"Case management for older people in Belgium: a realist perspective for the evaluation of case management in primary care"

Van Durme, Thérèse

ABSTRACT

Case management is a program expected to improve the quality of care for frail, community dwelling older people and thus, their quality of life. However, the heterogeneity, the multidimensionality and complexity of these programmes call for innovative evaluation means. Our aim was to propose a realist perspective, enabling the identification of mid-range theories linked to the drivers of success of case management. Starting with a realist synthesis of case management in other countries, we examined in-depth how and why case management could be effective in Belgium for this population, by the means of a multiple, embedded case study among the Protocol 3 projects. We identified crucial components explaining the success of case management and these components enabled us, in turn, to propose three types of case management. The type of case management should be linked to the complexity of the situation of the older person but certainly also linked to the local context.

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CASE MANAGEMENT FOR OLDER PEOPLE IN BELGIUM

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Objectives.

The objective of this thesis is to evaluate, through a realist approach, the effectiveness of case management for frail older people in Belgium.

This strategy (case management or CM) was recommended in a SWOT analysis with key stakeholders as one of the means of tackling care fragmentation in the organisation and delivery of chronic care in Belgium, of which frail older people are a part. This recommendation by stakeholders is not consistent with the results of systematic reviews. Indeed, stakeholders are unable to reach consistent conclusions as to the overall effectiveness of case management for this population. The reason may be that effectiveness depends not only on the population, which benefits but also on the context. Therefore, we aimed at responding to the questions of “why, how and for whom is case management effective in improving desirable outcomes?”

Methods. The originality of the approach within the overall evaluation of the Protocol 3 projects lay in the use of the realist perspective used in the synthesis of the existing literature and the evaluation of the existing Protocol 3 projects. Typically, a realist approach starts with an initial (“intuitive”) theory, which is then refined against other evidence. Second, CMOCs (Context-Mechanisms-Outcomes Configurations) are sought, in order to identify underlying mechanisms explaining why a specific outcome was achieved in a specific context. This can be seen as a mid-range theory. Third, candidate mid-range theories are sought in the literature, with experts and with researchers in order to provide an explanatory framework for these CMOCs. Fourth, adjudication between rival theories or refining of existing theories is carried out through testing them with the empirical data and iterative consultation of the literature and with experts.

(a) Review: realist synthesis. Articles for the literature review were identified from searches of MEDLINE, EMBASE, CINAHL, ISI Web of Knowledge, PsychInfo, Sociological Abstracts and SocIndex. We evaluated the abstracts and articles against pre-specified inclusion criteria. Data of eligible studies were extracted and entered into tables that were constructed during the review process, so as to be able to capture the CMOCs, and were summarized. Appraisal occurred at the
synthesis stage. Discussion with final users of the synthesis occurred at regular points in time.

(b) Realist evaluation. Empirical data included the official documents, questionnaires, focus groups and interviews with stakeholders of the Protocol 3 projects in Belgium – bottom-up designed alternatives of care or support for frail, community-dwelling older people (2010-2014). Of the 62 projects financed during this period, 22 projects organized case management. All Protocol 3 pilot projects were financed by the National Institute of Health and Disability Insurance (NIHDI). We discussed the results of the multiple, embedded case studies of seven Protocol 3 projects providing case management, with the same group of final users. This group identified the contextual conditions required in order to be able to offer effective case management.

(c) Typology of case management. All 22 case management projects of the Protocol 3 projects were scored against this list of contextual conditions and a multiple correspondence analysis was performed so as to group the case management per type of response pattern, so allowing grouping of projects.

Results.

(a) Realist synthesis. Of the 4321 citations identified, we screened and reviewed 440 full-length articles and included 86 articles representing 62 studies. The results refined the initial theory in which case management can be seen as a six-linked chain, in which each of the linked mechanisms can explain the success or failure of case management in its given context. In total, 42 context-mechanism-outcomes configurations were found.

(b) Realist evaluation. Two mid-range theories that can explain why case management can help frail older people to remain at home are discussed, i.e. through the lenses of capacity and social support.

(c) The typology makes a distinction between three types of case management, situated on a continuum going from a “social” type of case management towards a “clinical” type of case management. The main component which makes the difference between these types is the type of feedback provided to the general practitioner about both the global geriatric assessment and the result of the intervention. This was seen as a proxy of the level of interaction of the case manager with the primary care system.
**Conclusion.** Recognizing the heterogeneity of interventions and contexts, we sought to elucidate the conditions under which case management for community-dwelling older people was effective. We found that the impact of case management for frail, community-dwelling older persons could be reinforced through (a) the careful selection of “complex” cases, i.e. the situations in which older people’s needs and wishes are most likely to be misaligned with the care they are offered. (b) When such a complex case is identified, case management should focus on mechanisms of capacity and social support to help this population to reach desirable outcomes. (c) These mechanisms are likely to be triggered by favourable contexts such as access to adequate vocational training for the case managers (e.g. through reflective sessions with peers) and adequate communication with other primary care actors, such as general practitioners, through the means of providing useful and meaningful feedback about the results of case management and the interventions suggested during the case management process.
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The drawing on the front of the book is inspired by a web-based invitation to a congress of the Case Management Society of America, 2013
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Executive summary

