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Untangling the inter-relatedness within integrated care programmes for community-dwelling frail older people: a rapid realist review

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ABSTRACT

Objective To identify the relationships between the context in which integrated care programmes (ICPs) for community-dwelling frail older people are applied, the mechanisms by which the programmes do (not) work and the outcomes resulting from this interaction by establishing a programme theory.

Design Rapid realist review.

Inclusion criteria Reviews and meta-analyses (January 2013–January 2019) and non-peer-reviewed literature (January 2013–December 2019) reporting on integrated care for community-dwelling frail older people (≥60 years).

Analysis Selection and appraisal of documents was based on relevance and rigour according to the Realist And Meta-narrative Evidence Syntheses: Evolving Standards criteria. Data on context, mechanisms, programme activities and outcomes were extracted. Factors were categorised into the five strategies of the WHO framework of integrated people-centred health services (IPCHS).

Results 27 papers were included. The following programme theory was developed: it is essential to establish multidisciplinary teams of competent healthcare providers (HCPs) providing person-centred care, closely working together and communicating effectively with other stakeholders. Older people and informal caregivers should be involved in the care process. Financial support, efficient use of information technology and organisational alignment are also essential. ICPs demonstrate positive effects on the functionality of older people, satisfaction of older people, informal caregivers and HCPs, and a delayed placement in a nursing home. Heterogeneous effects were found for hospital-related outcomes, quality of life, healthcare costs and use of healthcare services. The two most prevalent WHO-IPCHS strategies as part of ICPs are 'creating an enabling environment', followed by 'strengthening governance and accountability'.

Conclusion Currently, most ICPs do not address all WHO-IPCHS strategies. In order to optimise ICPs for frail older people the interaction between context items, mechanisms, programme activities and the outcomes should be taken into account from different perspectives (system, organisation, service delivery, HCP and patient).

Strengths and limitations of this study

- By making use of realist research methods, this study provides insight into the inter-relatedness of context, mechanisms, programme activities and outcomes of integrated care programmes for community-dwelling frail older people.
- Experts and patient organisations were involved to test and refine the programme theory.
- Within this rapid realist review (RRR), data on context, mechanisms, programme activities and outcomes may show overlap, which is often considered an interpretative challenge within realist research.
- A broad definition of frailty was adopted in this RRR due to a lack of consensus on the term in the international scientific literature.

INTRODUCTION

Most older people develop care needs in multiple domains (ie, physical, mental and social at some point), and require coordinated care by multiple disciplines.[1–4] The framework of integrated people-centred health services (IPCHS) by the WHO describes the complex nature of care for those with multiple needs. The challenge is to manage and deliver '*health services, so that people receive a continuum of health promotion, disease prevention, diagnosis, treatment, disease-management, rehabilitation and palliative care services, coordinated across the different levels and sites of care within and beyond the health sector, and according to their needs throughout the life course*'[5] (p 2).

Despite the existence of this international framework for the delivery of people-centred and integrated care (IC), European healthcare systems face several issues, such as a lack of coordination and interprofessional collaboration, poor person-centredness of care and insufficient resources and support.[6] Existing reviews on the effectiveness of integrated care

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programmes (ICPs) for (frail) older people have shown heterogeneity in outcomes.[7–11] Insights into when ICPs do (not) work, for whom, why and how are lacking, and the mechanisms (M) and the influence of contextual factors often remain underexposed. The heterogeneity in the effectiveness of ICPs thus far has only been explained to a limited extent. Therefore, a more detailed understanding of the inter-relatedness of all factors that influence the effectiveness of ICPs for community-dwelling frail older people is needed.

Realist research is a way to offer such an understanding, as it aims to reveal the inner mechanisms by which a complex intervention operates.[12] In addition to outcomes (O), this approach examines the internal components of a care programme, unlike the traditional 'black box' approach, which mainly focuses on the outcomes, rather than how these outcomes were achieved. Thus, when applying a realist approach the specific aspects of the context (C) that influence the effect of a complex programme and the mechanisms that may create the change can be identified.[13 14] In this study, a rapid realist review (RRR) was conducted. The term 'rapid' refers to applying a realist approach within a relatively short time frame.[15]

Initial programme theory

The aim of realist research is to test and refine an initial programme theory (PT) (a hypothesised explanation of how a complex intervention or programme is expected to work) in order to determine how, when and for whom the intervention or programme will work in a particular setting.[16] In this RRR, the initial PT was based on the WHO-IPCHS framework. When developing the WHO-IPCHS framework, the WHO obtained experience and evidence on different levels (global, regional and national) from three different types of country settings (low, middle and high-income countries), and countries facing special circumstances (eg, conflict). In the framework, the WHO proposes five interdependent strategies that need to be adopted for health service delivery to become more integrated and people centred.[5] The five inter-connected strategies are:

1. Engaging and empowering people and communities.
2. Strengthening governance and accountability.
3. Reorienting the model of care (ie, ensuring that efficient and effective healthcare services are designed, purchased and provided through innovative models of care).
4. Coordinating services within and across sectors.
5. Creating an enabling environment (ie, in order for the four previous strategies to become an operational reality, it is necessary to create an enabling environment that brings together all stakeholders to undertake transformational change).

