire into the obstacles to interprofessional collaboration faced by care managers in rural areas of Japan                                      | Rural        | care managers who work with rural dwelling older people        | -Translation<br>-Communication (Caregiver)<br>-Assessment<br>-Medical Knowledge<br>-Collaborator (Practice)<br>-Team Follower/Member<br>-Time Management<br>-Resource Mobilizer<br>-Communication (Practice)<br>-Dialog Crafting |
| O'Malley, A<br>2017<br>America | Semi-structured interviews using a conceptual framework | To explore patients' experiences with care management, what they found useful, and what needs improvement                                            | Community    | High-risk patients or their caregivers, older adults inclusive | -Communication (Patient)<br>-Health System Navigation<br>-Coordinator<br>-Care Planning<br>-Discharge Planner<br>-Patient Follow-up                                                                                              |

| Author, Year, Location               | Study Type & Methods                          | Aims                                                                                                                                                                                          | Setting         | Population                                               | Competencies                                                                                                          |
|--------------------------------------|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Ortiz, J<br>2013<br>America          | Cross-sectional survey                        | To assess the value of geriatric care management (GCM) services from the perspective of individuals who receive the care—the “care recipients”                                                | Community       | Recipients of geriatric care management (GCM)            | -Advocacy<br>-System and Service Knowledge<br>-Arranging Services (Patient)<br>-Advising<br>-Communicator (Practice)  |
| Peckham, A<br>2013<br>Canada         | Mixed-methods balance of care simulation      | To examined how front-line home and community-care (H&CC) case managers view the role of informal caregivers, and the factors that contribute to H&CC managers’ resource allocation decisions | Home, Community | Older adults                                             | -Care Planning<br>-Culturally Sensitive<br>-Support (Caregiver)<br>-Assessment                                        |
| Randall, S<br>2014<br>United Kingdom | Qualitative findings of a mixed methods study | To consider findings from a study that evaluated case management of individuals with long-term conditions (LTCs) by a community matron (CM) service. The                                      | Community       | CMs and their patients, family, and secondary care staff | -Self-Management Promotion<br>-Relationship and Rapport Building (Patient)<br>-Coordinator<br>-Visible<br>-Leadership |

| Author, Year, Location               | Study Type & Methods                     | Aims                                                                                                                                                                                                                                 | Setting               | Population                                          | Competencies                                                                                                                                                 |
|--------------------------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                      |                                          | paper highlights issues related to the implementation of a new role and the impact this had on the experience of care across hospital and community settings for patients and their carers                                           |                       |                                                     |                                                                                                                                                              |
| Sargent, P<br>2007<br>United Kingdom | Interviews analysed with grounded theory | The research aim was to describe community matron case management from the perspective of patients and carers in order to develop a clearer understanding of how the model is being delivered for patients with long-term conditions | Community             | Older adults with long-term conditions receiving CM | <ul style="list-style-type: none"> <li>-Clinical Care</li> <li>-Advocacy</li> <li>-Psychosocial Support</li> <li>-Educating</li> <li>-Coordinator</li> </ul> |
| Vasquez, M<br>2009<br>America        | Review                                   | To identify strategies to improve patient outcomes and prevent rehospitalization                                                                                                                                                     | Community/home health | Case managers who work with older adults            | <ul style="list-style-type: none"> <li>-Coordinator</li> <li>-Care Planning</li> <li>-Patient Monitor</li> <li>-Holistic</li> <li>-Assessment</li> </ul>     |

| Author, Year, Location          | Study Type & Methods             | Aims                                                                                                                                                                                                      | Setting   | Population                                                           | Competencies                                                                                                                                                             |
|---------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 |                                  | ns in home healthcare                                                                                                                                                                                     |           |                                                                      | -Resource and Budget Management<br>-Evaluator                                                                                                                            |
| Vedel, I<br>2008<br>France      | Methods/<br>overview             | To provoke discussion and provide elements of a solution that will be useful to individuals and organizations that want to develop and implement successful models for the reorganization of elderly care | Community | Case managers and primary care physicians who work with older adults | -Coordinator<br>-Care Planning<br>-Care Implementing<br>-Assessment<br>-Collaborator (Practice)<br>-Facilitator/Implementor (Practice)                                   |
| Warkentin, N<br>2021<br>Germany | Interviews with deductive coding | To explore experiences and attitudes of family caregivers of geriatric patients regarding the community-based care- and case-management intervention RubiN                                                | Community | Family caregivers of geriatric patients involved with RubiN          | -Counsellor (Caregiver)<br>-Reporter/Information Sharer (Caregiver)<br>-Engage Clients Family<br>-Emotionally Receptive/Empathic<br>-Transporter<br>-Support (Caregiver) |
| Waugh, A<br>2013<br>America     | Overview                         | To report and discuss the adaptation of the PREVENT intervention to                                                                                                                                       | Community | Professionals who work with case managers                            | -Patient-Centered Approach<br>-Empowering (Patient)                                                                                                                      |

| Author, Year, Location | Study Type & Methods | Aims                                                                                                                                                            | Setting   | Population                               | Competencies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------------|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        |                      | the setting of the English National Health Service (NHS) and local government Adult Services, by practitioners and people with experiences of dementia services |           |                                          | <ul style="list-style-type: none"> <li>-Communication (Patient)</li> <li>-Confidential (Patient)</li> <li>-Liaising (Patient)</li> <li>-System and Service Knowledge</li> <li>-Care Planning</li> <li>-Patient Identification and Recruitment</li> <li>-Patient Engagement</li> <li>-Engage Clients Family</li> <li>-Medical Record Interpretation</li> <li>-System Building</li> <li>-IT Skills</li> <li>-Liaising (Practice)</li> <li>-Dialog Crafting</li> <li>-Confidentiality (Practice)</li> <li>-Continuing Education</li> </ul> |
| White, M 1994 America  | Overview             | To provide an overview of a liaison case manager                                                                                                                | Community | Case managers who work with older adults | <ul style="list-style-type: none"> <li>-Problem Solving</li> <li>-Relationship and Rapport Building (Patient)</li> <li>-Liaising (Patient)</li> <li>-Arranging Services (Patient)</li> <li>-Coordinator</li> <li>-Patient Identification and Recruitment</li> <li>-Care Integration</li> <li>-Referral</li> <li>-Care Continuity</li> <li>-Patient Monitor</li> </ul>                                                                                                                                                                   |

| Author, Year, Location             | Study Type & Methods                      | Aims                                                                                                                                        | Setting   | Population                                               | Competencies                                                                                                                                                                                                                                          |
|------------------------------------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|-----------|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                    |                                           |                                                                                                                                             |           |                                                          | <ul style="list-style-type: none"> <li>-Accessible</li> <li>-Visible</li> <li>-Communicator (Practice)</li> <li>-Liaison (Practice)</li> </ul>                                                                                                        |
| Wideman, 2012<br>America           | Review                                    | This article reviews the GCM role, which patients may be appropriate for the service, and patient benefits                                  | Community | Geriatric care managers                                  | <ul style="list-style-type: none"> <li>-Consulting</li> <li>-Arranging Services</li> <li>-Coordinator</li> <li>-Care Planning</li> <li>-Care Implementing</li> <li>-Patient Monitor</li> <li>-Assessment</li> <li>-Facilitator/Implementor</li> </ul> |
| Wilfling, D 2021<br>Germany        | Interviews analyzed with content analysis | To explore experiences and attitudes of geriatric patients towards the newly developed complex care- and case-management intervention RubiN | Community | Geriatric patients enrolled in a case management program | <ul style="list-style-type: none"> <li>-Self-Management Promotion</li> <li>-Support (Patient)</li> <li>-Psychosocial Support</li> <li>-Independence Support</li> <li>-Patient Contact</li> <li>-Open</li> <li>-Honest</li> </ul>                      |
| Uittenbroek, J 2018<br>Netherlands | Qualitative grounded theory               | To explore how district nurses and social workers experience their new professional roles as case managers within Embrace, a                | Community | Case managers                                            | <ul style="list-style-type: none"> <li>-Self-Management Promotion</li> <li>-Clinical Care</li> <li>-Person-Centered Approach</li> <li>-Observation</li> <li>-Communication (Patient)</li> </ul>                                                       |

| Author, Year, Location | Study Type & Methods                         | Aims                                                                                                                                                 | Setting   | Population                               | Competencies                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        |                                              | person-centered and integrated-care service for community-living older adults                                                                        |           |                                          | <ul style="list-style-type: none"> <li>-Relationship and Rapport Building (Patient)</li> <li>-Confidential (Patient)</li> <li>-System and Service Knowledge</li> <li>-Coordinator</li> <li>-Patient Monitor</li> <li>-Patient Follow-Up</li> <li>-Proactive</li> <li>-Fluid or Flexible (Patient)</li> <li>-Medical Knowledge</li> <li>-Collaborator (Practice)</li> <li>-Experienced</li> <li>-Information Sharer</li> </ul> |
| You, E Australia 2015  | Qualitative interviews analysed thematically | To explore case managers' perceived changes in their practice in the future when CDC is widely implemented in Australia's community aged care system | Community | Case managers who work with aged clients | <ul style="list-style-type: none"> <li>-Person-Centered Approach</li> <li>-Independence Support</li> <li>-Empowering (Patient)</li> <li>-Communication (Patient)</li> <li>-Educating</li> <li>-Patient Monitor</li> <li>-Resource and Budget Management</li> </ul>                                                                                                                                                            |
| You, E Australia 2016  | Qualitative interviews analysed thematically | To shed light on case managers' roles in community aged care case management                                                                         | Community | Care managers who work with aged clients | <ul style="list-style-type: none"> <li>-Clinical Care</li> <li>-Advocacy</li> <li>-Support (Patient)</li> <li>-Independence Support</li> </ul>                                                                                                                                                                                                                                                                                |

| Author,<br>Year,<br>Location | Study<br>Type &<br>Methods | Aims                                                                                           | Setting | Population | Competencies                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------|----------------------------|------------------------------------------------------------------------------------------------|---------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                              |                            | practice from<br>the perspectives<br>of front-line<br>case managers<br>working in this<br>area |         |            | <ul style="list-style-type: none"> <li>-Empowering (Patient)</li> <li>-Problem Solving</li> <li>-Communication (Patient)</li> <li>-Negotiating</li> <li>-Liaising (Patient)</li> <li>-Health System Navigation</li> <li>-Gatekeeping Services</li> <li>-Service Broker</li> <li>-Educating</li> <li>-Advising</li> <li>-Coordinator</li> <li>-Patient Engagement</li> <li>-Culturally Sensitive</li> <li>-Communication (Caregiver)</li> <li>-Buffer (Caregiver)</li> <li>-Counsellor (Caregiver)</li> <li>-Engage Clients Family</li> <li>-Resource and Budget Management</li> <li>-Communication (Practice)</li> <li>-Liaison (Practice)</li> <li>-Networking</li> </ul> |

## **Appendix F: Data collection survey**

### **Understanding Stakeholder Perspectives on Care Manager Competencies**

The following survey is part of a research study by Dr. Paul Stolee, Dr. Jennifer Yessis, Dr. Justine Giosa, and Leonardo Romano as part of the Geriatric Health Systems research group at the University of Waterloo School of Public Health Sciences. The survey hopes to collect data on your perception of how important certain competencies for care managers (Those who oversee the provision of care to patients, ensuring its continuity, quality, and integration) working with older adults in home-based settings. The survey should take 20-30 minutes.

The data collected during the survey will contribute to understanding which care manager competencies are important when managing older adults. These findings will assist in creating programs which are more capable of helping vulnerable older adults.

Specifically, we will ask you about the following 13 types of competencies, organized into three categories: Patient-facing competencies: Patient disease management, Patient care management, Healthcare systems and service provision, Patient Education, Personality traits, Non-medical patient support, and Patient communication.

Caregiver-facing competencies: Caregiver communication, and Caregiver support.

Practice-facing competencies: Operating within a practice, Medical ability, Communication within a practice, and Patient care delivery.

We thank you for taking the time to complete the survey and contributing to improving the healthcare provided to older adults.

### **Q1 Consent**

#### **Consent**

Before starting the survey, we need your consent to participate. Here is a description of the study, followed by a button you can click if you consent to answer the survey. This study is being conducted by Dr. Paul Stolee, Dr. Jennifer Yessis, Dr. Justine Giosa, and Leonardo Romano, from the School of Public Health Sciences at the University of Waterloo.