Background

With ageing and the risk of co-occurring morbidities, the complex need for healthcare and healthcare support increases. These needs are frequently supported by older people’s social surroundings (informal caregivers), who are often in advancing years themselves. Also, these situations require frequent help from multiple professionals, from different disciplines and organisations in health and social care, leading in turn to a risk of fragmented care. One strategy for improving collaborative care for this population is to develop professional case management, in which a professional takes responsibility for coordinating and implementing a patient’s care plan, either alone or with a team. Intuitively, professional case management could be seen as an asset when the coordination and integration of care is no longer possible for older people (or their informal caregivers) to accomplish on their own.

Case management usually involves high-intensity engagement between older people and case managers in attending to patients’ complex needs. A case manager can be seen as an advocate of the patient, taking a holistic approach to care, and serving as a bridge between the older person, the team of professionals with which he or she has a therapeutic relationship, the healthcare system and community resources. The coordinating functions performed by a case manager include helping older people and their informal caregiver navigate through healthcare systems, connecting them with healthcare and community resources, orchestrating multiple facets of healthcare delivery, even assisting with administrative and logistical tasks. Besides this navigator function, case managers can also perform clinical functions, including monitoring health problems and treatments, including supervising medication adherence, health education, and sometimes self-management. If such clinical functions are sometimes the attributes of other functions, they can be central to the role of a case manager in the context of older people with co-occurring morbidities.

Case management in the literature, as we will see in this dissertation, is a term used to describe a variety of interventions, functions, etc., also with diverse levels of intensity and interactions with other primary care providers. This variety of types

2 A list of terms defining what is meant by case management and terms specific to the realist approach, such as context, mechanism and outcomes, is provided in the lexicon on page 190.
of interventions of case management is a challenge in terms of evaluation of its effectiveness. It is a challenge that is addressed in this dissertation.

**Objectives**

The objective of this thesis is to evaluate, through a realist approach, the effectiveness of case management for frail older people in Belgium.

This strategy (CM) was suggested in a SWOT analysis with key stakeholders, as one of the means to tackle the care fragmentation in the organisation and delivery of chronic care in Belgium, of which frail older people are a part. Four focus groups were held with active stakeholders from the micro and meso level, in addition to two interviews with stakeholders who could not attend the focus group sessions. Data collection and the discussion were based on Wagner’s Chronic Care model, of which an expanded version was made for Belgium. Thematic analysis of the transcripts allowed for the identification of the strengths, weaknesses, opportunities and threats of the current health care system with focus on chronic care.

This strategy recommended by stakeholders is not consistent with the results of systematic reviews. Indeed, stakeholders are unable to reach consistent conclusions on the overall effectiveness of case management for this population. The reason may be that effectiveness depends not only on the beneficiary population but also on the context. Therefore, instead of posing the question “is case management effective for this population”, the research questions are categorized as follows:

**Question 1:**

How does the international literature help us to respond to the questions of why, how and for whom is case management effective in improving desirable outcomes for older people living at home with complex care needs?

**Question 2:**

How does the empirical data, collected during the course of the evaluation of the Protocol 3 projects in Belgium – projects aiming at helping frail older people to stay at home as long as they wish – help us to respond to the question of why, how and for whom is case management effective in improving desirable outcomes in Belgium?
Question 3:

What are the different types of case management for frail older people in Belgium? Why, how and for whom can these different types be effective?

Methods:

a) Realist synthesis (Method to answer to Question 1)

We started (1) with a stakeholder discussion with an initial literature review and input from the on-going Protocol 3 evaluation and (2) an in-depth literature review to develop and refine a programme theory of case management.

(1) Stakeholders engaged in the realist approach were a specialised nurse with a master’s degree in public health, a sociologist with a PhD in anthropology, a health economist and a physician with a PhD in public health. They interacted closely with the other members of the consortium of researchers engaged in the scientific evaluation of three other universities (sociologists, economists, nurses, primary care physicians, occupational therapist) and policy-makers who supported the mandate for these pilot projects (senior civil servants of the federal National Institute for Health and Disability Insurance). This group was also consulted at key stages in the review process: question formulation, theory development and evidence synthesis, providing critique and challenge to the method and emerging findings and theory development.