In online supplemental file 1, a summary and explanation of the strategies of the WHO-IPCHS framework is provided.

Objectives

An RRR was performed with the objective of gaining insight into the relationships between the context in which ICPs for community-dwelling frail older people are applied, the mechanisms by which the programmes do (not) work and the outcomes resulting from this interaction by establishing a PT on the effectiveness of IC for frail older people. Based on the WHO-IPCHS framework, this study also aims to explore to what extent the five strategies are applied in ICPs as reported in the literature.

METHODS

The methods were established prior to conducting the RRR and no deviations from the methods occurred.

Rapid realist review

An RRR was conducted to identify the mechanisms (enablers, underlying entities, processes, structures, reasoning, choices, collective beliefs) of ICPs that operate in particular contexts (wider external factors concerning implementation contexts, opportunities and resources to enact decisions, broad conditions and participant conditions) to generate outcomes (intended and unintended).[16] This RRR was the first stage of a larger study in which insights of the literature will be assessed on their relevance in the Netherlands by a Delphi expert panel. For the larger study, a steering committee was established, consisting of experts in the field of IC for older people (for more details on the steering committee, see the Acknowledgements section). The involvement of experts working in the field is of great importance to realist research for providing input throughout the research process, as well as for being able to use the insights from the study to improve the quality of care in daily practice.[17 18] The members of the committee provided feedback and guidance on the methods and the interpretation of the results. The steering committee was put in place by AA, METCM and HJMV and consisted of senior researchers in the field, a primary care practitioner and representatives of IC organisations.

Search strategy

Searches were conducted in PubMed, EMBASE, CINAHL, Web of Science and the Cochrane Library. All types of reviews (narrative, rapid, realist, scoping or systematic) and meta-analyses on ICPs for (frail) older people were included.[19] In this review, an overarching/non-specific definition of frailty was adopted in order to include various populations of frail older people. This implies that studies reporting on frailty were included, without operationalising a new definition of frailty in this study. English or Dutch papers published between January 2013 and January 2019 were included. As IC for (frail) older people has changed rapidly in recent years, programmes from before 2013 were not considered relevant. Programmes included patients who were frail older people with a minimum age of 60 years, corresponding to the WHO

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definition of an 'older adult'.[20] Programmes needed to describe ICPs that consist of at least two of the five strategies of the WHO-IPCHS framework (online supplemental file 2) provide an overview of the search terms used. The search took place in January 2019. We also searched the reference lists of the eligible papers identified for the review. An additional search of non-peer-reviewed literature was conducted using Google to identify relevant context, mechanisms and outcomes data. The key search terms of publications were similar to the ones of the peer-reviewed literature search. Non-peer-reviewed literature published between January 2013 and December 2019 was included. Due to time constraints, and to capture the most relevant hits and ensuring a feasible quantity to screen, the first 10 pages (representing a total of 100 'best match' results) were examined. The non-peer-reviewed literature search took place in December 2019.

Selection and appraisal of documents

The titles and abstracts were screened by one author (AA) and supervised by a second author (HJMV). In case of even a slight doubt on selecting an article, the screener presented the article to the supervisor to ensure that articles were not overlooked or not included incorrectly. During full-text screening, the selection and appraisal of the papers was conducted by two authors (AA and JCM) based on their relevance (contribution to the development of the PT) and on their rigour (credible and trustworthy methods to generate data) in line with the Realist And Meta-narrative Evidence Syntheses: Evolving Standards quality standards.[21] Disagreements were resolved by discussion resulting in consensus.

Data extraction and analysis

Data on context items, mechanisms, programme activities (PA) and outcomes were extracted and analysed. Per source publication, context-mechanism-outcome configuration(s) (CMOc(s)) were aimed to be identified. In case this was not possible due to the lack of data, overall common patterns in terms of context, mechanisms and outcomes in the source material were set out. In this review, the term 'programme activities' was used instead of 'interventions', as the term 'intervention' could cause confusion in relation to the composite nature of ICPs. Data extraction was performed by two authors (AA and HJMV). Disagreements about the category the extracted data belonged to (context, mechanism, programme activities or outcome) were resolved by discussion. Each context item, mechanism, programme activity and outcome that were reported in at least four papers were included in the analysis. Given the international perspective of this study and the variety of context items, mechanisms, programme activities and outcomes, we chose four papers as the minimum, realising this number is arbitrary.