#### **What is the purpose of the study?**

The purpose of this research is to identify what competencies are necessary for care

managers who work with older adults in home-based primary care. This study aims to identify what is known within the literature regarding competencies for a care manager, verify and contextualize these findings with stakeholders, and understand stakeholder perspectives on these competencies. The overall objective of this study is to produce a comprehensive guide of the competencies necessary for home-based primary care managers, which has been verified and supported by stakeholders with first-hand knowledge.

**What will happen?**

This survey will ask you to rank and rate a variety of potential care manager competencies, as well as provide some information about yourself. The survey should take 20-30 minutes. At the end of the survey, you will be asked if you might be interested in being interviewed as well. Later, we will be inviting a smaller group of interested individuals for an interview.

**Will the study help you or others?**

By participating in this study, you will be given access to the study's findings, should you wish to receive them. Beyond this, this study may aid in producing programs harnessing care management and home-based care to improve the care provided to older adults.

**Will the study harm you?**

Discussing healthcare experiences, due to their sensitive and personal nature, may cause short-term psychological or emotional harm. Any harm is expected to be minimal. However, should you feel uncomfortable, you may skip any question. You may also withdraw at any time. The researcher, additionally, can provide the contact information for local support services should you need or desire them.

**Is your participation voluntary?**

Participation in this study is entirely up to your discretion and is entirely voluntary. You may withdraw from participating in this study at any point, and you may do so without penalty. Should you choose to participate, your participation will be entirely up to your level of comfort. You may decline to answer any question asked of you. If you would like to stop the survey or interview, you may at any time.

Only your contact information can be deleted once you've completed the survey. Due to identifying information being stored independently, there is no way to identify surveys and delete individual surveys. However, should you be eligible and wish to participate in the follow-up interview portion of the study, you can choose to have your data deleted up until the beginning of data analysis by contacting the research team. It is expected that data

analysis for interviews will begin no later than 4 weeks after completing an interview.

**Will I receive anything for participating in the study?**

If you participate in this study, you will receive remuneration for your time. Participants who complete the survey will receive a \$15 Amazon gift card. Participants who complete the follow-up interview will receive a \$40 gift card to their choice of Amazon or Shoppers Drug Mart. If you decide to stop participating early, please click through to the end to receive the electronic gift card. To keep your responses anonymous, you will be asked to input your email address for purposes of receiving the electronic gift card in a separate online questionnaire. Email addresses will be stored separately, then destroyed once electronic gift cards have been issued. The amount received is taxable. It is your responsibility to report this amount for income tax purposes.

**Can you change your mind or decide not to answer a question?**

If at any time, should you change your mind, you can withdraw from the study and stop participating. Your decision to stop or not answer a question will have no impact on you. If you decide to leave the interview section of the study, it will be up to your discretion whether your data should be permanently deleted or if data already collected can be used.

**What will happen to your information?**

Your information will be kept on a secured server at the University of Waterloo School of Public Health Sciences, as well as an encrypted USB drive. Only members of the research team will have access to the data. Your identity will be kept confidential. For interviews, your data will only be referred to using a pseudonym to maintain your confidentiality. Video recordings, made automatically by videoconferencing software, will be deleted as soon as possible, with only audio recordings being retained. Audio recordings will be deleted after they have been transcribed and cleaned. Your name will not appear on any data, or in any subsequent paper, presentation, or materials produced from this study.

Files containing your data will be retained for a minimum of 7 years. All study materials will be de-identified to remove all names and identifying information from the data. For the interview portion of the study, each participant will be asked to provide a pseudonym or will have one provided to them.

**Who can I contact if I have any questions or if I am interested in participating?**

If you have questions about the research or about your role in the study, please feel free to contact Leonardo Romano by phone at ### ### #### or by e-mail at lromano@uwaterloo.ca. This study has been reviewed and received ethics clearance

through a University of Waterloo Research Ethics Board (REB #45512). If you have questions for the Board, contact the Office of Research Ethics, toll-free at 1-833-643-2379 (Canada and USA), 1-519-888-4440, or reb@uwaterloo.ca.

**Who is sponsoring/funding this study?**

This study is funded by the SE Research Centre.

**What will happen after the study is over?**

The researchers will ask if you would like to be contacted in the future to receive the results and findings of the study. If you do not want to be contacted in the future, you may indicate this preference to the researcher as part of the interview.

I agree to participate in this study (1)

☐ I do not agree to participate in this study (2)

*Skip To: End of Survey If Consent By providing your consent, you are not waiving your legal rights or releasing the investi... = I do not agree to participate in this study*

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Page Break

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Q3

**Part 1: Rating Patient-facing Competencies.**

The following questions will ask you to rate the patient-facing competencies and qualities of care managers who work with older adults. You will be asked to rate competencies along a scale, from very unimportant to very important, with neither important or unimportant as a midpoint. Note, the following competencies only concern a care manager and their work directly with patients.

Please think carefully about how important the following competencies are to a care manager's ability to fulfill their role when working with patients in home and community-based settings.

Q4 How important is it that care managers fulfill or possess the following aspects of **patient disease management**:

|                                                             | Very<br>Unimportant (1) | Unimportant (2)       | Slightly<br>Unimportant (3) | Neither<br>Important or<br>Unimportant (4) | Slightly<br>Important (5) | Important (6)         | Very<br>Important (7) |
|-------------------------------------------------------------|-------------------------|-----------------------|-----------------------------|--------------------------------------------|---------------------------|-----------------------|-----------------------|
| Disease<br>knowledge (1)                                    | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Disease<br>management<br>promotion (2)                      | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Self-<br>management<br>promotion (3)                        | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Activities<br>of daily<br>living<br>(ADL)<br>support<br>(4) | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Clinical<br>care (5)                                        | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Medication<br>prescriber (6)                                | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Addressing<br>deficits<br>(7)                               | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Exploring<br>barriers<br>(8)                                | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |

Promotin  
g function  
(9)



Q5 How important is it that care managers fulfill or possess the following aspects of **patient care management**:

|                                            | Very<br>Unimportant (1) | Unimportant (2)       | Slightly<br>Unimportant (3) | Neither<br>Important or<br>Unimportant (4) | Slightly<br>Important (5) | Important (6)         | Very<br>Important (7) |
|--------------------------------------------|-------------------------|-----------------------|-----------------------------|--------------------------------------------|---------------------------|-----------------------|-----------------------|
| Coordination (1)                           | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Care planning (2)                          | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Patient identification and recruitment (3) | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Patient Screening (4)                      | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Care integration (5)                       | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Referral (6)                               | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Care continuity (7)                        | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Patient engagement (8)                     | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Patient monitoring (9)                     | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Care implementing (10)                     | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |

|                               |                       |                       |                       |                       |                       |                       |                       |
|-------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Discharge<br>planning<br>(11) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Patient<br>follow-up<br>(12)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

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Q6 How important is it that care managers fulfill or possess the following aspects of **healthcare systems and service provision**, with regard to patient care:

|                                  | Very<br>Unimportant (1) | Unimportant (2)       | Slightly<br>Unimportant (3) | Neither<br>Important or<br>Unimportant (4) | Slightly<br>Important (5) | Important (6)         | Very<br>Important (7) |
|----------------------------------|-------------------------|-----------------------|-----------------------------|--------------------------------------------|---------------------------|-----------------------|-----------------------|
| System and service knowledge (1) | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Health system navigation (2)     | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Arranging services (3)           | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Gatekeeping services (4)         | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Service broker (5)               | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Collaborating (6)                | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Service mobilizing (7)           | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |

Q7 How important is it that care managers fulfill or possess the following aspects of **patient education**:

|               | Very<br>Unimportant (1) | Unimportant (2)       | Slightly<br>Unimportant (3) | Neither<br>Important<br>or<br>Unimportant (4) | Slightly<br>Important (5) | Important (6)         | Very<br>Important (7) |
|---------------|-------------------------|-----------------------|-----------------------------|-----------------------------------------------|---------------------------|-----------------------|-----------------------|
| Educating (1) | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                         | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Coaching (2)  | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                         | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Advising (3)  | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                         | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Page Break    |                         |                       |                             |                                               |                           |                       |                       |

| Q8 How important is it that care managers fulfill or possess the following <b>personality traits</b> when working with patients: | Very Unimportant (1)  | Unimportant (2)       | Slightly Unimportant (3) | Neither Important or Unimportant (4) | Slightly Important (5) | Important (6)         | Very Important (7)    |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------|--------------------------|--------------------------------------|------------------------|-----------------------|-----------------------|
| Culturally sensitive (1)                                                                                                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>                | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> |
| Attentive (2)                                                                                                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>                | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> |
| Compassionate or empathic (3)                                                                                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>                | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> |
| Open (4)                                                                                                                         | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>                | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> |
| Willing to go above and beyond (5)                                                                                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>                | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> |
| Proactive (6)                                                                                                                    | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>                | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> |
| Fluid and flexible (7)                                                                                                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>                | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> |
| Honest (8)                                                                                                                       | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>                | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> |
| Loyal (9)                                                                                                                        | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>                | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> |
| Responsive (10)                                                                                                                  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>                | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> |
| Trust builder (11)                                                                                                               | <input type="radio"/> | <input type="radio"/> | <input type="radio"/>    | <input type="radio"/>                | <input type="radio"/>  | <input type="radio"/> | <input type="radio"/> |

|                                                         |                       |                       |                       |                       |                       |                       |                       |
|---------------------------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Holistic, or<br>mindful of the<br>whole patient<br>(12) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Objective of<br>the patients<br>condition (13)          | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Cheerleader<br>(14)                                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Accessible<br>and available<br>(15)                     | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Visible (16)                                            | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Solution-<br>oriented (17)                              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q9 How important is it that care managers fulfill or possess the following aspects of **non-medical patient support**:

|                             | Very<br>Unimportant (1) | Unimportant (2)       | Slightly<br>Unimportant (3) | Neither<br>Important or<br>Unimportant (4) | Slightly<br>Important (5) | Important (6)         | Very<br>Important (7) |
|-----------------------------|-------------------------|-----------------------|-----------------------------|--------------------------------------------|---------------------------|-----------------------|-----------------------|
| Person-centred approach (1) | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Advocacy (2)                | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Support (3)                 | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Emotional support (4)       | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Psychosocial support (5)    | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Independence support (6)    | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Empowering (7)              | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Emotionally receptive (8)   | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Problem-solving (9)         | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Isolation breaking (10)     | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Errands (11)                | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |

|                                               |                       |                       |                       |                       |                       |                       |                       |
|-----------------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Observation, ability to detect problems (12)  | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Transportation (13)                           | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Mobility and ability to make home visits (14) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Able to act as a safety net (15)              | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q10 How important is it that care managers fulfill or possess the following aspects of **patient communication**:

|                                                         | Very<br>Unimport<br>ant (1) | Unimport<br>ant (2)   | Slightly<br>Unimport<br>ant (3) | Neither<br>Importan<br>t or<br>Unimport<br>ant (4) | Slightly<br>Import<br>ant (5) | Import<br>ant (6)     | Very<br>Import<br>ant (7) |
|---------------------------------------------------------|-----------------------------|-----------------------|---------------------------------|----------------------------------------------------|-------------------------------|-----------------------|---------------------------|
| Communic<br>ation skills<br>(1)                         | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Relationshi<br>p and<br>rapport<br>building (2)         | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Patient<br>contact (3)                                  | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Translation<br>(4)                                      | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Consulting<br>(5)                                       | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Negotiating<br>(6)                                      | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Being a<br>confidant<br>(7)                             | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Confidentia<br>l (8)                                    | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Counselling<br>(9)                                      | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Buffering,<br>conciliating<br>, or<br>mediating<br>(10) | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Providing<br>information<br>(11)                        | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |

Liaising (12)



Q11 Are there any competencies related to patients which this section did not include?  
*If so, please add them here:*

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Q12

**Part 2: Rating Caregiver-facing Competencies.**

The following questions will ask you to rate the caregiver-facing competencies and qualities of care managers who work with older adults. You will be asked to rate competencies along a scale, from very unimportant to very important, with neither important or unimportant as a midpoint. Note, the following competencies only concern a care manager and their work directly with a patient's caregivers.

Please think carefully about how important the following competencies are to a care manager's ability to fulfill their role when working with the caregivers of older adult patients in home and community-based settings.