(2) Articles for the literature review were identified from searches of MEDLINE, EMBASE, CINAHL, ISI Web of Knowledge, PsychInfo, Sociological Abstracts and SocIndex. Primary theory building within the group of stakeholders resulted in a six-stepped sequential framework, oriented by a theory-of-change and guided by the review process. Data were then extracted, analysed and synthesised iteratively through a group of stakeholders.

b) Realist evaluation (Method to answer to Question 2)

Typically, a realist evaluation of an intervention starts with the identification of the logic of the intervention (also called program theory). This seeks to describe the
logical link between the objective of an intervention, the resources used, the activities carried out and the expected results. Second, CMOC (Context-Mechanisms-Outcomes Configurations) are sought, in order to identify underlying mechanisms explaining why a specific outcome was achieved in a specific context. This can be seen as a mid-range theory. Third, candidate mid-range theories are searched in the literature, amongst experts and researchers in order to provide an explanatory framework for these CMOCs. Fourth, adjudication between rival theories or refining of existing theories is done through testing them with the empirical data and iterative consultation of the literature and with stakeholders. In our case, empirical data included the official documents, questionnaires, focus groups and interviews with stakeholders of the Protocol 3 projects in Belgium (2010-2014). This data was collected and analysed through a Case study design.

c) Typology of case management (Method to answer to Question 3)

The next step included an across-cases analysis of the projects, attempting to identify the essential components of the projects and of the context in (1) achieving their implementation and (2) being successful in reaching the desired outcomes for the older people. All 22 case management projects of the Protocol 3 projects were scored against these lists of contextual conditions by two independent researchers. In case of disagreement, results were discussed until consensus was reached. Finally, a multiple correspondence analysis was carried out so as to group the case management per type of response pattern, so allowing grouping of the projects.
Results

A realist synthesis to respond to Question 1:

How does the international literature help us to respond to the questions of why, how and for whom is case management effective in improving desirable outcomes for older people living at home with complex care needs?

Of the 4321 citations identified, we screened and reviewed 440 full-length articles and included 86 articles representing 62 studies. The results refined the initial theory in which case management can be seen as a six-linked chain, in which each of the linked mechanisms can explain the success or failure of case management in its given context. In total, 42 context-mechanism-outcomes configurations were found. They are presented here per link of the chain, so illustrating the necessity for continuity in the case management process.

a. **Step one.** Proactive case-finding strategies by flagging systems may foster adequate enrolment and be acceptable for the people they target in enabling contexts, such as structured health care organisations where case management is already part of the care provision, but they may not be acceptable in less structured health and financing systems. In other words, these data suggest the adequacy of “automated” case-finding strategies, when based on flagged systems, preferably in addition to the clinical judgment of a care provider, rather than relying only on the clinical judgment of primary care teams. It is expected that the inclusion of older people in case management programmes by means of these flagging systems is more likely accepted by them when case management is already part of the structured health system.

b. **Step two.** The assessment of needs, preferences and resources has to be done collaboratively, in order to allow the adjustment of the care in coherence with those needs, etc. in a later stage. If other care providers are already involved in that stage and are motivated by a sense of urgency as a result of this identification, it is likely that they will want to be actively involved in the care at a later stage of the case management and, as a result, professional collaboration will be enhanced by the identification of common goals among care providers.
c. **Step three.** The third step describes the multicomponent domain of planning and coordination of the care. In this step, the sense of coherence is pivotal (alignment of needs, preferences and resources with the adequate level and recommended (i.e. based on the latest evidence) type of care). Therefore, adequate information at all levels (from information about an individual to information about adequate services and reimbursement systems) is key, in order to align the needs, preferences and resources of an older person with the services and resources the system can offer.

d. **Step four.** The focus here lies in the care provider’s response: integrated care delivery puts the focus on the paradigm shift needed from care providers, in order to move towards collaborative care.

e. **Step five.** Older persons and informal caregivers’ response: improved coping, the findings highlighted the importance of coping as a mechanism explaining positive outcomes. This mechanism could be triggered by the provision of care delivered in the older people and informal caregivers’ own space and time.

f. **Step six.** Older persons and informal caregivers’ outcomes: one of the most cited mechanisms was about the building of a trusting relationship, enhanced by personal continuity and impaired by the rate of turnover of professional case managers.

**A realist evaluation to respond to question 2:**

How does the empirical data help us to respond to the question of why, how and for whom is case management effective in improving desirable outcomes in Belgium?

Two mid-range theories that can explain why case management can help frail older people to remain at home were identified, namely capacity and social support. To support these outcomes (i.e. remaining at home), some contextual elements are shown to be important. First, there is the crucial point of the identification of the correct beneficiaries, in order to support their care with the adequate level of management. Our results have shown that older people with a low level of impairment can be sufficiently supported by coordinators, hired by coordination centres and do not need the input of professional case managers. Conversely, beneficiaries with a high level of ADL impairment could be adequately helped by a more social type of case management, while beneficiaries having a high level of cognitive impairment need clinical case management. This realist evaluation also enabled the identification of 23 contextual components that were likely to trigger
mechanisms leading to desirable outcomes for older people benefiting from case management. These 23 contextual components can be seen as an operationalization of the six requirements of the expanded version of Wagner’s Chronic Care Model, translated into the Belgian context by the Belgian Knowledge Centre (KCE) and relevant to case management in Belgium.

Proposal for a typology to respond to Question 3:

What are the different types of case management for frail older people in Belgium? Why, how and for whom can these different types be effective?