Programme theory

Based on the CMOcs the PT was refined, describing the underlying relationships between context, mechanisms, programme activities and outcomes. Subsequently, two authors (AA and HJMV) individually categorised the context items, mechanisms, programme activities and outcomes into one (or more) of the five strategies of the WHO-IPCHS framework. The extent to which the strategies of the WHO-IPCHS framework were applied in the design and implementation of ICPs for community-dwelling (frail) older people was analysed. Categorisation was based on whether the context items, mechanisms, programme activities and outcomes corresponded to the strategic approaches and potential policy options and interventions provided by the WHO-IPCHS framework.[5] Disagreements about which WHO-IPCHS strategy factors belonged to were resolved by discussion.

Patient and public involvement

This study was instigated by the National Health Care Institute, an advisory and implementing organisation who, among others, encourages good healthcare by helping all parties involved to continually improve healthcare quality and by helping patients find their way to high-quality care. A stakeholder dissemination meeting was held during the course of the study (April 2019). This meeting was held with the objective of sharing the results of the RRR and to consider stakeholder perspectives to test and refine the initial PT derived from the RRR. Among others, (representatives of) patient organisations attended this meeting.

RESULTS

A total of 374 papers were identified. After exclusion of the duplicates, 352 papers were screened on titles and abstracts. An additional 30 records were identified through a reference list search and added. After exclusion of 304 papers, the remaining 78 papers were screened on their full text. In this step, 51 papers were excluded (see figure 1 for more details). Finally, a total of 27 papers (15 papers from the peer-reviewed literature search and 12 papers from the non-peer-reviewed literature search) were included in the review (figure 1). The peer-reviewed papers included eight systematic reviews,[9 22–28] five non-systematic reviews,[29–33] one meta-analysis[34] and one paper consisting of both a systematic review and meta-analysis.[35] The non-peer-reviewed papers included four (policy) reports,[6 36–38] four guides (for practitioners),[39–42] three websites/online articles[43–45] and one journal article.[46] In online supplemental file 3, an overview of the included papers is provided.

Patient populations

The patients included in the papers had chronic diseases or multimorbidity (n=8),[22 24 25 27–30 34] heart conditions (n=7)[22–25 29 32 34] or dementia (n=3).[23 25 28] Papers often did not specify exclusion criteria (n=11).[22–24 26 29–35]

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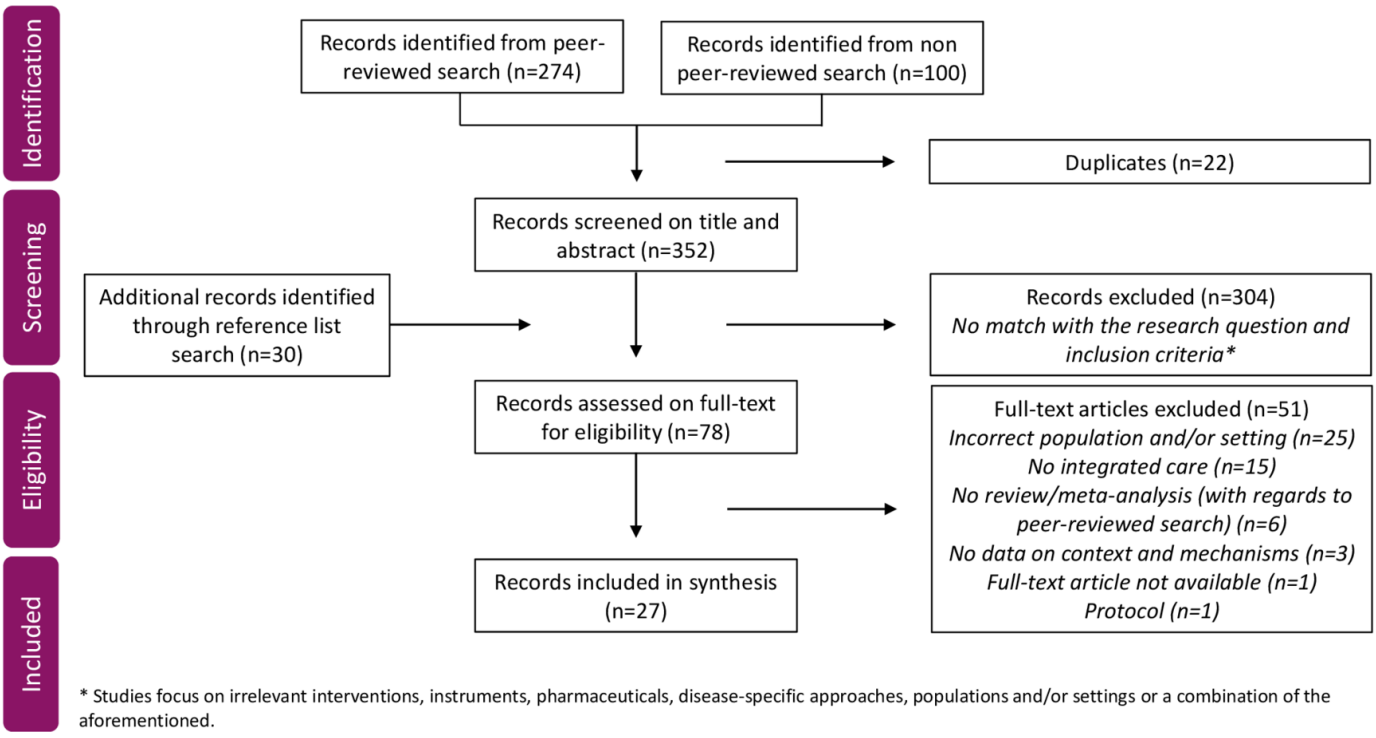