Q13 How important is it that care managers fulfill or possess the following aspects of **caregiver communication**:

|                                       | Very<br>Unimportant (1) | Unimportant (2)       | Slightly<br>Unimportant (3) | Neither<br>Important or<br>Unimportant (4) | Slightly<br>Important (5) | Important (6)         | Very<br>Important (7) |
|---------------------------------------|-------------------------|-----------------------|-----------------------------|--------------------------------------------|---------------------------|-----------------------|-----------------------|
| Communication skills (1)              | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Relationship and rapport building (2) | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Buffering and mediating (3)           | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Counselling (4)                       | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Information sharing (5)               | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Family engagement (6)                 | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |

Q14 How important is it that care managers fulfill or possess the following aspects of **caregiver support**:

|                       | Very<br>Unimportant (1) | Unimportant (2)       | Slightly<br>Unimportant (3) | Neither<br>Important or<br>Unimportant (4) | Slightly<br>Important (5) | Important (6)         | Very<br>Important (7) |
|-----------------------|-------------------------|-----------------------|-----------------------------|--------------------------------------------|---------------------------|-----------------------|-----------------------|
| Emotional support (1) | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Empathy (2)           | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Transportation (3)    | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Empowerment (4)       | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Support (5)           | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |

Page Break

Q15 Are there any competencies related to caregivers which this section did not include?  
If so, please add them here:

Q16

### Part 3: Rating Practice Competencies.

The following questions will ask you to rate the practice-facing competencies and qualities of care managers who work with older adults. You will be asked to rate competencies along a scale, from very unimportant to very important, with neither important or unimportant as a midpoint. Note, the following competencies only concern a care manager and their work

within a practice.

Please think carefully about how important the following competencies are to a care manager's ability to fulfill their role when working with the caregivers of older adult patients in home and community-based settings.

Q17 How important is it that care managers fulfill or possess the following aspects of **operating within a practice:**

|                                        | Very<br>Unimportant (1) | Unimportant (2)       | Slightly<br>Unimportant (3) | Neither<br>Important or<br>Unimportant (4) | Slightly<br>Important (5) | Important (6)         | Very<br>Important (7) |
|----------------------------------------|-------------------------|-----------------------|-----------------------------|--------------------------------------------|---------------------------|-----------------------|-----------------------|
| Collaboration (1)                      | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Flexibility (2)                        | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Resource management (3)                | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Time management (4)                    | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Ability to follow a leader (5)         | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Ability to lead (6)                    | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Knowledge of practice capabilities (7) | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Experience with older adults (8)       | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| Team facilitating and development (9)  | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |
| System building (10)                   | <input type="radio"/>   | <input type="radio"/> | <input type="radio"/>       | <input type="radio"/>                      | <input type="radio"/>     | <input type="radio"/> | <input type="radio"/> |

|                                               |                       |                       |                       |                       |                       |                       |                       |
|-----------------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Information<br>technology (IT) skills<br>(11) | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Resource<br>mobilization (12)                 | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Q18 How important is it that care managers fulfill or possess the following aspects of **medical ability**:

|                                             | Very<br>Unimport<br>ant (1) | Unimport<br>ant (2)   | Slightly<br>Unimport<br>ant (3) | Neither<br>Importan<br>t or<br>Unimport<br>ant (4) | Slightly<br>Import<br>ant (5) | Import<br>ant (6)     | Very<br>Import<br>ant (7) |
|---------------------------------------------|-----------------------------|-----------------------|---------------------------------|----------------------------------------------------|-------------------------------|-----------------------|---------------------------|
| Assessme<br>nt (1)                          | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Diagnosin<br>g (2)                          | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Triaging (3)                                | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Medical<br>knowledge<br>(4)                 | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Pharmacol<br>ogy<br>knowledge<br>(5)        | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Clinical<br>expertise<br>(6)                | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Referrals<br>(7)                            | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Medical<br>record<br>interpretat<br>ion (8) | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |

Q19 How important is it that care managers fulfill or possess the following aspects of **communication within a practice**:

|                                  | Very<br>Unimport<br>ant (1) | Unimport<br>ant (2)   | Slightly<br>Unimport<br>ant (3) | Neither<br>Importan<br>t or<br>Unimport<br>ant (4) | Slightly<br>Import<br>ant (5) | Import<br>ant (6)     | Very<br>Import<br>ant (7) |
|----------------------------------|-----------------------------|-----------------------|---------------------------------|----------------------------------------------------|-------------------------------|-----------------------|---------------------------|
| Communic<br>ation skills<br>(1)  | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Relationshi<br>p building<br>(2) | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Liaising (3)                     | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Information<br>sharing (4)       | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Dialogue<br>crafting (5)         | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Networking<br>(6)                | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Mediating<br>(7)                 | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Joint<br>decision<br>making (8)  | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Confidentia<br>lity (9)          | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Being a<br>confidant<br>(10)     | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                              | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |

Q20 How important is it that care managers fulfill or possess the following aspects of **patient care delivery** while working within a practice:

|                                                | Very<br>Unimport<br>ant (1) | Unimport<br>ant (2)   | Slightly<br>Unimport<br>ant (3) | Neither<br>Important<br>or<br>Unimport<br>ant (4) | Slightly<br>Import<br>ant (5) | Import<br>ant (6)     | Very<br>Import<br>ant (7) |
|------------------------------------------------|-----------------------------|-----------------------|---------------------------------|---------------------------------------------------|-------------------------------|-----------------------|---------------------------|
| Care<br>delivery<br>(1)                        | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                             | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Evaluatin<br>g care (2)                        | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                             | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Discharg<br>e<br>planning<br>(3)               | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                             | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Reviewin<br>g care<br>package<br>s (4)         | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                             | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Medicati<br>on<br>review<br>(5)                | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                             | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Evidence<br>-based<br>approac<br>hes (6)       | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                             | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Patient<br>populati<br>on<br>knowled<br>ge (7) | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                             | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |
| Arrangin<br>g<br>services<br>(8)               | <input type="radio"/>       | <input type="radio"/> | <input type="radio"/>           | <input type="radio"/>                             | <input type="radio"/>         | <input type="radio"/> | <input type="radio"/>     |

Continui  
ng  
educatio  
n (9)



Q21 Are there any competencies related to practices which this section did not include?  
*If so, please add them here:*

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Page Break

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Q22

#### **Part 4: Ranking Competencies**

The following questions will ask you to rank the collections of competencies which you have already rated. You will be asked to rank the groupings in relation to one another, with a higher ranking indicating greater importance. Please think carefully about the groupings, what competencies included within them, and how they relate to one another regarding care managers who work with older adult patients.

Q23 How important, compared to one another, are the following competencies? *Please drag and drop options into the correct order:*

- \_\_\_\_\_ Patient disease management (1)
- \_\_\_\_\_ Patient care management (2)
- \_\_\_\_\_ Healthcare systems and service provision (3)
- \_\_\_\_\_ Patient education (4)
- \_\_\_\_\_ Personality traits (5)
- \_\_\_\_\_ Non-medical patient support (6)
- \_\_\_\_\_ Patient communication (7)
- \_\_\_\_\_ Caregiver communication (8)
- \_\_\_\_\_ Caregiver support (9)
- \_\_\_\_\_ Operating within a practice (10)
- \_\_\_\_\_ Medical ability (11)
- \_\_\_\_\_ Communication within a practice (12)
- \_\_\_\_\_ Patient care delivery (13)

Q24

#### **Part 5: Demographic Information and Follow-up**

Thank you for completing the technical portion of the survey. For the purpose of reporting the study results, we will now ask you for some demographic information, including race, gender, age, occupation, and education, and your experience with care management.

In addition, you will be asked whether you would like to participate in a follow-up interview and to provide contact information to accommodate this. Your interview eligibility will be determined by whether or not, and how, you have experience with care management. Your contact information will be collected and stored separately from your survey data and

demographic information. Should you wish to participate in a follow-up interview, you will be contacted within two weeks of completing your survey. Should you wish to participate

but do not meet the eligibility criteria, your contact information will be deleted.

25 How do you identify your race or ethnicity? *Check all that apply*

African/Black (including African-American, African-Canadian, Caribbean) (1)

East Asian (e.g., Chinese, Taiwanese, Japanese, Korean, etc.) (2)

European/White (3)

Indo-Caribbean, Indo-African, Indo-Fijian, West-Indian (4)

Latin, South or Central American (5)

Polynesian (e.g., Samoans, Tongan, Niuean, Cook Island Māori, Tahitian Mā'ohi, Hawaiian Mā'oli, Marquesan, New Zealand Māori) (6)

South Asian (e.g., Afghan, Nepali, Tamil, Bangladeshi, Pakistani, Indian, Sri Lankan, Punjabi) (7)

Southeast Asian (e.g., Vietnamese, Thai, Cambodian, Malaysian, Filipino/a, Laotian, Singaporean, Indonesian) (8)

West Asian (e.g., Iraqi, Jordanian, Palestinian, Saudi, Syrian, Yemeni, Armenian, Iranian, Israeli, Turkish) (9)

Indigenous within Canada (e.g., First Nation, Métis, Inuit) (10)

Prefer not to answer (11)

Prefer to self-identify: (12) \_\_\_\_\_

Q26 What gender do you identify as?

Man (1)

Woman (2)

Non-binary/third gender (3)

Prefer not to say (4)

Prefer to self-identify: (5) \_\_\_\_\_

Q27 How old are you?

18 - 24 (1)

25 - 34 (2)

35 - 44 (3)

45 - 54 (4)

55 - 64 (5)

65 - 74 (6)

75 - 84 (7)

85 or older (8)

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Q28 What is your highest level of education?

No certificate, diploma, or degree (1)

Secondary school diploma or equivalency certificate (2)

Apprenticeship or trades certificate or diploma (3)

College, CEGEP or other non-university certificate or diploma (4)

University certificate or diploma below bachelor level (5)

University certificate, diploma or degree at bachelor level or above (6)

Q29 What is your occupation?

*Select all that apply:*

Physician (1)

Care manager (2)

Nurse (3)

Social worker (4)

Administrator (5)

Non-medical, please specify: (6) \_\_\_\_\_

Other, please specify: (7) \_\_\_\_\_

Q30 Do you have experience with case management in community or primary care settings? If so, how?

*Select all that apply:*

Care/Case Manager (those managing home-based care patients) (1)

Healthcare Provider (those providing home-based care) (2)

Patient or informal caregiver (those receiving care management or home-based care) (3)

Other: (4) \_\_\_\_\_

## Appendix G: Recruitment letter to organizations

Good Morning,

I hope this email finds you well. My name is Leonardo Romano, and I am a Master's student with the Geriatric Health Systems Research Group (PI: Paul Stolee) at the University of Waterloo.

For my Master's thesis, I am conducting a research study entitled "Understanding Stakeholder Perspectives on Care Manager Competencies: A Multiple-Method Needs Assessment". The purpose of this research is to identify what competencies are necessary for care managers who work with older adults in home-based primary care, and to better understand these competencies through consultation with experts. This research has received ethics clearance through the University of Waterloo Office of Research Ethics (ORE #45512).

**I am looking for individuals who can assess and comment on the importance of competencies which have been identified in the literature.** Your organization's experience with care management would make your personnel valuable contributors and I would like to invite you to participate in a survey.

I would greatly appreciate your help in connecting me with members of your organization who can speak to the importance of care manager competencies. Participation would involve completing a survey, between 20 and 30 minutes.

If you can aid in recruitment, please contact me at ###-###-#### or [lromano@uwaterloo.ca](mailto:lromano@uwaterloo.ca). If you would like any additional information on this study, please do not hesitate to contact me.

Sincerely,

Leonardo Romano, BSc

University of Waterloo School of Public Health Sciences

Telephone: ###-###-####

Email: [lromano@uwaterloo.ca](mailto:lromano@uwaterloo.ca)

Website: <https://uwaterloo.ca/geriatric-health-systems-research-group>

## **Appendix H: Letter of information Before remuneration**

### **Date:**

**Study Name:** Understanding Stakeholder Perspectives on Care Manager Competencies

### **Lead Researcher:**

Paul Stolee\*, PhD, Professor

### **Co-Investigators:**

Jennifer Yessis\*, PhD

Justine Giosa\*, PhD

Leonardo Romano\*, BSc

\*University of Waterloo

200 University Ave W, Waterloo, ON N2L 3G1

### **Introduction:**

You are being invited to participate in a research study called *Understanding Stakeholder Perspectives on Care Manager Competencies* conducted by Dr. Paul Stolee, Dr. Jennifer Yessis, Dr. Justine Giosa, and Leonardo Romano. This study is being conducted by the Geriatric Health Systems Research Group at the University of Waterloo. **Your participation in this study is entirely voluntary, so it is up to you to decide whether or not to take part in any portion of this study.**

Before you decide, it is important for you to understand what the research study involves. This letter will provide you with information about the study. It will explain the purpose of the research, your role in the research and potential benefits, risks and discomforts.