The typology makes a distinction between three types of case management, situated on a continuum going from a “social” type of case management towards a “clinical” type of case management.

The first type, acting in a social dimension, was marked by a poor level of collaboration with older peoples’ general practitioners. This was also associated with a high turnover rate of case managers, who were neither nurses nor social workers. The chosen inclusion criteria were seen as inadequate while it is intended that case management should be more profitable to people specifically identified as those with complex care needs. This type of case management is likely to be beneficial for older people who have (only) ADL deficiencies.

In the second type of case management, where the focus is also on the integration of the care at a social level, the intervention is likely to be better supported by the input of other professionals, as these professionals benefit from reflexive sessions with peers including professionals from outside their organisation and the information about the beneficiaries is shared and organized thanks to structured software. As a result, communication flow between professionals about the beneficiaries’ complex health care needs is likely to be more fluent than in the previous group. This type of case management is likely to be beneficial for older people who have ADL and a light form of cognitive deficiency.

In the third type of case management with its more clinical focus, the level of collaboration with other professionals was facilitated by external factors, such as formal agreements with other primary care agencies and the use of software for the organisation of the care, including sharing information about the beneficiaries.
with other professionals. The collaboration was also facilitated by internal factors, such as the professional skills of the case managers, supported by previous experience of geriatric care and ongoing reflexive sessions with peers. The monitoring of the care plan, which in itself was supported by the means of evidence-based, multidisciplinary protocols was likely to provide positive results in this type of project, as this approach enabled the case manager to get an adequate view of the possibly unstable situation of the beneficiary and offered tailored, evidence-based interventions. In turn, this could lead to the prevention of acute exacerbations or, at least, attenuate their effects. This type of case management is likely to be beneficial for older people who have cognitive and ADL deficiencies.

Discussion

Case management is a process for improving the delivery of clinical services to older people with complex needs. The realist synthesis showed how case management is a process with a long series of functions articulated within a stepwise chain. This chain illustrates the process, starting with the initial intuition that older people with complex care needs require care integrated into case management throughout the chain from care providers from different disciplines, organisations, care levels, to the case manager and, finally, to the older people themselves and their informal caregivers. Based on the entire range of types of case management processes described in the projects included in the Protocol 3 study, the types of older people (and their informal caregivers) who potentially could benefit from case management generally fell into three categories:

- When the older person had (only) ADL deficiencies but had complex care needs because of multimorbidity or other problems (such as social isolation);
- When the older person had ADL deficiencies and light cognitive impairment;
- When the older person had both ADL and cognitive deficiencies.

The type of case management needed for these three types of older people was, respectively, (a) a social type, (b) with an integration of the care at the social level and (c) a clinical type of case management. The first mechanism through which successful case management could be achieved was through the older peoples’ perception of their own capability because they can influence the choice of activities (e.g. accepting the services and care offered) and believe in the possibility of success (remaining at home). This mechanism can also influence coping efforts
once they are initiated. The second mechanism pertained to the *perceived social support* as a mediator for helping frail older people to stay at home.

For these three categories of dependencies, health and community resources are generally available but may be unknown to older people and their informal caregivers and may be poorly coordinated. Case management can help surmount these problems, but the role of the case manager is complex. The case manager can play distinctly different roles and act upon the mechanism through which case management can lead to desirable outcomes, such as supporting older peoples’ perception of their own capability and social support.

Thanks to the design of a multiple, embedded case study, we were able to describe in-depth the content and the contextual conditions of case management in Belgium in this population. While we acknowledged the heterogeneity of the interventions and contexts, we were able to identify the conditions under which case management could be effective. This led to a list of 23 contextual components necessary for successful case management, which were displayed along the expanded version of Wagner’s Chronic Care Model, translated and operationalized to the Belgian context. Based on the level of achievement of these 23 components in all the case management projects in the Protocol 3 projects in Belgium, we identified three types of case management, of which the third type, “clinical” case management, seemed the best fit for older people with complex care needs. Indeed, in this type, the case manager works closely with older peoples’ usual care providers (in our case, the proxy used was the level of interaction with older people’s general practitioners).

**Conclusion.** Recognizing the heterogeneity of interventions and contexts, we sought to elucidate the conditions under which case management was effective. We found that the impact of case management for frail, community-dwelling older persons could be reinforced through better role definition of the case managers’ team with other primary care actors, such as general practitioners, by means of assessing carefully those older people professional for whom case management is likely to be effective.
Overall introduction

Political background: Case management and current transitions in the health (care) system: placing it on the “map”

