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General introduction
Western societies are facing increasingly ageing populations. In the Netherlands, the proportion of people aged 65 years and older is expected to rise from 19% in 2017 to 26% in 2040. By that time, the share of people aged 80 years or older will have increased as well, comprising one-third of the population of older people [1]. An ageing population has its benefits; old age comes with knowledge and experience, and many older people continue to contribute to society in various ways. At the same time, ageing is associated with an increasing prevalence of chronic conditions and limitations in functioning. In 2015, 80% of people aged over 75 years in the Netherlands suffered from two or more chronic conditions, also called multimorbidity [2]. Multimorbidity, in turn, is associated with increased levels of disability, functional decline, and frailty [3-5], resulting in chronic health and social care needs. Consequently, the demand for health and social care services is rising [6, 7].

In response to these growing pressures, reforms have taken place to move towards more sustainable health and social care systems. Such changes include the decentralisation of responsibilities for preventive, long-term, and social care services from national governments to local authorities [8]. Furthermore, governmental policies are increasingly relying on people’s ability to remain active and independent participants of society, and are stimulating older people to live at home for as long as possible [9, 10]. The majority of people indeed remain in their homes and communities well into old age [11-13]. Older people themselves also prefer to ‘age in place’, as it enables them to maintain their independence and autonomy, and retain their social roles and connections in the community [14]. However, in the face of multimorbidity, functional limitations, and frailty, ageing in place could become increasingly challenging. Frail older people tend to need a range of formal and informal care and support to be able to live independently at home. Yet, most health and social care systems are not equipped to meet the chronic and often complex care needs of older people. Their reactive and disease-specific nature frequently results in care and support that is untimely, fragmented and poorly coordinated [15, 16]. Integrated care has been proposed as a solution to better address older people’s chronic health and social care needs [16, 17].

Integrated care

Many different definitions of integrated care have been proposed over the years [17-20]. In these definitions, integrated care is characterised as a proactive, person-centred, and comprehensive approach to care and support, which is coordinated across preventive, curative, and long-term services. The Chronic Care Model (CCM), which is shown in Figure 1 of this chapter, displays essential components of integrated care [21-23]. The model presumes that high-quality care is the result of productive interactions between informed, activated patients and prepared, proactive care teams. Key elements to achieve these productive interactions include self-management support and patient empowerment,
coordinated and interdisciplinary care delivery, decision support with access to evidence-based guidelines, and clinical information systems that support care providers in the care planning process. The structure, goals, and values of the health care organisations and health system in which these elements reside determine the extent to which these elements can be successful. Furthermore, linkages between health care organisations and the broader community can provide resources necessary to support older people living at home and create supportive environments [24].

![Diagram of the Chronic Care Model](image)

**Figure 1. The Chronic Care Model [24]**

Over the years, many integrated care approaches for frail older people have been implemented in primary and community care settings [25-32]. These approaches commonly include multiple components of the CCM, such as interdisciplinary care teams, comprehensive geriatric assessments to proactively identify older people’s needs and support care planning, and strategies to empower older people and involve them in decision making. Generally, such integrated approaches in primary and community care are considered essential to support older people to live independently at home for as long as possible [33].

Evaluations have shown the potential benefits of integrated care, but they have also highlighted some limitations. For example, evidence for the effectiveness of integrated care for older people remains inconclusive [25-32, 34]. Furthermore, it has become clear that the implementation of integrated care is challenging [35-39]. The way that integrated care programmes give shape to different CCM components, and the extent to which these
components are implemented successfully, are highly dependent on local contexts [26, 40-42]. There is no one-size-fits-all approach, and as a result, integrated care approaches are heterogeneous. Despite extensive theoretical knowledge about the critical elements of integrated care, it seems there is a substantial gap between theory and the application of this knowledge in practice. As such, there are many opportunities to further develop integrated health and social care for older people living at home.

Safety

For older people to successfully age in place, it is essential to maintain their safety. Traditionally, research on ‘patient safety’ has focused on people residing in institutional care settings. The World Health Organisation defines safety as “the prevention of errors and adverse effects to patients associated with health care” [43, par. 1]. However, risks are inherent in people’s everyday lives, and their safety may be challenged by many different factors [44-47]. Therefore, to support older people to live safely at home, a broader perspective on safety is necessary. Lau et al. (2007) [44] proposed a framework for the concept of health-related safety that extends beyond health care institutions and includes risks on the micro (individual characteristics), the meso (people’s homes and communities) and the macro (social, political, economic and natural forces) levels.

On a micro level, as previously mentioned, the presence of chronic conditions, and related levels of functional decline and disability, may undermine people’s ability to live safely at home. At the same time, many chronic conditions can be prevented or effectively managed. For example, healthy nutritional habits and physical activity have significant benefits for older people’s health and well-being [48, 49]. Improving older people’s ability to manage and adapt to their chronic conditions is associated with positive effects on people’s health and functioning, and reduces service utilisation [50-53]. Therefore, preventive interventions addressing people’s lifestyle and self-management behaviours may play an important role in supporting older people’s ability to live safely at home.