**Please take the time to read the following information carefully.**

### **Who is conducting the study?**

This study is being conducted by Dr. Paul Stolee, Dr. Jennifer Yessis, Dr. Justine Giosa, and Leonardo Romano, all of whom are from the School of Public Health Sciences at the University of Waterloo.

### **What is the purpose of the study?**

The purpose of this research is to identify what competencies are necessary for care managers who work with older adults in home-based primary care. This study aims to identify what is known within the literature regarding competencies for a care manager, verify and contextualize these findings with stakeholders, and understand stakeholder perspectives on these competencies. The overall objective of this study is to produce a comprehensive guide of the competencies necessary for home-based primary care managers, which has been verified and supported by stakeholders with first-hand knowledge.

### **What will happen?**

You are being invited to participate in a survey, and potentially an interview depending on your experience with care management and your willingness. The survey will ask you to rank and rate care managers' competencies which have already been uncovered, as well as provide some demographic information. The survey should take 20-30 minutes. Should you meet the interview criteria, and wish to participate in the interview, you will be asked about some demographic details, your experience in care management in community settings, to confirm which competencies you felt were most important, and to expand upon why you feel these competencies were important. The conversation will take place as an individual interview or an

interview with your caregiver or family member, if that is what you prefer. The interview will be scheduled at your convenience. The interview should take approximately 45 minutes.

**Where will the study take place?**

The study will take place online.

**Will the study help you or others?**

By participating in this study, you will be given access to the study's findings, should you wish to receive them. Beyond this, this study may aid in producing programs harnessing care management and home-based care to improve the care provided to older adults.

**Will the study harm you?**

Discussing healthcare experiences, due to their sensitive and personal nature, may cause short-term psychological or emotional harm. Any harm is expected to be minimal. However, should you feel uncomfortable, you may skip any question. You may also withdraw at any time. The researcher, additionally, can provide the contact information for local support services should you need or desire them.

**Is your participation voluntary?**

Participation in this study is entirely up to your discretion and is entirely voluntary. You may withdraw from participating in this study at any point, and you may do so without penalty. Should you choose to participate, your participation will be entirely up to your level of comfort. You may decline to answer any question asked of you. If you would like to stop the survey or interview, you may at any time.

Only your contact information can be deleted once you've completed the survey. Due to identifying information being stored independently, there is no way to identify surveys and delete individual surveys. However, should you be eligible and wish to participate in the follow-up interview portion of the study, you can choose to have your data deleted up until the beginning of data analysis by contacting the research team. It is expected that data analysis for interviews will begin no later than 4 weeks after completing an interview.

**Can you change your mind or decide not to answer a question?**

If at any time, should you change your mind, you can withdraw from the study and stop participating. Your decision to stop or not answer a question will have no impact on you. If you decide to leave the interview section of the study, it will be up to your discretion whether your data should be permanently deleted or if data already collected can be used.

**What will happen to your information?**

Your information will be kept on a secured server at the University of Waterloo School of Public Health Sciences, as well as an encrypted USB drive. Only members of the research team will have access to the data. Your identity will be kept confidential. For interviews, your data will only be referred to using a pseudonym to maintain your confidentiality. Video recordings, made automatically by videoconferencing software, will be deleted as soon as possible, with only audio recordings being retained. Audio recordings will be deleted after they have been transcribed and cleaned. Your name will not appear on any data, or in any subsequent paper, presentation, or materials produced from this study.

Files containing your data will be retained for a minimum of 7 years. All study materials will be de-identified to remove all names and identifying information from the data. For the interview portion of the study, each participant will be asked to provide a pseudonym or will have one provided to them.

**Who can I contact if I have any questions or if I am interested in participating?**

If you have questions about the research or about your role in the study, please feel free to contact Leonardo Romano by phone at ###-###-#### or by e-mail at [leo.romano@live.com](mailto:leo.romano@live.com). This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Board (REB #45512). If you have questions for the Board, contact the Office of Research Ethics, toll-free at 1-833-643-2379 (Canada and USA), 1-519-888-4440, or [reb@uwaterloo.ca](mailto:reb@uwaterloo.ca).

**What will happen after the study is over?**

The researchers will ask if you would like to be contacted in the future to receive the results and findings of the study. If you do not want to be contacted in the future, you may indicate this preference to the researcher as part of the interview.

**Conclusion**

We are excited about this study and are looking forward to listening to your opinions, experiences and insights. We sincerely hope that you will consider participating.

## **Appendix I: Survey invitation letter before remuneration**

Date:

To whom it may concern:

This letter is being given to you on behalf of Dr. Paul Stolee, Dr. Jennifer Yessis, Dr. Justine Giosa, and Leonardo Romano in order to provide you with information about a research study that they are conducting in the Geriatric Health Systems research group at the University of Waterloo School of Public Health Sciences.

They are hoping to survey people who have experience providing or receiving care management in home-based settings. They hope to better understand the relative importance of competencies which care managers must possess when working with older adults in home-based settings. Your participation in this portion of their research study would involve completing a survey, which should take between 20 and 30 minutes.

The data collected during the survey will contribute to understanding which care manager competencies are important when managing older adults. These findings may assist in creating programs which are more capable of helping vulnerable older adults. If you are still interested in participating in the survey portion of the study, please contact Leonardo Romano at ###-###-#### or [lromano@uwaterloo.ca](mailto:lromano@uwaterloo.ca). We will send you a link to complete the survey. This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Board (REB #45512).

Sincerely,

Leonardo Romano, BSc  
University of Waterloo  
School of Public Health Sciences  
Telephone: ###-###-####  
Email: [lromano@uwaterloo.ca](mailto:lromano@uwaterloo.ca)  
Website: <https://uwaterloo.ca/geriatric-health-systems-research-group>

## **Appendix J: Updated email script to organizations**

Good Morning,

I hope this email finds you well. My name is Leonardo Romano, and I am a Master's student with the Geriatric Health Systems Research Group (PI: Paul Stolee) at the University of Waterloo.

For my Master's thesis, I am conducting a research study entitled "Understanding Stakeholder Perspectives on Care Manager Competencies: A Multiple-Method Needs Assessment". The purpose of this research is to identify what competencies are necessary for care managers who work with older adults in home-based primary care, and to better understand these competencies through consultation with experts. This research has received ethics clearance through the University of Waterloo Office of Research Ethics (ORE #45512).

**I am looking for individuals who can assess and comment on the importance of competencies which have been identified in the literature.** Your organization's experience with care management would make your personnel valuable contributors and I would like to invite you to participate in a survey.

I would greatly appreciate your help in connecting me with members of your organization who can speak to the importance of care manager competencies. Participation would involve completing a survey, between 20 and 30 minutes.

If you can aid in recruitment, please contact me at ###-###-#### or [lromano@uwaterloo.ca](mailto:lromano@uwaterloo.ca). If you would like any additional information on this study, please do not hesitate to contact me.

Sincerely,

Leonardo Romano, BSc

University of Waterloo School of Public Health Sciences

Telephone: ###-###-####

Email: [lromano@uwaterloo.ca](mailto:lromano@uwaterloo.ca)

Website: <https://uwaterloo.ca/geriatric-health-systems-research-group>

## **Appendix K: Updated letter of information**

### **Date:**

**Study Name:** Understanding Stakeholder Perspectives on Care Manager Competencies

### **Lead Researcher:**

Paul Stolee\*, PhD, Professor

### **Co-Investigators:**

Jennifer Yessis\*, PhD

Justine Giosa\*, PhD

Leonardo Romano\*, BSc

\*University of Waterloo

200 University Ave W, Waterloo, ON N2L 3G1

### **Introduction:**

You are being invited to participate in a research study called *Understanding Stakeholder Perspectives on Care Manager Competencies* conducted by Dr. Paul Stolee, Dr. Jennifer Yessis, Dr. Justine Giosa, and Leonardo Romano. This study is being conducted by the Geriatric Health Systems Research Group at the University of Waterloo. **Your participation in this study is entirely voluntary, so it is up to you to decide whether or not to take part in any portion of this study.**

Before you decide, it is important for you to understand what the research study involves. This letter will provide you with information about the study. It will explain the purpose of the research, your role in the research and potential benefits, risks and discomforts.

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### **Who is conducting the study?**

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### **What is the purpose of the study?**

The purpose of this research is to identify what competencies are necessary for care managers who work with older adults in home-based primary care. This study aims to identify what is known within the literature regarding competencies for a care manager, verify and contextualize these findings with stakeholders, and understand stakeholder perspectives on these competencies. The overall objective of this study is to produce a comprehensive guide of the competencies necessary for home-based primary care managers, which has been verified and supported by stakeholders with first-hand knowledge.

### **What will happen?**

You are being invited to participate in a survey, and potentially an interview depending on your experience with care management and your willingness. The survey will ask you to rank and rate care managers' competencies which have already been uncovered, as well as provide some demographic information. The survey should take 20-30 minutes. Should you meet the interview criteria, and wish to participate in the interview, you will be asked about some demographic details, your experience in care management in community settings, to confirm which competencies you felt were most important, and to expand upon why you feel these competencies were important. The conversation will take place as an individual interview or an

interview with your caregiver or family member, if that is what you prefer. The interview will be scheduled at your convenience. The interview should take approximately 45 minutes.

**Where will the study take place?**

The study will take place online.

**Will the study help you or others?**

By participating in this study, you will be given access to the study's findings, should you wish to receive them. Beyond this, this study may aid in producing programs harnessing care management and home-based care to improve the care provided to older adults.

**Will the study harm you?**

Discussing healthcare experiences, due to their sensitive and personal nature, may cause short-term psychological or emotional harm. Any harm is expected to be minimal. However, should you feel uncomfortable, you may skip any question. You may also withdraw at any time. The researcher, additionally, can provide the contact information for local support services should you need or desire them.

**Is your participation voluntary?**

Participation in this study is entirely up to your discretion and is entirely voluntary. You may withdraw from participating in this study at any point, and you may do so without penalty. Should you choose to participate, your participation will be entirely up to your level of comfort. You may decline to answer any question asked of you. If you would like to stop the survey or interview, you may at any time.

Only your contact information can be deleted once you've completed the survey. Due to identifying information being stored independently, there is no way to identify surveys and delete individual surveys. However, should you be eligible and wish to participate in the follow-up interview portion of the study, you can choose to have your data deleted up until the beginning of data analysis by contacting the research team. It is expected that data analysis for interviews will begin no later than 4 weeks after completing an interview.

**Will I receive anything for participating in the study?**

If you participate in this study, you will receive remuneration for your time. Participants who complete the survey will receive a \$15 Amazon gift card. Participants who complete the follow-up interview will receive a \$40 gift card to their choice of Amazon or Shoppers Drug Mart. If you decide to stop participating early, please click through to the end to receive the electronic gift card. To keep your responses anonymous, you will be asked to input your email address for purposes of receiving the electronic gift card in a separate online questionnaire. Email addresses will be stored separately, then destroyed once electronic gift cards have been issued. The amount received is taxable. It is your responsibility to report this amount for income tax purposes.

**Can you change your mind or decide not to answer a question?**

If at any time, should you change your mind, you can withdraw from the study and stop participating. Your decision to stop or not answer a question will have no impact on you. If you decide to leave the interview section of the study, it will be up to your discretion whether your data should be permanently deleted or if data already collected can be used.

**What will happen to your information?**

Your information will be kept on a secured server at the University of Waterloo School of Public Health Sciences, as well as an encrypted USB drive. Only members of the research team will have access to the data. Your identity will be kept confidential. For interviews, your data will only be referred to using a pseudonym to maintain your confidentiality. Video recordings, made automatically by videoconferencing software, will be deleted as soon as possible, with only

audio recordings being retained. Audio recordings will be deleted after they have been transcribed and cleaned. Your name will not appear on any data, or in any subsequent paper, presentation, or materials produced from this study.

Files containing your data will be retained for a minimum of 7 years. All study materials will be de-identified to remove all names and identifying information from the data. For the interview portion of the study, each participant will be asked to provide a pseudonym or will have one provided to them.