* Studies focus on irrelevant interventions, instruments, pharmaceuticals, disease-specific approaches, populations and/or settings or a combination of the aforementioned.

Figure 1 Flowchart of paper selection.

Programme theory

In table 1, the context items, mechanisms, programme activities and outcomes reported in the literature and their explanation are shown in ascending order of how often they were reported. Based on the identified factors, CMOcs were established (figure 2). In figure 2, each set of coloured arrows represents a CMOc, which indicate that mechanisms of action get triggered within a specific context and that these mechanisms lead to particular outcomes. The dashed arrows indicate incomplete configurations, where either a context factor is linked with a mechanism or an outcome, or a mechanism with an outcome. Findings in the form of CMOcs are described in the following PT for effective IC for older people.

Based on the needs of older people, the focus of IC should be on treating older people as individuals rather than a collection of diseases (M). In order to realise an appropriate approach and a successful use of risk prevention programmes, it is essential that the right patient population is identified and selected, for example, by use of a risk stratification tool (PA). Treatment approaches need to match the broad health issues/illness processes of frail older people by focusing on all life domains (ie, physical, mental and social), instead of single disease-related aspects (M) in order to achieve desired results, such as an improved quality of life of older people (O).

Health education and training (C) for older people and their informal caregivers could stimulate their active involvement in the care process (M), leading to the patient and the healthcare providers(HCPs) understanding each other better, as well as the patient having more insight into the importance of his/her treatment (M). Their involvement is important in setting up tailor-made individual care plans (PA), leading to an improvement in functionality of the older person (O), but also for managing medication treatment (PA), and planning follow-up support (eg, after hospital discharge) (PA) in order to have a reduced hospital (re)admission rate (O).

To provide care in line with the vision of IC, it is essential to work with multidisciplinary core teams (C, M). These teams should consist of HCPs of various disciplines each having their own expertise (and include, for example, a case manager, a general practitioner, a geriatrician and an advanced nurse practitioner) (C) to meet the complex and diverse care needs of older people (O). Team members need to have clearly defined roles and responsibilities and need to be aware of each other's expertise (C) to work closely together effectively (M) and to establish a well-working collaboration (M), leading to higher satisfaction of older people, informal caregivers and HCPs (O).

Training and education of HCPs in, for example, shared decision-making, patient empowerment, interprofessional collaboration and communication (C) needs to be an integral part of the healthcare system, as it is beneficial to enhance their skills and knowledge (C) to improve the quality of healthcare (O). With the help of training (C) and by means of customised communication (M), PAs such as having (preventive) home visits (PA) and performing extensive geriatric assessments (PA) can be conducted in a more competently matter resulting in a delay in nursing home placement (O) and a reduced use of healthcare services (O). However, it is important that organisational alignment (C) on all levels and the

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Table 1 Reported context items (C), mechanisms (M), programme activities (PA) and outcomes (O)