On a meso level, supportive environments can enable older people to maintain their functioning [54]. However, hazards in people’s physical environments, such as their homes and neighbourhoods, challenge their safety [55, 56]. Vulnerabilities in people’s social environments may also jeopardise people’s safety at home. For example, problems such as social isolation, insufficient levels of informal support, and elder abuse are associated with increases in negative health behaviours, health care consumption, institutionalisation, and mortality [57-59]. Health and social care providers can support older people’s safety by addressing such risks in people’s physical and social environments. At the same time, however, health and social care provision also exposes people to risks. Care and support for older people often involve care transitions and collaboration across a broad array of formal and informal care providers. Such care transitions are prone to errors and mistakes, and may lead to, for example, care discontinuity or medication errors [56, 60, 61].
Factors on the macro level, such as socio-economic trends and political policies, are also of influence on people's ability to live safely at home. However, the focus of this dissertation is on the micro and the meso levels. Based on the literature [44, 47, 56, 62-64], this dissertation defines safety as preventing or reducing the risk of problems that could undermine older people's ability to live independently at home. Risks could be associated with individual characteristics and behaviour (e.g., cognitive decline, poor diet, physical inactivity), social and physical environments (e.g., caregiver burden, social isolation, hazards in the home), and health and social care management (e.g., polypharmacy, fragmentation of care). Efforts to improve older people's safety, therefore, may involve mitigating risks associated with any of these micro or meso characteristics.

Given its comprehensive and interdisciplinary character, integrated care provides many opportunities to address older people's safety [65]. However, little is known about the extent to which integrated care currently contributes to safety. Insights into older people's safety at home, and what is necessary to maintain this, may give direction to further improvements to integrated care for older people. Knowledge of the risks and needs of older people living at home could guide the focus of integrated care programmes. Insights into what is already being done in integrated care to address these risks and needs support knowledge exchange and help determine points of action for researchers, policy makers, and service providers. By examining these matters from the perspectives of those whom it concerns, being older people and health and social care providers, this dissertation will contribute to a better understanding of integrated care in practice.

Research objectives

This dissertation aims to advance further our understanding of what is necessary for integrated care programmes to better support older people to live safely at home. The following questions will therefore be answered:

1. Which risks and needs, from a multidimensional perspective, should be the focus of integrated care for older people living at home?
2. How do integrated care programmes currently address the safety of older people living at home?
3. What is necessary to further improve integrated care for older people living at home?

This dissertation draws from scientific literature, interviews, data from the cross-European SUSTAIN project [66], and data collected with the interRAI Home Care instrument [67]. The research questions were examined from multiple perspectives, including those of older people and health and social care providers, using a combination of qualitative and quantitative methods. An overview of the methods used to answer the research questions is provided in Table 1 of this chapter.
Table 1. Data sources and methods used to answer research questions

<table>
<thead>
<tr>
<th>Research question</th>
<th>Method</th>
<th>Chapter</th>
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<tbody>
<tr>
<td>Which risks and needs, from a multidimensional perspective, should be the focus of integrated care for older people living at home?</td>
<td>Cross-sectional study</td>
<td>2</td>
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<td></td>
<td>Qualitative study</td>
<td>3</td>
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<td>How do integrated care programmes currently address the safety of older people living at home?</td>
<td>Scoping review</td>
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<td>5</td>
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<tr>
<td>What is necessary to further improve integrated care for older people living at home?</td>
<td>Participatory case study</td>
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Dissertation outline

**Chapters 2 and 3** focus on the multidimensional risks and needs of older people living at home. **Chapter 2** takes a quantitative approach and provides insight into the occurrence of a range of multidimensional risks among frail older people receiving proactive primary care in West-Friesland, the Netherlands. **Chapter 3** approaches this topic from a qualitative perspective, exploring how early detection of older people's multidimensional risks and needs can be improved. The chapter provides insight into what matters to older people about living independently at home and the care and support they receive. Following these insights, the chapter explores professionals' perspectives on how early detection initiatives can be better aligned with older people's needs and preferences.

**Chapters 4 and 5** examine how integrated care programmes address the multidimensional risks and needs of older people living at home. **Chapter 4** presents a scoping review of published literature, which provides insight into how integrated care programmes address the safety of older people living at home. Specifically, this review shows the types of risks that are addressed, and the range of activities and interventions that are used to address them. Similar questions are explored in a multiple case study analysis of thirteen operating integrated care programmes across Europe. **Chapter 5** describes the results of this analysis and provides lessons regarding how integrated care programmes across Europe address the safety of older people living at home.

Since older people often have needs related to both health and social care, **Chapter 6** investigates how collaboration between health and social care providers can be improved. The chapter describes a case study in which researchers worked together with health and social care organisations to develop and implement improvements to their way of working.

Finally, **Chapter 7** provides a general discussion of the findings of this dissertation, the methodological reflections, and the implications of the findings for future research, policy, and practice.
REFERENCES


38. Breton M, Gray CS, Sheridan N, Shaw J, Parsons J, Wankah P, et al. Implementing Community Based Primary Healthcare for Older Adults with Complex Needs in Quebec, Ontario and New-
General introduction