**Who can I contact if I have any questions or if I am interested in participating?**

If you have questions about the research or about your role in the study, please feel free to contact Leonardo Romano by phone at ###-###-#### or by e-mail at [lromano@uwaterloo.ca](mailto:lromano@uwaterloo.ca). This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Board (REB #45512). If you have questions for the Board, contact the Office of Research Ethics, toll-free at 1-833-643-2379 (Canada and USA), 1-519-888-4440, or [reb@uwaterloo.ca](mailto:reb@uwaterloo.ca).

**Who is sponsoring/funding this study?**

This study is funded by the SE Research Centre.

**What will happen after the study is over?**

The researchers will ask if you would like to be contacted in the future to receive the results and findings of the study. If you do not want to be contacted in the future, you may indicate this preference to the researcher as part of the interview.

**Conclusion**

We are excited about this study and are looking forward to listening to your opinions, experiences and insights. We sincerely hope that you will consider participating

## **Appendix L: Updated Survey invitation letter**

Date:

To whom it may concern:

This letter is being given to you on behalf of Dr. Paul Stolee, Dr. Jennifer Yessis, Dr. Justine Giosa, and Leonardo Romano in order to provide you with information about a research study that they are conducting in the Geriatric Health Systems research group at the University of Waterloo School of Public Health Sciences.

They are hoping to survey people who have experience providing or receiving care management in home-based settings. They hope to better understand the relative importance of competencies which care managers must possess when working with older adults in home-based settings. Your participation in this portion of their research study would involve completing a survey, which should take between 20 and 30 minutes. In appreciation of your time, you will receive a \$15 Amazon gift card.

The data collected during the survey will contribute to understanding which care manager competencies are important when managing older adults. These findings may assist in creating programs which are more capable of helping vulnerable older adults. If you are still interested in participating in the survey portion of the study, please contact Leonardo Romano at ###-###-#### or [lromano@uwaterloo.ca](mailto:lromano@uwaterloo.ca). We will send you a link to complete the survey. This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Board (REB #45512).

Sincerely,

Leonardo Romano, BSc

University of Waterloo

School of Public Health Sciences

Telephone: ###-###-####

Email: [lromano@uwaterloo.ca](mailto:lromano@uwaterloo.ca)

Website: <https://uwaterloo.ca/geriatric-health-systems-research-group>

## Appendix M: Interview invitation letter

Date

To whom it may concern:

This letter is being given to you on behalf of Dr. Paul Stolee, Dr. Jennifer Yessis, Dr. Justine Giosa, and Leonardo Romano in order to provide you with information about a research study that they are conducting in the Geriatric Health Systems research group at the University of Waterloo School of Public Health Sciences. **You are receiving this because you have indicated that you were interested in taking part in an interview as a follow-up to a survey you have already completed.**

They are hoping to interview people who have experience providing or receiving care management in home-based settings. They hope to better understand which attributes care managers must have when providing home-based primary care. Your continued participation in this research study would involve taking part in an interview. The interview would last approximately 45 minutes and would be held online. In appreciation of your time, you will receive a \$40 Amazon gift card.

The data collected during the interview will contribute to understanding which care manager attributes are important, as well as why these attributes are important. These findings may assist in creating programs which are more capable of helping vulnerable older adults.

If you are still interested in participating in the interview portion of the study, please contact Leonardo Romano at ###-###-#### or lromano@uwaterloo.ca. We will set up an interview at a time that is convenient for you. This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Board (REB #45512).

Sincerely,

Leonardo Romano, BSc

University of Waterloo

School of Public Health Sciences

Telephone: ###-###-####

Email: lromano@uwaterloo.ca

Website: <https://uwaterloo.ca/geriatric-health-systems-research-group>

## **Appendix N: Interview guide**

*Thank you very much for going over all of those questions with me. I'm now going to begin the interview with some demographic questions, which will help me with reporting the findings of this study.*

### **Demographics:**

1. In what year were you born?
2. How do you identify your race or ethnicity?
3. What gender do you identify as?
4. What is your current highest level of education?
5. What is your current occupation, and what level of experience do you have in that occupation?
6. Could you explain the type of experience you have with care management?  
Probe/follow-up: What setting has your experience been in?
7. Could you describe what type of patients you encounter / your own health / the health of the person whom you care for?

*Thank you very much. With the demographics out of the way, I'm now going to ask you questions which concern care managers and care management more directly. As you may recall, this interview is a follow-up to a survey you completed [rough estimation of time passed] ago. In this, I will be asking questions which add depth to the types of questions you were asked there, and I may refer to some of its findings.*

### **Benefits of care management**

8. Before we begin in earnest, I'd like to ask you what you think of when you hear the term care management?  
Probes: What kind of tasks happen in care management? What are care managers responsible for or what are their roles? What is the purpose of care management for patients?
9. What benefits have you noticed of the inclusion of care management in caring for older adults?  
Probe: We know in the literature that older adults often encounter barriers in their healthcare. How does or how can care managers address these?
10. What benefits have you noticed, if any, for the caregivers of older adults who receive care management?  
Follow-up: Have you noticed benefits that are specific to patients or caregivers?
11. What benefits have you noticed for practices or physicians which have incorporated care management?  
Probe: We know that some primary care practices experience issues, has care management impacted those?

### **Care manager competencies**

12. What competencies, overall, are important for a care manager?  
Prompt: Without considering the setting or who they are working with, what must a care manager be able to do?
13. When working with older adults, which competency would you say is most important?

Prompt: If the response to this question is different from the competency group they stated on the survey, inquire as to the reason for the change.

14. When working with family or informal caregivers, which competency would you say is most important?

Prompt: If the response to this question is different from the competency group they stated on the survey, inquire as to the reason for the change.

15. When working as part of a care team, which competencies would you say is most important?

Prompt: If the response to this question is different from the competency group they stated on the survey, inquire as to the reason for the change.

16. Are there any competencies which you feel are unimportant or irrelevant for a care manager to have?

Note: Provide the competencies used for the survey.

17. What would you say is the most challenging part or parts of a care manager role?

18. Do you feel the importance of competencies would change depending on the setting in which care management is being conducted?

Probe: Could you describe, if there are any, the distinctions between conventional primary-care and community-based care with regards to care manager skills and competencies?

Probe: Would you say there are any differences between primary and community-based care in terms of important competencies?

19. Can you describe an ideal interaction between a care manager and a patient?

Probe: What would a care manager need to do to make an interaction go as smoothly and efficiently as possible?

Probe: What would make a case manager's interaction with a patient or client go well, also what would hinder their interactions?

20. What professional group is best suited to doing care management?

Prompt: List some options if they are unsure: nurses, social workers, PSWs, community support workers

21. Are there any competencies which I have not mentioned that you feel are important to a care manager's ability to perform their role?

### **Ending off**

22. Is there anything else you would like to mention that we have not discussed today?

23. Do you have any questions for me before we conclude this interview?

## Appendix O: Verbal consent script

### Verbal Consent Script to Participate for Interviews

*Thank you very much for taking the time to meet with me today, and for showing interest in participating in a follow-up interview. I will now take some time to ensure that you understand the study and agree with participating in this interview.*

- ☐ Could you please confirm that you have read the information in the Letter of Information for this project “Understanding Stakeholder Perspectives on Care Manager Competencies”, and that you know that this study is being conducted at the University of Waterloo under the Principal Investigator Dr. Paul Stolee?

*Have you had a chance to read the information letter? Do you have any questions?*

- ☐ Could you please confirm that you have had the opportunity to ask questions related to the project, and that those questions have been answered to your satisfaction?
- ☐ Do you consent to participating in the interview?
- ☐ Do you give permission for your interview to be audio/video recorded?
- ☐ Do you agree to the use of anonymous quotations in any paper or publication resulting from this research?
- ☐ *Do you agree to the use of anonymous quotations in any paper or publication resulting from this research with the understanding that you may be referenced generally by your area of expertise (e.g., Referring to something you’ve said in this interview, specifically as a care manager/care provider/patient)?*

*If you would not like to be referred to by your general area of expertise:*

- ☐ *Do you agree to the use of quotations in any paper or publication resulting from this study with the understanding that a pseudonym will be used in place of your real name (e.g., Jane Doe)?*

*As a reminder, participation is voluntary, and you may end the interview session by advising me of your decision at any time. By providing your consent, you are not waiving your legal rights or releasing the investigator(s) or involved institution(s) from their legal and professional responsibilities. If you have questions for the Research Ethics Board, contact information for the Office of Research Ethics is listed on the information letter that you received prior to this session. For all other questions about the study, you may contact me, Leo Romano, by phone at ###-###-####, or through email at lromano@uwaterloo.ca.*

## Appendix P: Consent log

| ID | Name | Email | Date | Platform? | Read the LOI? | Opportunity to ask questions? | Consent to participate? | Consent to Audio/video recording? | Consent to anonymous quotes? | Reference by expertise? | Reference by pseudonym? | Consent Time? |
|----|------|-------|------|-----------|---------------|-------------------------------|-------------------------|-----------------------------------|------------------------------|-------------------------|-------------------------|---------------|
|    |      |       |      |           |               |                               |                         |                                   |                              |                         |                         |               |
|    |      |       |      |           |               |                               |                         |                                   |                              |                         |                         |               |
|    |      |       |      |           |               |                               |                         |                                   |                              |                         |                         |               |

## Appendix Q: Letter of Appreciation

Date

Dear [Participant],

I want to thank you for your participation in this study entitled “Understanding Stakeholder Perspectives on Care Manager Competencies”. This work would not be possible without contributions such as yours, and we are sincerely grateful for you spending your time to help make this project possible. Truly, thank you.

As a reminder, the purpose of this study is to identify and better understand the competencies necessary for care managers who work with older adults in the community. The data collected during your [survey/interview/survey and interview] will contribute greatly to a better understanding of how care managers work in home-based settings, and what about them aids in facilitating care. These findings may assist in creating programs which are more capable of helping vulnerable older adults.

Please remember that any data about you as an individual participant will be kept confidential. Once all the data has been collected and analyzed for this project, I plan on sharing this information with the research community through conferences, presentations and journal articles. If you would like to receive a copy of the study results or a summary of the studies findings, please respond to this email. If you have any questions about the study, please do not hesitate to contact me by email or telephone, as noted below. This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Board (REB #45512). If you have questions for the Board, contact the Office of Research Ethics, toll-free at 1-833-643-2379 (Canada and USA), 1-519-888-4440, or reb@uwaterloo.ca.

Sincerely,

Leonardo Romano

University of Waterloo

School of Public Health Sciences

Telephone: ###-###-####

Email: lromano@uwaterloo.ca

Website: <https://uwaterloo.ca/geriatric-health-systems-research-group>

## Appendix R: Quotes and interpretation

| Competency                                                                | Quote                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | My Interpretation                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pharmacology Knowledge<br><br>Practice facing (medical ability)           | I don't know if it's 100% essential, but I do know it makes a difference because when you're talking about seniors, I can't remember it's like 25%, or maybe up to 50% of like hospital visits for seniors is medication related, whether they've taken medication inappropriately, or they're lacking medication that they need, or a medication has caused an adverse effect, like a fall, or, you know, sometimes medication changes as people age, age, there's like the there's like a narrow therapeutic index with certain high risk medications, which can cause severe adverse effects leading to hospitalizations. So I know, in seniors, medication is a big thing. So it would be great for someone to at least have, you know, a basic level of medication knowledge too. | Care managers having a understanding of medications and how they impact older adults is valuable, as it can help to avoid potential health complications which can arise from improper medication.                                                                                                                                                                                                |
| Family Engagement<br><br>Caregiver facing (Family Engagement)             | But we try to utilize them if we can, to help facilitate the treatment plan. Because a lot of these patients, they may lack of motivation or something may be preventing them from following through with any of the advice that's given to them either from their family doctor or the hospital or the pharmacy or whoever. So if we can get the the, the family member to help, it can be significant.                                                                                                                                                                                                                                                                                                                                                                               | Participant added nuance to the concept of family engagement, indicating that as a care manager family caregivers can be leveraged to aid in the treatment plan, and that the help given by family caregivers can have significant impacts                                                                                                                                                        |
| Willing to go Above and Beyond<br><br>Patient facing (Personality traits) | We often try hard, for these patients. So I know we've had conversations where. not burned out, but like, where we feel like we're really trying a lot harder than the patients. And then you hear people saying, well, you don't try harder than your patients. But our team is sometimes motivated to go above and beyond, like, really trying to find different solutions for these issues that are arising or, yeah, or different methods or approaches or different team members. It's just that we don't, we don't quit, we don't quit. Even when someone sometimes fires us, we'll leave it for a few months and go back and knock on their door. And more often, then not we're                                                                                                | Consultant emphasized that, as a personality trait, in performing their role of a care manager they and their team members go above and beyond for the patients who they care for. They further explain that, even in the event that they are asked to no longer provide services to their client, they are still willing to go out of their way to retain them in their home-based care program. |

|                                                                 |                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                            |
|-----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                 | welcomed back in. We just know that because of the different personalities, or maybe brain injuries or whatever, that we've worked with, that things aren't always the way they seem. So we're willing to keep trying , like... Yeah, we don't give up easily and we do genuinely care for, for these patients. And for their wellbeing. |                                                                                                                                                                                                            |
| Medication Prescriber<br><br>Patient facing (Disease Knowledge) | So yeah, if you just have one, it might just be, you know, ideal to have like a nurse practitioner or someone as a prescriber. But if you can't get a prescriber, if you can have that multidisciplinary approach, it kind of makes up for it .                                                                                          | In the event that an integrated care team can only have one professional who is responsible for care management, it would be ideal for that professional to be one who is capable of writing prescriptions |

## Appendix S: Ethics clearance

### UNIVERSITY OF WATERLOO

#### Notification of Ethics Clearance to Conduct Research with Human Participants

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Principal Investigator: Paul Stolee

Student investigator: Leonardo Romano

File #: 45512

Title: Understanding Stakeholder Perspectives on Care Manager Competencies: A Multiple-Method Needs Assessment

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The Human Research Ethics Board is pleased to inform you this study has been reviewed and given ethics clearance.