Factor	Explanation	References	Related WHO-IPCHS strategy
Context (C)			
Multidisciplinary core team	Deployment of different types of professionals as a core team (ANP, case manager, specialised geriatric care provider, community nurse, GP; discharge planning expert); clearly defined roles and responsibilities; HCPs know each other's expertise; sufficient staffing levels.	6 22 23 25 27 33 35–38 40–44	3, 4, 5
Training and education of HCP	Training and education of HCPs for the required competences, skills and knowledge; optimisation expertise of HCPs; provision of training on case management.	6 23 25 27–31 33 35–37 39 42	5
Role of older person and informal caregiver(s)	Providing health education and training to the older person and informal caregivers; clearly defined single contact point for the older person and informal caregivers; availability of social support.	22 25 28 31–33 38 39 41	1
Financial support	Offering remunerative support and financial incentives; alignment of incentives and performance indicators; means to invest in new approaches and their management; issue of fragmented funding; sustainable funding of IC.	6 24 30 33 34 36–38	2 and 5
Information technology	Use of smarter (information) technologies to facilitate clinical practice (eg, administrative tasks); use of a web-based electronic record system; capturing and disseminating information electronically across the health and social care system; access to shared records/electronic patient records by all involved stakeholders.	6 29 33 36–38 41 43 45	3 and 5
Organisational alignment	Organisational coordination on all levels; cultural change; lack of sustainable agreements between different health and social care providers and agencies; well-connected networks to facilitate access to support; offering organisational supports.	6 25 37 38 40 42	1, 2, 3, 4 and 5
Mechanisms (M)			
Collaboration within and between disciplines	Fully integrated multidisciplinary care team with structures of collaboration within disciplines as well as between disciplines.	6 26 27 30 33 36–41 43–46	4 and 5
Involvement of older person and informal caregiver(s)	Active involvement of older person and informal caregiver(s) in the care process, for example, shared decision-making, developing care plans, discharge plan, and so on; involving the network of the older person as much as possible.	9 22–25 27 31 33 34 38 40 41 43	1, 2, 3 and 4
Person-centred care	A focus on possibilities, needs, wishes and preferences of the older person (and informal caregivers) instead of the person's illness and/or disabilities; viewing the older person as a human being, rather than a collection of diseases; focusing on care processes instead of outcomes.	6 9 22 24 25 27 34 36 38–40 42 46	1, 2, 3, 4 and 5
Effective communication	Providing effective communication between all stakeholders (older person, informal caregiver(s), HCPs, organisations, sites, and so on).	6 22 25 30 31 36 38	1, 2, 3 and 5

Continued

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Table 1 Continued

Factor	Explanation	References	Related WHO-IPCHS strategy
Programme activities (PAs)			
Individual care plans	Setting up, implementing, monitoring, evaluating and adjusting individual care plans.	9 22–29 33 34 36–38 41 45	1, 2 and 5
Geriatric assessment	Performing comprehensive multidimensional geriatric assessments (physical, social and psychological, functional social), ideally at the older person's home.	9 24–26 28 33–36 38–40 42 45	1 and 3
Case finding/prevention	(Early) identification and selection of potentially frail older people (=target group), for example, in the GP practice by means of screening instruments (eg, risk stratification tool); incorporating prevention programmes.	9 28–30 37–42 45	3 and 4
Hospital discharge planning	Developing an (early) extensive discharge plan in collaboration with the patient, informal caregiver(s) and HCPs; assessing hospital discharge.	22 24 25 27 31 32 34 44	1 and 4
Follow-up appointments	Planning follow-up support and/or strategies; performing follow-up appointments at home and by telephone, for example, after hospital discharge.	9 22–25 32 34	1, 3 and 4
Medication treatment	Adjusting and aligning medication treatment plans, for example, when discharged from the hospital; medication counselling; medication self-management; securing medication safety.	22 24 25 29 34 39	1, 3 and 4
Home visits	Frequent (preventive) home visits and assessments.	23 25 27 29 30	1 and 3
Case management	Deployment of case manager/case management.	9 27 33 44	4
Outcomes (O)			
Healthcare costs	Heterogeneous effects (mainly reduced healthcare costs and community costs).	9 22 23 25–30 33 35 42	2 and 5
Hospital-related outcomes	Heterogeneous effects (mainly a reduced hospital (re)admission rate; a reduced length of hospital stay; reduced use of emergency care).	22 24–26 30–35 45	2 and 5
Quality of life	Heterogeneous effects (mainly an improved quality of life).	22 24 25 27 29 32–34 40 42 46	2 and 5
Satisfaction	Higher satisfaction older person, informal caregivers and HCPs.	9 22 25–27 29 31 33	2 and 5
Functionality	Improved functioning/functional status.	22 25 27 29 30 33 41	2 and 5
Use of healthcare services	Heterogeneous effects (mainly reduced use of hospital services/healthcare system).	9 22 27–30 33	2 and 5
Nursing home placement	Postponement of placement in institutions/nursing home; lower nursing home admission rates; shorter length of stay in nursing home.	9 23 28 30 33	4

ANP, advanced nurse practitioner; GP, general practitioner; HCP, healthcare provider; IC, integrated care; IPCHS, integrated people-centred health services.