The challenges of changing demographics

The trajectory of this thesis cannot be understood except in the context of the reforms of the healthcare system in Belgium in recent years, especially in those sectors of care for people with chronic conditions⁶(1). Indeed, the current system, which was originally designed to respond accurately to the healthcare demands of a population with acute care needs, is trying to change for the better in view of changing demographics. These demographics are characterized on the one hand by double ageing, i.e. more older people becoming yet older and, on the other hand, by the consequent increase in occurrences of people living with multiple morbidities (commonly defined as the presence of two or more chronic medical conditions in an individual) (2). Indeed, it has been shown that at least one in two people aged 65 and over presents at least two chronic diseases (3). It is expected that the population of 65 and over will represent 24.5 % of the Belgian population in 2050 (4). The challenges that these changing demographics represent to the healthcare system are well-documented in OECD countries (5). One of the main challenges arises from the fragmented and complicated healthcare system for both users and professionals. The responses to these challenges vary from country to country and region to region, at various speeds and depending on the existing health care conditions and financing arrangements. It is important to highlight that the relationship between health care providers in Belgium is viewed as imbalanced, and supported by the law underpinning the practice of healthcare professionals (so-called Royal Decree 78, dating from 1967 (6)). This law freezes the relation between healthcare providers, in which some ‘upper professions’ are noted, i.e. physicians and clinical psychologists, who can practise completely independently. The other professional groups can be called ‘support’ professions (i.e. nurses, physiotherapists) because at least a part of their practice needs a prescription from another care provider (i.e. a physician), with whom they have a hierarchical relationship (7). As we will describe in this dissertation, this context may affect the way case management can be carried out. Indeed, historically, general practitioners played the role of professional case managers. However, given the changes in the

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⁶ A summary of the healthcare reforms in Belgium, viewed through the lens of eHealth, can be found on the government website www.plan-egezondheid.be.
profiles of GPs, as well as the changes in the demographic and epidemiologic profiles, they may not be able to do so in complex situations (8).

One of the Belgian responses to these changes: The Protocol 3 projects

Concerning Belgium, the European Observatory on health systems and Policies published a report in 2010 in which the results of these fragmentations were described (9). In response to this report, the federal healthcare agencies, i.e. the Federal Public Service of Public Health and the National Institute of Health and Disability Insurance (NIHDI), asked the Belgian Healthcare and Knowledge Centre (KCE) to write a position paper about chronic care in Belgium (10). We contributed to this paper by performing a SWOT analysis among active stakeholders in Belgium about future healthcare organisation for people living with chronic conditions. This position paper, which also contains a comparison of the organisation of care for people with chronic conditions in other countries with similar healthcare systems, can be seen as an introduction to this dissertation. Indeed, it identifies the lack of integration of care as one of the biggest weaknesses of today’s health care system, along with its determinants such as the unclear definitions of the roles and functions of health professionals involved in care processes, including professional case managers.

At the same time, actions were taken to reorganise care for older people at home. In 2009 a budget of 13.8 million euros, initially intended for nursing home beds, was freed to finance pilot projects willing to experiment alternative ways to provide care at home for people aged 60 and over and who were at risk of institutionalisation. Two calls for projects were launched, the first in 2009 and the second in 2013, the so-called “Protocol 3- projects” (11). Indeed, these calls occurred in the context of the sixth Belgian state reform, which included a transfer from federal competencies to the federated levels, i.e. the Flemish, Brussels and Walloon Regions. In health, two key competencies transferred to the region were long-term institutional care for older people and the management of structures aiming at improving coordination within primary (health) care and between primary health and social care (12-15). A protocol of agreement, the third one,

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4 For readers interested in the Belgian healthcare system, we strongly recommend the regularly updated information available on the webpage of the Health System and Policy Monitor of the European Observatory on Health Systems and Policies: http://www.hspm.org/countries/belgium25062012/countrypage.aspx.

5 The sixth Belgian state reform includes major changes of competencies for the Regions regarding healthcare, among other competencies (i.e. Environment, Social Action, Energy, Housing, Economics, Employment, Traffic safety and Healthcare). A total of 4734,9 million
provided the legal framework in which this budget was freed; hence the name “Protocol 3”. A consortium of four universities (Université catholique de Louvain, Universiteit Antwerpen, Katholieke Universiteit Leuven and Université de Liège), from the different regions of the country, was asked to evaluate the effectiveness of these alternative projects.

Link of this dissertation to the evaluation of Protocol 3 projects

This dissertation is embedded in the wider context of the evaluation of the Protocol 3 projects. The overall evaluation of the Protocol 3 projects includes three distinct but closely intertwined parts: (1) the implementation analysis of the alternative pilot projects of care and support of care for community-dwelling frail older people, (2) the effectiveness analysis (impact of the alternatives of care on “definitive” institutionalisation in nursing homes, quality of life, dependency status (ADL and IADL), burden of the informal caregiver of the older person and (3) the cost analysis of these alternatives of care and impact on the cost (e.g. on the healthcare consumption) (16). This dissertation uses the data of the first part of the analysis (implementation analysis), but broadens the scope and deepens the analysis. First, it broadens the scope because it introduces realist methodology as a means and epistemological stance to include the interaction with the context in the analysis, from the perspective of the researchers and end users of the results of the analysis. Second, it deepens the analysis because it draws on a systematic review of international literature to investigate drivers for the success of case management elsewhere, before investigating these drivers in Belgium, and back to the literature, to test whether findings in the Belgian context were found elsewhere, and refine those findings with the literature. Of importance is that the whole process was iterative. This thesis is meant as a basis from which to perform statistical analyses on health status and health outcomes as reported by older people and their informal caregivers-reported outcomes, which should vary as a result of case management. These outcomes are: the reporting of definitive institutionalisation and other healthcare consumption costs (hospitalisation, ER visits, out-of-hours