**Initial Approval Date: 11/15/23 (m/d/y)**

University of Waterloo Research Ethics Boards are composed in accordance with, and carry out their functions and operate in a manner consistent with, the institution's guidelines for research with human participants, the Tri-Council Policy Statement for the Ethical Conduct for Research Involving Humans (TCPS2 2022), the Ontario Personal Health Information Protection Act (PHIPA), and all laws and regulations of the province of Ontario (as applicable). Additionally, CREB operates in a manner consistent with the International Conference for Harmonization of Technical Requirements for Pharmaceuticals for Human Use (ICH) Guidance E6(R2): Good Clinical Practice, the International Organization for Standardization of Good Clinical Practices (GCP) as set out by ISO 14155 - Clinical investigation of medical devices for human subjects, Part C, Division 5 of the Food and Drug Regulations, Part 4 of the Natural Health Products Regulations, Part 3 of the Medical Devices Regulations. Both Boards are registered with the U.S. Department of Health and Human Services under the Federal Wide Assurance, FWA00021410, and IRB registration number IRB00002419 (HREB) and IRB00007409 (CREB).

**Expiry Date: 11/16/24 (m/d/y)**

Multi-year research must be renewed at least once every 12 months unless a more frequent review has otherwise been specified. Studies will only be renewed if the renewal report is received and approved before the expiry date. Failure to submit renewal reports will result in the investigators being notified ethics clearance has been suspended and Research Finance being notified the ethics clearance is no longer valid.

Level of review: Delegated Review

Signed on behalf of the Human Research Ethics Board



Joanna Eidse, Research Ethics Officer, jeidse@uwaterloo.ca, 519-888-4567, ext. 47163

This above named study is to be conducted in accordance with the submitted application and the most recently approved versions of all supporting materials.

Documents reviewed and received ethics clearance for use in the study and/or received for information:

file: REVISIONS\_VERSION2\_20231110.docx

file: SURVEY\_ONLINE\_CONSENT\_FORM\_VERSION1\_20230822.pdf

file: INTERVIEW\_VERBAL\_CONSENT\_SCRIPT\_VERSION2\_20231030.pdf

file: LETTER\_OF\_INFORMATION\_VERSION3\_20231110.pdf

file: CCS\_SCREENING\_QUESTION\_VERSION2\_20231030.pdf

file: FEEDBACK\_AND\_LETTER\_OF\_APPRECIATION\_VERSION2\_20231030.pdf

file: SURVEY\_INVITATION\_LETTER\_VERSION3\_20231110.pdf

file: INTERVIEW\_INVITATION\_LETTER\_VERSION3\_20231110.pdf

file: METHODS\_GRAPGIC\_VERSION1\_20230822.pdf

file: CCS\_SURVEY\_VERSION3\_20231110.pdf

file: FOLLOW\_UP\_CONTACT\_INFO\_SURVEY\_VERSION1\_20231030.pdf

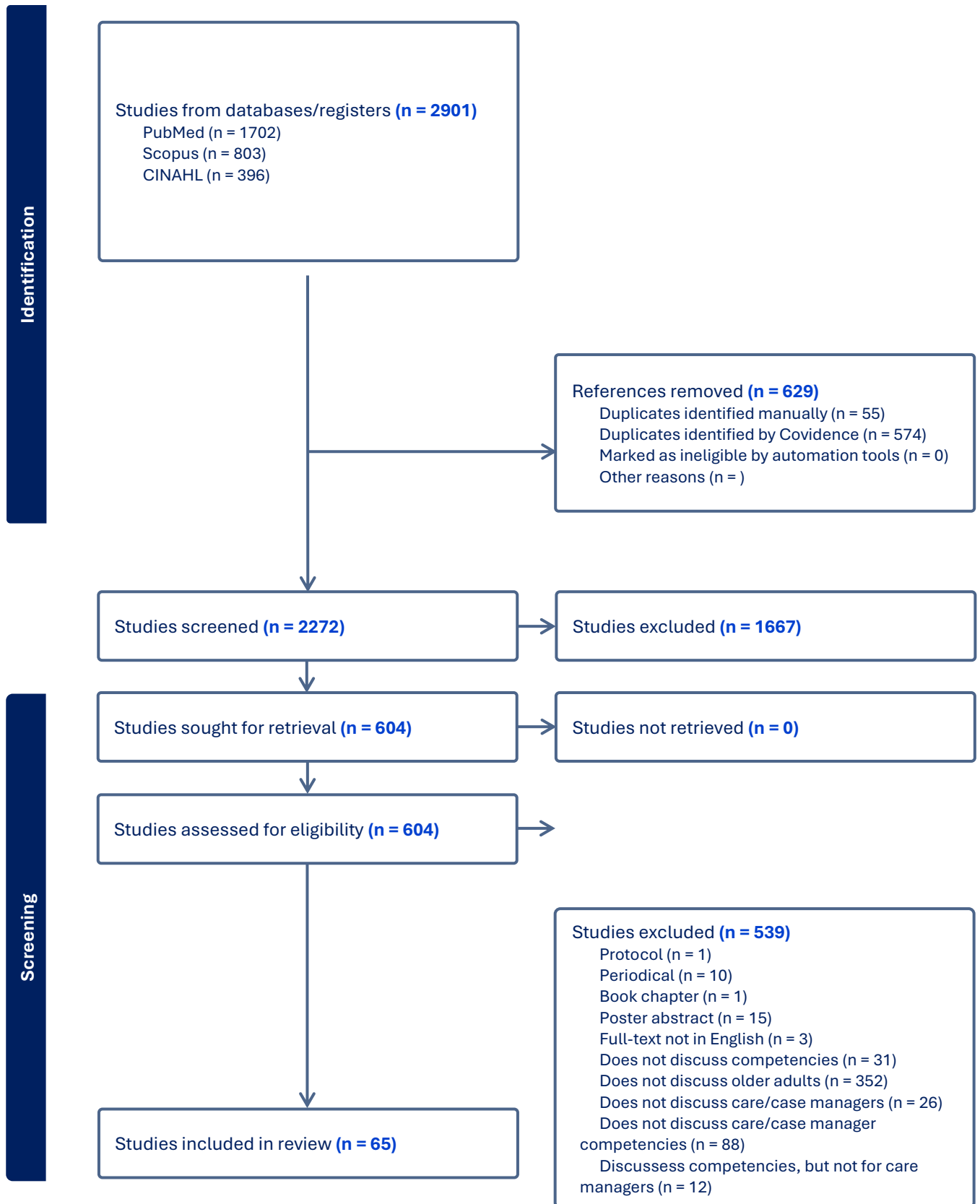
file: INTERVIEW\_GUIDE\_VERSION3\_20231030.pdf

Approved Protocol Version 3 in Research Ethics System

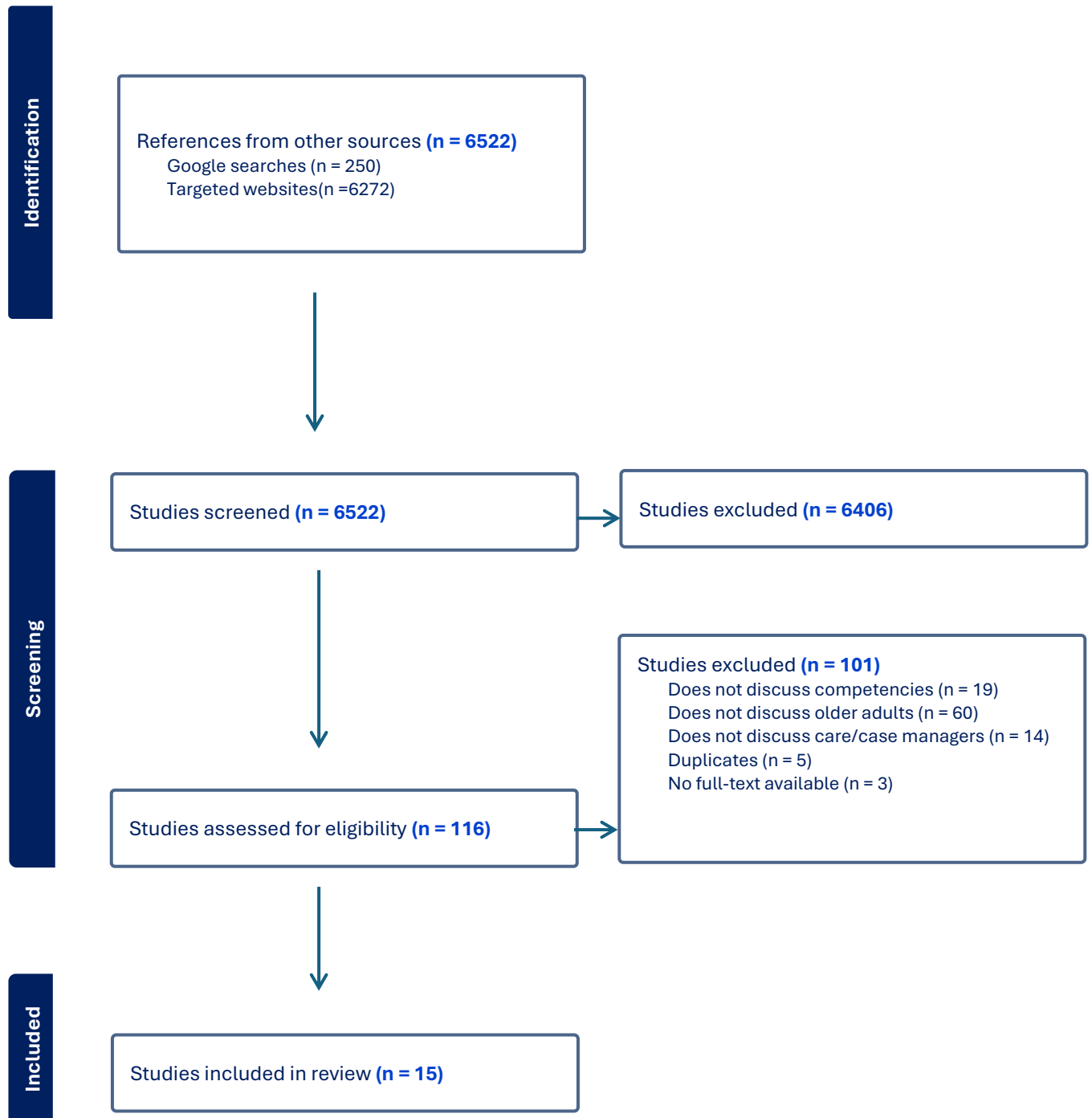
**This is an official document. Retain for your files.**

**You are responsible for obtaining any additional institutional approvals that might be required to complete this study.**