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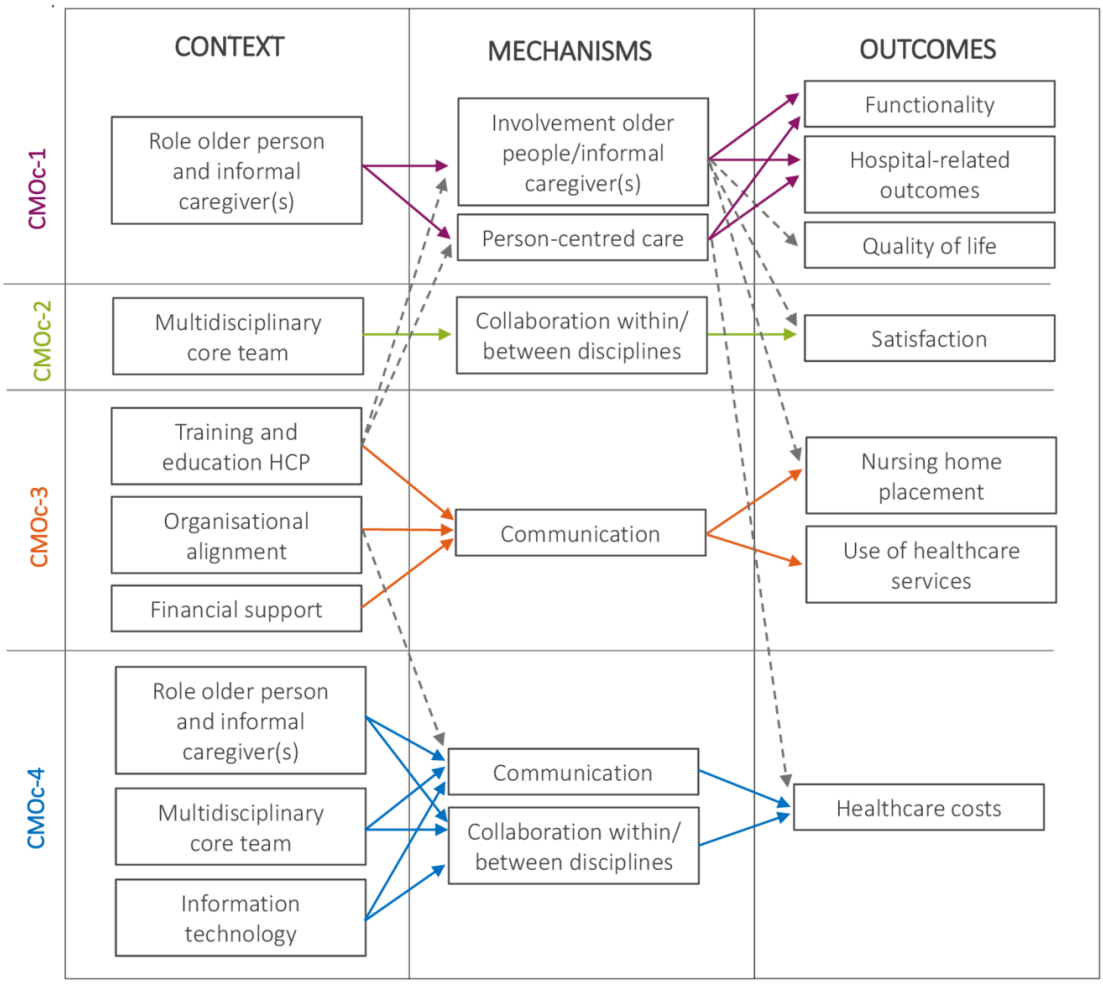

Figure 2 Context-mechanism-outcome configurations (CMOcs) of integrated care (IC) for community-dwelling frail older people. HCP: healthcare provider.

provision of sufficient financial resources (C) is in place to realise the aforementioned activities.

Since frail older people are hospitalised relatively often, it is important that the core team includes an HCP (C) with expertise in hospital discharge planning (PA). This expertise entails developing an (early) extensive discharge plan (PA) in collaboration with the patient, informal caregiver(s) and HCPs (C), as well as assessing hospital discharge (PA) and ensuring collaboration among all disciplines (M) involved in caring for the respective older person (PA). In the long term, it may entail reduced healthcare costs for the health system (O). Information technology (C) can support the collaboration, involvement and communication (M) of HCPs by enabling information sharing (PA) between, for example, professionals of different disciplines, older people and their informal caregivers (C); by enabling health-related social networks and patient–provider interactions; by supporting patient engagement; by providing electronic access to guidelines, protocols and other health information; and by sending reminders for providers and patients (C).