euros is to be transferred from the Federal to the Federated States (i.e. Communities and Regions): this concerns nursing homes for older people (including ‘short stays’ and day care), isolated geriatric wards and subsidies for older people; hospital infrastructure and medico-technical services; agreements for rehabilitation, mental health (centres and sheltered housing) and primary healthcare). At the moment of the writing of this dissertation (March 2017), the planned calendar was in progress and some competencies affecting this population, e.g. loco-regional structures aimed at improving coordination at the primary care level and between primary and social care, were still to be transferred to the Regions [8-10]
general practitioner visits), activities of daily living (ADL) and instrumental activities of daily living (IADL), perceived burden of the informal caregiver (ZBI-12), and four questions related to the I-statements. The description of the practical implications of the link with the Protocol 3 evaluation is described in the Methodological Approach.

Case management as one of the most frequently cited approaches to tackle fragmentation

Among the alternative interventions of care and support of care of the Protocol 3 projects, case management was one of the most frequent processes to be implemented or, at least, processes that were labelled as “case management”. In fact, at the same time, it also became apparent that the description of the features of case management and the conditions in which case managers operated were not clear for all parties involved. As members of the consortium, we took the fantastic opportunity offered by the context of the evaluation of the Protocol 3 projects to make an in-depth exploration of case management in these projects and, simultaneously, in the international literature.

Case management is defined by the Case Management Society of America (17), p.10) as “a collaborative process of assessment, planning, facilitation, care coordination, evaluation, and advocacy for options and services to meet an individual’s and family’s comprehensive health needs through communication and available resources to promote quality, cost-effective outcomes”. Case management is brought about in highly diverse ways according to its intensity (frequency and duration of the contacts), its embeddedness in the local care network, the profile and training of the case managers (e.g. nurse-led case management versus social worker-led case management). Because of its features and its embeddedness in a stratified reality (i.e. different levels of healthcare, itself embedded in the strata of society, etc.), it can be seen as a process or as a complex intervention. Complex interventions are often confused with complicated interventions.
Figure 1. The 'complex' zone is situated between the 'chaos' zone and the 'complicated' zone (after Stacey) (18).

To understand the difference between complex and complicated interventions, it might be useful to start from the concept of a simple intervention. A simple intervention, like a guideline implemented in a controlled environment, will lead to linear, predictable outcomes. However, the (social) world and in our case, the healthcare system, is neither simple nor controlled. By comparison, some argue that the world is complicated. This means that to explain phenomena, taking into account history, knowledge, etc. into the linear equation, will suffice. However, the literature shows us lots of examples where the results are not what one might expect. Even if more elements are added in the equation, there seems to be a systematic dearth of elements to be able to predict the results of complex interventions (19). This zone (the middle area in the figure) has insufficient agreement and certainty to make the choice of the next step obvious (as it is in simple linear systems), but not so much disagreement and uncertainty that the system is thrown into chaos. Therefore, we state that case management is not a complicated intervention, but a complex process, as is expanded below.

In the article of the Medical Research Council in 2008, a complex intervention is defined as an intervention with multiple, interacting components, with an increasing complexity depending on the number and difficulty of behaviours required by those delivering or receiving the intervention, the number of groups or organisational levels targeted by the intervention, the number and variability of
outcomes and the degree of flexibility or tailoring of the intervention permitted (20).

Teleological definitions of a complex intervention are also common in literature, where a complex intervention is defined by the difficulty of its “one-size-all-fits” form of implementation and the number of organisational levels targeted (21).

Case management for community-dwelling older people certainly shares these features. The components of case management are multiple, as is shown in the definition of the Case Management Society of America (“a collaborative process of assessment, planning, facilitation, care coordination, evaluation, and advocacy, etc.”) (17), including multiple steps of implementation, in interaction with multiple persons (older people, their informal and formal caregivers, representatives of sickness funds, etc.), who interact with each other.

Not only is case management a complex intervention but in the Belgian context, the various activities, disciplines, care levels and persons it involves, are implemented within a complex adaptive system, with which case management shares common features. In this sense, case management is an open system, i.e. one that is not limited to the combination of a case manager, older person, informal caregiver and other care providers, who can belong to the primary care level6 as well at the secondary care level, within a system (22). In their seminal article, Plsek and Greenhalgh defined ten major features of complex adaptive systems in health care (23) that can be used to describe case management interventions in Belgium. These ten features are described in detail on page 66 and are listed here: (1) fuzzy boundaries, (2) shared, internalised rules, (3) adaptive behaviour, (4) occur in multi-layered realities, (5) tension and paradox as natural phenomena, (6) interaction leads to continually emerging, novel behaviour, (7) inherent non-linearity of the behaviour, (8) inherent unpredictability, (9) inherent patterns, despite this unpredictability and (10) attractor patterns can be observed.