## Appendix T: Scoping review flow diagram



## Appendix U: Grey literature flow diagram



**Appendix V: Grey literature extraction table**

| Author, Year, Location                 | Study Type & Methods | Aims                                                                                                       | Setting   | Population                                        | Competencies                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|----------------------------------------|----------------------|------------------------------------------------------------------------------------------------------------|-----------|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aging Life Care Association, USA, 2017 | Grey Literature      | Recommendations for Academic Communities Developing aging life care and geriatric care management programs | Community | Students who would become geriatric care managers | <ul style="list-style-type: none"> <li>-Advocate</li> <li>-Evidence Based Approach</li> <li>-Assessment</li> <li>-Team Follower</li> <li>-Medical Knowledge</li> <li>-</li> <li>Communication (Patient)</li> <li>-Evaluate</li> <li>-Person-Centered Approach</li> <li>-Care Continuity</li> <li>-Collaborate (Practice)</li> <li>-</li> <li>Communication (Practice)</li> <li>-Support (Caregiver)</li> <li>-Health System and Services Knowledge</li> </ul> |
| Moroch, USA, 2020                      | Grey Literature      | Highlight the advocacy role of care managers who work with older adults                                    | Community | Older adults                                      | -Advocate                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Pilcher, USA, 2021                     | Grey Literature      | Overview of a the purpose of an aging life care manager                                                    | Community | Aging life care managers                          | <ul style="list-style-type: none"> <li>-Health System Navigator</li> <li>-Assessment</li> <li>-Holistic</li> <li>-Independence Support</li> </ul>                                                                                                                                                                                                                                                                                                             |

|                                            |                 |                                                       |              |                                               |                                                                                                                                                      |
|--------------------------------------------|-----------------|-------------------------------------------------------|--------------|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| Senior Persons Living Together, Canada, ND | Grey Literature | Overview of care management                           | Community    | Older Adults                                  | -Health System Navigator<br>-Service Arranger/Accessor<br>-Support (Caregiver)                                                                       |
| Stowell Associates, USA, 2022a             | Grey Literature | To compare geriatric care managers with case managers | None stated  | Geriatric care managers and case managers     | -Person-Centered Approach<br>-Evidence Based Approach<br>-Support (Patient)                                                                          |
| Keystone Health, USA, ND                   | Grey Literature | Overview of a geriatric care managers role            | None stated  | Geriatric care managers                       | -Coordinator<br>-Care planner<br>-Emotional support (Patient)<br>-Discharge Planner<br>-Mobile/Able to make home visits<br>-Evaluator<br>-Assessment |
| Hayes, USA, 2016                           | Grey Literature | Case study of care management plus                    | Primary care | Older adults with multiple chronic conditions | -Empower (Patients)<br>-Empower (Caregiver)<br>-Barrier Explorer<br>-Coordinator<br>-Assessment                                                      |
| Griffin, USA, 2014                         | Grey Literature | Overview of integrated care management                | Community    | Older adults in rural communities             | -Integrator<br>-Coordinator<br>-Person-Centered Approach                                                                                             |

|                                              |                         |                                                                                                        |           |                                                 |                                                                                                                                                                                                                                    |
|----------------------------------------------|-------------------------|--------------------------------------------------------------------------------------------------------|-----------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ross, United Kingdom, 2011                   | Grey Literature         | Overview of case management                                                                            | Community | Older adults                                    | -Patient Identification and Recruitment<br>-Assessment<br>-Care planning<br>-Coordination<br>-Referral<br>-Patient Monitor<br>-Medication review<br>-Self-Management Support<br>-Advocacy<br>-Negotiating<br>-Psychosocial Support |
| Stowell Associates, USA, 2023                | Grey Literature         | An overview of the qualities a caregiver should possess, and contrast them with those of care managers | Community | Older adults                                    | -Engage Clients                                                                                                                                                                                                                    |
| Stowell Associates, USA, 2022b               | Grey Literature         | An overview of the role of a Memory Care Specialist and geriatric care manager                         | Community | Older adults                                    | -Counselling<br>-Advocacy<br>-Assessment<br>-Coordinate<br>-Decision making<br>-Mediator<br>-Care planning<br>-Liaison                                                                                                             |
| Public Health Agency of Canada, Canada, 2019 | Grey Literature: Report | To report the information gathered from Canadians that informed the dementia strategy for Canada       | Community | Older adults with dementia and their caregivers | -Assessment<br>-Care coordination<br>-Advocacy<br>-Communication<br>-Care planning                                                                                                                                                 |

|                                               |                         |                                                                                                                                   |                |                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------|----------------|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Canadian Home Care Association, Canada, 2005  | Grey Literature: Report | To report the results of a roundtable on case management, where the goal was to develop a common understanding on case management | Home/Community | Case management for people in home care | <ul style="list-style-type: none"> <li>-Patient Centered</li> <li>-Cultural competency</li> <li>-Patient Education</li> <li>-Evidence based</li> <li>-Family Engagement</li> <li>-Communication</li> <li>-Resource and budget management</li> <li>-Advocate</li> <li>-Independence support</li> <li>-Responsive</li> <li>-Patient population knowledge</li> <li>-Screening</li> <li>-Assessment</li> <li>-Care planning</li> <li>-Coordination</li> <li>-Liaising</li> <li>-Care implementation</li> <li>-Monitoring</li> <li>-Evaluation</li> <li>-Discharge planning</li> </ul> |
| Gerontological Advisory Council, Canada, 2006 | Grey Literature: Report | To report the recommendations from the Gerontological Advisory Council of Veterans Affairs Canada                                 | Home/Community | Older adult veterans                    | <ul style="list-style-type: none"> <li>-Flexibility</li> <li>-Resource and Budget Management</li> <li>-Information Provider</li> <li>-Arranging Services</li> <li>-Disease knowledge</li> <li>-Resource Mobilizer</li> <li>-Patient Monitor</li> </ul>                                                                                                                                                                                                                                                                                                                            |

|                       |                         |                                                                                                                |      |                                                   |                                                                                                                                     |
|-----------------------|-------------------------|----------------------------------------------------------------------------------------------------------------|------|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
|                       |                         |                                                                                                                |      |                                                   | <ul style="list-style-type: none"> <li>- Communication with care team</li> <li>- Discharge planner</li> </ul>                       |
| Shapiro, Canada, 2002 | Grey Literature: Report | To synthesize the key process and outcome learning from the home care theme area of the Health Transition Fund | Home | Care managers, Older adults, healthcare providers | <ul style="list-style-type: none"> <li>- Leadership</li> <li>- Assessment</li> <li>- Coordination</li> <li>- Implementor</li> </ul> |

## Appendix W: Frequency Response Table

|                                            | Responses no. (%) |             |                      |          |                    |           |                |
|--------------------------------------------|-------------------|-------------|----------------------|----------|--------------------|-----------|----------------|
| Competency                                 | Very Unimportant  | Unimportant | Slightly Unimportant | Neither* | Slightly Important | Important | Very Important |
| <b>Patient Disease Management</b>          |                   |             |                      |          |                    |           |                |
| Disease knowledge                          | 0 (0.0)           | 0 (0.0)     | 1 (5.0)              | 0 (0.0)  | 2 (10.0)           | 9 (45.0)  | 8 (40.0)       |
| Disease management promotion               | 0 (0.0)           | 0 (0.0)     | 2 (10.0)             | 0 (0.0)  | 4 (20.0)           | 5 (25.0)  | 9 (45.0)       |
| Self-management promotion                  | 0 (0.0)           | 0 (0.0)     | 0 (0.0)              | 1 (5.0)  | 4 (20.0)           | 4 (20.0)  | 11 (55.0)      |
| Activities of Daily Living (ADL) promotion | 0 (0.0)           | 0 (0.0)     | 0 (0.0)              | 2 (10.0) | 0 (0.0)            | 5 (25.0)  | 13 (65.0)      |
| Clinical care                              | 0 (0.0)           | 0 (0.0)     | 0 (0.0)              | 1 (5.0)  | 6 (30.0)           | 5 (25.0)  | 8 (40.0)       |
| Medication prescriber                      | 4 (20.0)          | 1 (5.0)     | 3 (15.0)             | 3 (15.0) | 7 (35.0)           | 1 (5.0)   | 1 (5.0)        |
| Addressing deficits                        | 0 (0.0)           | 0 (0.0)     | 0 (0.0)              | 0 (0.0)  | 4 (20.0)           | 5 (25.0)  | 11 (55.0)      |
| Exploring barriers                         | 0 (0.0)           | 0 (0.0)     | 0 (0.0)              | 0 (0.0)  | 0 (0.0)            | 7 (35.0)  | 13 (65.0)      |
| Promoting Function                         | 0 (0.0)           | 1 (5.0)     | 0 (0.0)              | 0 (0.0)  | 0 (0.0)            | 9 (45.0)  | 10 (50.0)      |
| <b>Patient Care Management</b>             |                   |             |                      |          |                    |           |                |

|                                                         |          |          |         |          |          |              |              |
|---------------------------------------------------------|----------|----------|---------|----------|----------|--------------|--------------|
| Coordin<br>ation                                        | 0 (0.0)  | 0 (0.0)  | 0 (0.0) | 0 (0.0)  | 3 (15.0) | 4 (20.0)     | 13<br>(65.0) |
| Care<br>planning                                        | 0 (0.0)  | 0 (0.0)  | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 5 (25.0)     | 15<br>(75.0) |
| Patient<br>identific<br>ation<br>and<br>recruitm<br>ent | 0 (0.0)  | 2 (10.0) | 0 (0.0) | 1 (5.0)  | 8 (40.0) | 9 (45.0)     | 0 (0.0)      |
| Patient<br>screenin<br>g                                | 0 (0.0)  | 0 (0.0)  | 0 (0.0) | 2 (10.0) | 6 (30.0) | 6 (30.0)     | 6 (30.0)     |
| Care<br>integrati<br>on                                 | 2 (10.0) | 0 (0.0)  | 0 (0.0) | 0 (0.0)  | 4 (20.0) | 7 (35.0)     | 7 (35.0)     |
| Referral                                                | 1 (5.0)  | 1 (5.0)  | 0 (0.0) | 1 (5.0)  | 1 (5.0)  | 10<br>(50.0) | 6 (30.0)     |
| Care<br>continuit<br>y                                  | 0 (0.0)  | 0 (0.0)  | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 5 (25.0)     | 15<br>(75.0) |
| Patient<br>engagem<br>ent                               | 0 (0.0)  | 0 (0.0)  | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 6 (30.0)     | 14<br>(70.0) |
| Patient<br>monitori<br>ng                               | 0 (0.0)  | 0 (0.0)  | 0 (0.0) | 0 (0.0)  | 2 (10.0) | 9 (45.0)     | 9 (45.0)     |
| Care<br>impleme<br>nting                                | 0 (0.0)  | 0 (0.0)  | 0 (0.0) | 2 (10.0) | 2 (10.0) | 8 (40.0)     | 8 (40.0)     |
| Discharg<br>e<br>planning                               | 0 (0.0)  | 0 (0.0)  | 1 (5.0) | 0 (0.0)  | 5 (25.0) | 8 (40.0)     | 6 (30.0)     |
| Patient<br>follow-<br>up                                | 0 (0.0)  | 0 (0.0)  | 0 (0.0) | 0 (0.0)  | 4 (20.0) | 4 (20.0)     | 12<br>(60.0) |
| <b>Health Systems and Service Provision</b>             |          |          |         |          |          |              |              |
| System<br>and<br>service<br>knowled<br>ge               | 0 (0.0)  | 0 (0.0)  | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 4 (20.0)     | 16<br>(80.0) |
| Health<br>system<br>navigati<br>on                      | 0 (0.0)  | 0 (0.0)  | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 9 (45.0)     | 11<br>(55.0) |