Link to the WHO-IPCHS framework

In table 1 (rightmost column), the strategy/strategies of the WHO-IPCHS framework that relate to the extracted data are shown. These links with the WHO-IPCHS framework demonstrated that the most prevalent strategy to which most of the context items, mechanisms, programme activities and outcomes are categorised into was strategy 5 'creating an enabling environment' (25%), followed by WHO-IPCHS strategy 2 'strengthening governance and accountability' (20%). Three WHO-IPCHS strategies were linked with context items, mechanisms, programme activities and outcomes to the same extent (all 18%): 'engaging and empowering people and communities' (strategy 1), 'reorienting the model of care' (strategy 3) and 'coordinating services within and across sectors' (strategy 4).

Linking the items to the WHO-IPCHS strategies shows that regarding context items, WHO-IPCHS strategy 5 'creating an enabling environment' was most prevalent; regarding programme activities strategy 1 'engaging and empowering people and communities'; and regarding the outcomes both strategy 2 'strengthening governance and accountability' and strategy 5 'creating

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an enabling environment'. Concerning mechanisms, all strategies were equally prevalent.

DISCUSSION

In this RRR, we provided a detailed overview of the interrelatedness of context items, mechanisms, programme activities and outcomes of IC for community-dwelling frail older people. Further, we linked these factors to the strategies of the WHO-IPCHS framework to explore to what extent the strategies are applied in ICPs and refined the PT.

We developed a PT that explains how ICPs for community-dwelling frail older people work, for whom and why. The PT illustrated that it is essential to establish multidisciplinary teams of competent HCPs providing person-centred care, closely working together and communicating effectively with other stakeholders. Older people and informal caregivers should be involved in the care process in order to get a better picture of the patient's wishes and needs, and shared decision-making can be established. Financial support, efficient use of information technology and organisational alignment are also essential. ICPs demonstrate positive effects on the functionality of older people, satisfaction of older people, informal caregivers and HCPs, and a delayed placement in a nursing home. Heterogeneous effects were found for hospital-related outcomes, quality of life, healthcare costs and use of healthcare services. Outcomes of IC for frail older people are the result of interactions of context items, mechanisms and programme activities, as identified in this study. The interaction of factors can only partly explain the effects of IC, as the focus in evaluating outcomes primarily lies on PAs and outcomes compared with context and mechanisms.

Authors of papers included in this review reported that it was difficult to link ICPs to outcomes (n=9).[9 22 23 25 27 28 31 32 35] According to the authors, this was attributed to the differences in populations, variations in the content and characteristics of programmes and their activities and, generally, a lack of robust programmes. This, however, made it impossible, as part of this RRR, to shed light on why ICPs do not work.

The PT developed in this RRR should be considered a first step towards a more comprehensive PT. In this study, a linkage between the PT and the WHO-IPCHS framework shows that 'creating an enabling environment' (strategy 5) and 'strengthening governance and accountability' (strategy 2) seem to be prioritised in the way IC is currently delivered to older people, implicating that IC for older people still needs to be further developed, as not all five interconnected WHO-IPCHS strategies are equally prevalent in the current programmes. It must be noted that the WHO-IPCHS framework is transformative and given that healthcare systems are setting specific, its implications need to be aligned to the local context, values and preferences. In a follow-up study to this RRR, primary data on the relevance of the identified factors for the Dutch setting will be assessed. Context items, mechanisms, programme activities and outcomes reported in three papers or less, which are not included in the analysis of this study, will be included in the follow-up study.

The categories (context, mechanisms, programme activities, outcomes) factors belonged to sometimes differed in the included studies depending on the function they held within a programme, as reported by the papers. For example, the factor 'home visits' was reported as a programme activity by five papers, and as a context item by three papers. This accentuates the importance of accurately indicating the meaning of each factor within a programme. It also emphasises that when programmes are compared, the varied meanings of identical items may partly explain differences in outcomes between programmes with apparently similar factors.