The literature shows that case management should focus on people with medical illnesses and complex healthcare needs. As this definition is very broad, the population likely to benefit from case management can be very diverse. As a consequence, some systematic reviews observed that no consensus could be found about the core components of case management (10, 24)

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6 i.e. first-contact, accessible, continued, comprehensive and coordinated care
Moreover, the mix of activities of case management will differ from population to population. For instance, some case management interventions may include primarily coordinating functions while others focus mainly on clinical activities. Other differences include the intensity of activities (frequent home visits versus only phone calls) or the independence of the case manager (on the one hand, working with the usual care provider of the patient or with a multidisciplinary team of care providers, while on the other hand, working independently). The variability of the activities performed during the case management process, but also the different contexts in which case management is offered, is a comparative effectiveness issue that is addressed in this dissertation.

In this dissertation, we focus on case management for community-dwelling older adults. We acknowledge that other populations can benefit from case management, such as older adults with one or more chronic diseases, frail elderly, patients with dementia, congestive heart failure, diabetes mellitus, cancer, chronic infections (HIV, hepatitis B or tuberculosis), mental health problems (including substance abuse disorder) or other medical problems.
Objective of this dissertation: Evaluation of the conditions under which case management in Belgium can be effective

In constant interaction between the lessons learned from the international literature and the evaluation of the pilot projects, the aim of this dissertation was to learn lessons from experience from outside the country and to confront those lessons with the findings of the evaluation of the Protocol 3 projects, in interaction with all the stakeholders involved (from beneficiaries to case managers, project coordinators, civil servants and policy makers), in order to make recommendations about how and what should be implemented in Belgium regarding the profile, resources, training, etc. for case management to be delivered in the best conditions in Belgium.

Case management is an important feature in integrating services around the needs of older people with long-term conditions (25). However, the evidence for its effectiveness is mixed, as is shown in the many systematic reviews conducted for this population (24-34). The reasons for the absence of conclusive proof of its effectiveness is the heterogeneity of the understanding of case management. For instance, there is a lack of consensus about the role, the functions, the financing, the training, the profile, the expertise, ... for this healthcare intervention in the international literature (35). Moreover, if this function is to be implemented in Belgium, the specific conditions of the organisation and delivery of healthcare in Belgium mean that research about case management in Belgium is sorely needed. In this country, healthcare organisation and delivery are characterized, amongst others, by principles of therapeutic freedom for physicians, freedom of choice for patients, and remuneration mainly based on fee-for-service payments. At the decision level, healthcare is fragmented between federal state and federated entities, with significant differences in reimbursement systems between federated entities for the health and care for the older population in need of care. When evaluating the effectiveness of case management, this influence of the context should be taken into consideration.

What is described above provides the rationale for the different research questions for this dissertation.

1. What are the perceptions of active stakeholders in Belgium about the strengths, weaknesses, opportunities and threats of the healthcare system for people with chronic diseases?
2. What is case management about in other countries? Why and for whom is it effective – or not?
3. What is case management about in Belgium? Why and for whom is it effective – or not? What are the conditions under which case management could be effective?
4. What are the different types of case management in Belgium? Why and for whom is it effective?

The first chapter of this thesis presents key features of Belgian health systems that pave the way towards a reformed and more integrated health and social care system.

The second chapter presents a realist synthesis of the international literature investigating why and how case management for community-dwelling older people should lead to desirable outcomes.

The third chapter reports the findings of a multiple, embedded case study of seven out of the 22 case management projects of the Protocol 3 projects of the first call, using a realist approach. This chapter draws on the findings of the realist synthesis described in the second chapter. It also describes the conditions needed to implement case management.

The fourth chapter uses the findings of the conditions needed to implement case management of the third chapter, to provide a typology of case management. First, all 22 Protocol 3 projects providing case management are evaluated for the level of presence of these conditions by means of a scoring system. Second, the scores are analysed by means of a multiple correspondence analysis (MCA), which makes it possible to group projects with similar scores. Third, the grouping of projects is then analysed by considering their scoring patterns. Fourth, their grouping is discussed by researchers, along with the findings of the realist evaluation described in the
third chapter, to find explanations as to why projects with similar outcomes should lead to desirable outcomes.

The methodological approach of realism of Chapter 2-4 is justified and described in a separate chapter. The use of the MCA is also described in the methodological approach.

The different steps of this dissertation are summarized in Figure 2. Two features of the process have to be highlighted: (1) the process is iterative, meaning that information gathered in one step will influence the work in the following step but will also refine the findings of the previous step. This is specially the case between chapter 1 and 2. (2) As realist studies are work-in-progress (19), the ongoing building of knowledge by this approach does not stop with the writing of this dissertation.