|                                |         |         |         |          |          |           |           |
|--------------------------------|---------|---------|---------|----------|----------|-----------|-----------|
| Arranging services             | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 2 (10.0) | 6 (30.0)  | 12 (60.0) |
| Gatekeeping services           | 0 (0.0) | 1 (5.0) | 1 (5.0) | 6 (30.0) | 2 (10.0) | 3 (15.0)  | 7 (35.0)  |
| Service broker                 | 1 (5.0) | 0 (0.0) | 1 (5.0) | 5 (25.0) | 2 (10.0) | 5 (25.0)  | 6 (30.0)  |
| Collaborating                  | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 7 (35.0)  | 13 (65.0) |
| Service mobilizing             | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 2 (10.0) | 11 (55.0) | 7 (35.0)  |
| <b>Patient Education</b>       |         |         |         |          |          |           |           |
| Educating                      | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1 (5.0)  | 3 (15.0) | 10 (50.0) | 6 (30.0)  |
| Coaching                       | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 3 (15.0) | 10 (50.0) | 7 (35.0)  |
| Advising                       | 0 (0.0) | 0 (0.0) | 1 (5.0) | 1 (5.0)  | 0 (0.0)  | 12 (60.0) | 6 (30.0)  |
| <b>Personality Traits</b>      |         |         |         |          |          |           |           |
| Culturally sensitive           | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 6 (30.0)  | 14 (70.0) |
| Attentive                      | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 10 (50.0) | 10 (50.0) |
| Compassionate or Empathic      | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 3 (15.0)  | 17 (85.0) |
| Open                           | 0 (0.0) | 0 (0.0) | 1 (5.0) | 1 (5.0)  | 0 (0.0)  | 11 (55.0) | 7 (35.0)  |
| Willing to go above and beyond | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 2 (10.0) | 15 (75.0) | 3 (15.0)  |
| Proactive                      | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 13 (65.0) | 7 (35.0)  |
| Fluid and flexible             | 0 (0.0) | 0 (0.0) | 1 (5.0) | 1 (5.0)  | 0 (0.0)  | 10 (50.0) | 8 (40.0)  |
| Honest                         | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 7 (35.0)  | 13 (65.0) |
| Loyal                          | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 13 (65.0) | 7 (35.0)  |

|                                           |         |         |         |          |          |              |              |
|-------------------------------------------|---------|---------|---------|----------|----------|--------------|--------------|
| Responsive                                | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 11<br>(55.0) | 9 (45.0)     |
| Trust builder                             | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 11<br>(55.0) | 9 (45.0)     |
| Holistic, or mindful of the whole patient | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 3 (15.0)     | 17<br>(85.0) |
| Objective of the patients condition       | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 11<br>(55.0) | 9 (45.0)     |
| Cheerleader                               | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 5 (25.0) | 13<br>(65.0) | 2 (10.0)     |
| Accessible and available                  | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 15<br>(75.0) | 5 (25.0)     |
| Visible                                   | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2 (10.0) | 4 (20.0) | 8 (40.0)     | 6 (30.0)     |
| Solution-oriented                         | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 15<br>(75.0) | 5 (25.0)     |
| <b>Non-medical Patient Support</b>        |         |         |         |          |          |              |              |
| Person-centred approach                   | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 7 (35.0)     | 13<br>(65.0) |
| Advocacy                                  | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 5 (25.0)     | 15<br>(75.0) |
| Support                                   | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 2 (10.0) | 6 (30.0)     | 12<br>(60.0) |
| Emotional support                         | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 6 (30.0) | 8 (40.0)     | 6 (30.0)     |
| Psychosocial support                      | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 4 (20.0) | 10<br>(50.0) | 6 (30.0)     |
| Independence support                      | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2 (10.0) | 0 (0.0)  | 11<br>(55.0) | 7 (35.0)     |
| Empowering                                | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 11<br>(55.0) | 9 (45.0)     |
| Emotionally receptive                     | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 4 (20.0) | 12<br>(60.0) | 4 (20.0)     |

|                                          |         |          |          |          |          |           |           |
|------------------------------------------|---------|----------|----------|----------|----------|-----------|-----------|
| Problem-solving                          | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 3 (15.0)  | 17 (85.0) |
| Isolation breaking                       | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 2 (10.0) | 1 (5.0)  | 13 (65.0) | 4 (20.0)  |
| Errands                                  | 0 (0.0) | 6 (30.0) | 2 (10.0) | 4 (20.0) | 6 (30.0) | 2 (10.0)  | 0 (0.0)   |
| Observation, ability to detect problems  | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 12 (60.0) | 8 (40.0)  |
| Transportation                           | 0 (0.0) | 1 (5.0)  | 0 (0.0)  | 3 (15.0) | 4 (20.0) | 9 (45.0)  | 3 (15.0)  |
| Mobility and ability to make home visits | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 2 (10.0) | 5 (25.0)  | 13 (65.0) |
| Able to act as a safety net              | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 2 (10.0) | 3 (15.0) | 11 (55.0) | 4 (20.0)  |
| <b>Patient Communication</b>             |         |          |          |          |          |           |           |
| Communication skills                     | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 4 (20.0)  | 16 (80.0) |
| Relationship and rapport building        | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 2 (10.0)  | 18 (90.0) |
| Patient contact                          | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 3 (15.0) | 5 (25.0)  | 12 (60.0) |
| Translation                              | 0 (0.0) | 2 (10.0) | 0 (0.0)  | 0 (0.0)  | 4 (20.0) | 8 (40.0)  | 6 (30.0)  |
| Consulting                               | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 4 (20.0) | 12 (60.0) | 4 (20.0)  |
| Negotiating                              | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 2 (10.0) | 12 (60.0) | 6 (30.0)  |
| Being a confidant                        | 0 (0.0) | 0 (0.0)  | 2 (10.0) | 0 (0.0)  | 7 (35.0) | 8 (40.0)  | 3 (15.0)  |
| Confidential                             | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 2 (10.0)  | 18 (90.0) |
| Counseling                               | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 5 (25.0) | 13 (65.0) | 2 (10.0)  |

|                                                         |         |         |          |          |          |              |              |
|---------------------------------------------------------|---------|---------|----------|----------|----------|--------------|--------------|
| Bufferin<br>g,<br>conciliat<br>ing, or<br>mediatin<br>g | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 2 (10.0) | 14<br>(70.0) | 4 (20.0)     |
| Providin<br>g<br>informat<br>ion                        | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 7 (35.0)     | 13<br>(65.0) |
| Liaising                                                | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 8 (40.0)     | 12<br>(60.0) |
| <b>Caregiver Communication</b>                          |         |         |          |          |          |              |              |
| Communi<br>cation<br>skills                             | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 2 (10.0) | 2 (10.0)     | 16<br>(80.0) |
| Relation<br>ship and<br>rapport<br>building             | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 4 (20.0)     | 16<br>(80.0) |
| Bufferin<br>g and<br>mediatin<br>g                      | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 4 (20.0) | 12<br>(60.0) | 4 (20.0)     |
| Counsell<br>ing                                         | 0 (0.0) | 0 (0.0) | 1 (5.0)  | 0 (0.0)  | 5 (25.0) | 13<br>(65.0) | 1 (5.0)      |
| Informat<br>ion<br>sharing                              | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 7 (35.0)     | 13<br>(65.0) |
| Family<br>engagem<br>ent                                | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 10<br>(50.0) | 10<br>(50.0) |
| <b>Caregiver Support</b>                                |         |         |          |          |          |              |              |
| Emotion<br>al<br>support                                | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 2 (10.0) | 16<br>(80.0) | 2 (10.0)     |
| Empathy                                                 | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 10<br>(50.0) | 10<br>(50.0) |
| Transpor<br>tation                                      | 1 (5.0) | 0 (0.0) | 2 (10.0) | 3 (15.0) | 7 (35.0) | 5 (25.0)     | 2 (10.0)     |
| Empowe<br>rment                                         | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 14<br>(70.0) | 6 (30.0)     |
| Support                                                 | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 0 (0.0)  | 12<br>(60.0) | 8 (40.0)     |
| <b>Operation Within a Practice</b>                      |         |         |          |          |          |              |              |

|                                    |         |         |         |          |          |           |           |
|------------------------------------|---------|---------|---------|----------|----------|-----------|-----------|
| Collaboration                      | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 6 (30.0)  | 14 (70.0) |
| Flexibility                        | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 4 (20.0) | 7 (35.0)  | 9 (45.0)  |
| Resource management                | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 3 (15.0) | 4 (20.0)  | 13 (65.0) |
| Time management                    | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 8 (40.0)  | 12 (60.0) |
| Ability to follow a leader         | 0 (0.0) | 0 (0.0) | 0 (0.0) | 4 (20.0) | 0 (0.0)  | 10 (50.0) | 6 (30.0)  |
| Ability to lead                    | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 2 (10.0) | 11 (55.0) | 7 (35.0)  |
| Knowledge of practice capabilities | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 8 (40.0)  | 12 (60.0) |
| Experience with older adults       | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 4 (20.0) | 4 (20.0)  | 12 (60.0) |
| Team facilitating and development  | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 1 (5.0)  | 11 (55.0) | 8 (40.0)  |
| System building                    | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1 (5.0)  | 0 (0.0)  | 14 (74.0) | 4 (21.0)  |
| Information technology (IT) skills | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 18 (90.0) | 2 (10.0)  |
| Resource mobilization              | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 14 (70.0) | 6 (30.0)  |
| <b>Medical Ability</b>             |         |         |         |          |          |           |           |
| Assessment                         | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0)  | 14 (70.0) | 6 (30.0)  |
| Diagnosing                         | 0 (0.0) | 0 (0.0) | 0 (0.0) | 3 (17.0) | 0 (0.0)  | 14 (78.0) | 1 (6.0)   |

|                                        |         |         |         |          |         |              |              |
|----------------------------------------|---------|---------|---------|----------|---------|--------------|--------------|
| Triaging                               | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0) | 14<br>(70.0) | 6 (30.0)     |
| Medical knowledge                      | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0) | 15<br>(75.0) | 5 (25.0)     |
| Pharmacology knowledge                 | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0) | 14<br>(70.0) | 6 (30.0)     |
| Clinical expertise                     | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2 (10.0) | 0 (0.0) | 15<br>(75.0) | 3 (15.0)     |
| Referrals                              | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0) | 16<br>(84.0) | 3 (16.0)     |
| Medical record interpretation          | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0) | 10<br>(50.0) | 10<br>(50.0) |
| <b>Communication Within a Practice</b> |         |         |         |          |         |              |              |
| Communication skills                   | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0) | 8 (40.0)     | 12<br>(60.0) |
| Relationship building                  | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0) | 6 (30.0)     | 14<br>(70.0) |
| Liaising                               | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0) | 9 (45.0)     | 11<br>(55.0) |
| Information sharing                    | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0) | 6 (30.0)     | 14<br>(70.0) |
| Dialogue crafting                      | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0) | 13<br>(65.0) | 7 (35.0)     |
| Networking                             | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2 (10.0) | 0 (0.0) | 16<br>(80.0) | 2 (10.0)     |
| Mediating                              | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1 (5.0)  | 0 (0.0) | 13<br>(65.0) | 6 (30.0)     |
| Joint decision making                  | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0) | 11<br>(55.0) | 9 (45.0)     |
| Confidentiality                        | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0) | 3 (15.0)     | 17<br>(85.0) |
| Being a confidant                      | 0 (0.0) | 0 (0.0) | 0 (0.0) | 2 (10.0) | 0 (0.0) | 13<br>(65.0) | 5 (25.0)     |
| <b>Patient Care Delivery</b>           |         |         |         |          |         |              |              |
| Care delivery                          | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0)  | 0 (0.0) | 16<br>(80.0) | 4 (20.0)     |

|                              |         |         |         |         |         |           |           |
|------------------------------|---------|---------|---------|---------|---------|-----------|-----------|
| Evaluating care              | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 11 (55.0) | 9 (45.0)  |
| Discharge planning           | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 12 (60.0) | 8 (40.0)  |
| Reviewing care packages      | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 10 (50.0) | 10 (50.0) |
| Medication review            | 0 (0.0) | 0 (0.0) | 0 (0.0) | 1 (5.0) | 0 (0.0) | 12 (60.0) | 7 (35.0)  |
| Evidence-based approaches    | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 11 (55.0) | 9 (45.0)  |
| Patient population knowledge | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 12 (60.0) | 8 (40.0)  |
| Arranging services           | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 6 (30.0)  | 14 (70.0) |
| Continuing education         | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 0 (0.0) | 16 (80.0) | 4 (20.0)  |

\*Neither Important nor Unimportant

**Appendix X: Caregiver Support Cronbach's alpha if items deleted**

| Cronbach's Alpha | Number of Items |
|------------------|-----------------|
| 0.41             | 5               |

|                           | Corrected Item-Total<br>Correlation | Cronbach's Alpha if Item<br>Deleted |
|---------------------------|-------------------------------------|-------------------------------------|
| CG - Emotional<br>Support | 0.43                                | 0.28                                |
| CG - Empathy              | 0.57                                | 0.18                                |
| CG - Transportation       | 0.03                                | 0.78                                |
| CG - Empowerment          | 0.64                                | 0.17                                |
| CG - Support              | -0.03                               | 0.47                                |