Depending on the type of literature (peer reviewed vs non-peer reviewed), either the interpretive meaning of factors was described or a statement was given. For example, regarding the context item 'financial support', papers reported a lack of financial incentives and resources, and no sustainable funding being in place.[6 31 37] Regarding the context item 'multidisciplinary core teams', papers mentioned constrained staffing levels, unclarity of roles and responsibilities of team members, and mutual unfamiliarity of professionals from different disciplines/domains.[6 42]

Also, the theoretical underpinning of the interrelatedness of factors and the level factors are operating on are lacking in the literature. It was difficult to identify CMOcs per publication and their corresponding level, as very limited to no information on the interaction of factors was found per article. Consequently, the current PT may give an oversimplified impression of the interplay of factors. Evaluating ICPs is considered challenging due to their complex nature.[47]

Comparison with other literature

In line with this study, previous research demonstrated that the several components of ICPs for older people play a prominent role. However, the interaction of factors is underexposed as only one of the papers is a realist review,[10] next to a scoping review,[7] narrative review[48] and review of reviews,[8] which mainly assessed components that contribute to IC. Studies reported the following components that correspond to the context items, mechanisms, PAs and outcomes found in this study: professional training of HCPs[7 8 10]; incentives for integration and a funding system for IC[7 10]; patient education[8]; organisational integration[7]; effective communication[7 10]; person-centred care[7]; comprehensive/geriatric assessment[8 48]; case management[7 8 48]; home visits[8]; medication review[8]; developing care plans[10]; and discharge planning.[7] Favourable effects regarding care utilisation (reduced) and health outcomes (improved) were found,[10 48] and mixed results on costs.[48] Similarly, the review of reviews by Briggs *et al*.[8] also demonstrated that the focus of key elements of IC models for older

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people aligns with the WHO-IPCHS strategy 'creating an enabling environment' (strategy 5).[8]

Strengths and limitations

To the best of our knowledge, this is the first RRR that provides an overview of the interaction of context items, mechanisms, programme activities and outcomes and aligns them with the WHO-IPCHS strategies in order to explore to what extent the five strategies are applied in programmes. The strength of the realist approach lies in opening the black box, which leads to theory development explaining why ICPs (do not) work, for whom and under what circumstances. People from other countries may consider these findings useful to influence the effectiveness of ICPs for frail older people. Moreover, they are provided an overview of which WHO-IPCHS strategies are applied and which strategies are underexposed and deserve more attention. Another strength is the involvement of experts and (representatives of) patient organisations to test and refine the PT and to confirm findings.

A limitation to be considered is the definitions of context, mechanisms, programme activities and outcomes. Within the realist approach this is often a challenge, as there may be some overlap, since an outcome from one ICP may be a contextual factor in another. However, in this study, disagreement about the category data belonged to was resolved by discussion between the authors. A second limitation was the use of an overarching/non-specific definition of frailty due to a lack of consensus on the term in international scientific literature, resulting in a broad patient population. Even though definitions of frailty and multiple instruments to measure frailty are available, these are rarely reported in research concerning IC for frail older people.[49–55] Four papers included in this study mentioned the heterogeneity in the patient population as a striking finding.[9 26 27 35]

Recommendations

As the identified factors of ICPs for frail older people could not be aligned with all WHO-IPCHS strategies, ICPs need to have a more balanced application of all WHO-IPCHS strategies, as the realisation of all strategies in programmes ensures that health service delivery will be more people centred and integrated. Strategies most commonly reflected in ICPs are more administrative and planning focused, and less focused on the strategies that are related to actions associated with implementing new care models. In case one or more strategies are underexposed, it will affect progress in other strategies.[5] To ensure that ICPs fulfil all five strategies, the WHO suggests implementation guidance support tools.[56] Further research of ICPs should make use of the existing operationalisations of frailty to define clear and complete description of patient groups and their health problems. This would enable to offer tailor-made programme activities to the different degrees of frailty. Lastly, additional realist research is needed to establish a more comprehensive PT for IC for frail older people. As very limited to no information on the interaction of factors was found within each article, more focus on the theoretical underpinning of the inter-relatedness of factors in the literature is needed by considering CMOc(s) within each article. Further setting-specific validation of context items, mechanisms, programme activities and outcomes of IC for frail older people needs to take place by involving older people and informal caregivers in the design and development of ICPs. As IC is in full development and needs to be defined more precisely than hitherto,[57] this the study can be considered a valuable starting point for testing CMOcs and to use the study results as management information for the further application of IC.

CONCLUSION

In this RRR, we developed a PT that explains how ICPs for community-dwelling frail older people work, for whom and why. This study shows that ICPs for frail older people are still in development, as most ICPs do not address all WHO-IPCHS strategies. In order to optimise ICPs for frail older people, the comprehensiveness of the WHO-IPCHS framework and the interaction between context items, mechanisms, programme activities and the outcomes should be taken into account from different perspectives (system, organisation, service delivery, HCP and patient). Additional realist research is needed to establish more comprehensive PTs for IC for community-dwelling frail older people.

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