Figure 2. Overall plan of the dissertation showing how each of the steps informs the subsequent steps to refine the theories and build new knowledge about case management in Belgium
We will start, however, with the description of the specific context of Belgium, through the lens of the stakeholders perceived needs for health reforms, provided in the next chapter. Of interest is the use of the expanded version of Wagners’ Chronic Care Model, which can act as an overarching structural model explaining the requirements for chronic illness care. This model was used to offer a framework for the healthcare reforms in Belgium in the domain of the care for people with chronic conditions (8).
Contextual framework: the need for healthcare reform in Belgium

Stakeholders’ perception on the organization of chronic care: A SWOT analysis to draft avenues for health care reforms

Article published in BMC Health Services Research 2014, 14:179

Abstract

Introduction: The aim of this study was to identify Belgian stakeholders’ perceptions on the strengths, weaknesses, opportunities and threats of the healthcare system for people with chronic diseases in Belgium.

Methods: Four focus groups were held with stakeholders from the micro and meso level, in addition to two interviews with stakeholders who could not attend the focus group sessions. Data collection and the discussion were based on the Chronic Care model. Thematic analysis of the transcripts allowed for the identification of the strengths, weaknesses, opportunities and threats of the current health care system with focus on chronic care.

Results: Informants stressed the overall good quality of the acute health care system and the level of reimbursement of care as an important strength of the current system. In contrast, the lack of integration of care was identified as one of the biggest weaknesses of today’s health care system, along with the unclear definitions of the roles and functions of health professionals involved in care processes. Patient education to support self-management exists for patients with diabetes and/or terminal kidney failure but not for those living with other or multiple chronic conditions. The current overall fee-for-service system is a barrier to integrated care, as are incentives to integrate care. Attending multidisciplinary meetings, for example, is underfinanced to date. Finally, clinical information systems lack interoperability, which further impedes information flow across settings and disciplines.

Conclusion: Our study’s methods allowed for the identification of problematic domains in the health system for people living with chronic conditions. These findings provided useful insights surrounding perceived priorities. This methodology may inspire other countries faced with the challenge of drafting reforms to tackle the issue of chronic care.
Keywords
Health care reform, Long-term care, Health Services, Primary care

Background
The World Health Organization (WHO) defines a chronic disease as requiring, “...ongoing management over a period of years or decades” (36). The term traditionally refers to diabetes, cardiovascular and renal diseases, mental disorders, cancer, COPD (chronic obstructive pulmonary disease) and diseases like HIV/AIDS. Chronic diseases are responsible for over three quarters of the global burden of disease in industrialized countries (36, 37). Higher life expectancy, changing lifestyles, and improved medical technology are all factors that increase their prevalence (5). The provision of high quality and accessible care is a challenge for the health care system and the society as a whole (38).

Recent publications from the European Commission and the European Union Policy Forum summarize the burden of chronic diseases (39, 40): 40% of the population in Europe above the age of 15 is reported to have a chronic disease; such diseases are responsible for 86% of deaths. An additional problem is that chronic diseases rarely come alone (41). Chronically ill persons often suffer from several problems: fifty to seventy percent of individuals over the age of 70 have at least two disorders (42). The current health systems of many OECD countries tend to focus on acute conditions (9). However, people with chronic diseases have broader needs like more intensive medical, psychological, psychosocial, social and spiritual support (43).

Some national health systems, such as the Netherlands or Denmark, have developed national plans to face the challenge of chronic care (44, 45). Common elements of these plans include the drafting of a national framework for the provision of chronic care, the promotion of integrated care, the implementation of a disease management processes and the set-up of personal health care plans (46). In line with these international developments, the Belgian Minister of Health & Social Affairs asked for the development of a national position paper on the future of chronic care in Belgium (8, 10). This position paper is based on various data sources: (1) publications from international organizations; (2) national plans of four countries; (3) a review of the literature on patient empowerment and on new functions for healthcare professionals; (4) a description of Belgian initiatives, and (5) an extensive consultation process of active stakeholders in the Belgian health care system.
The current article describes a qualitative study on stakeholders’ perceptions, carried out within the context of the development of the aforementioned national position paper. The aim of this study was to describe how stakeholders perceive the strengths, weaknesses, opportunities and threats (SWOT) of the Belgian healthcare system in relation to the care of chronically ill people and to identify new avenues for a national healthcare reform.

Belgium is a small country in Europe. The part of the GDP spent on health care is within the European average. Belgian health care is characterized by free entrance to primary, secondary and tertiary care facilities. General practitioners (general practitioners) do not play the role of gatekeeper, and referrals are not required. Physicians are most often paid on a ‘fee-for-service’ basis and are self-employed. Patients have obligatory medical insurance by which some medical services are reimbursed. Out of pocket payment accounts for approximately 25% of health expenses. In Belgium, almost 99% of the population is covered by compulsory health insurance. In primary care, nursing care is provided by large scale originsations (salaried nurses) or small scale independent providers (self-employed). The Federal Government has provided incentives to lower competition between providers, targeting more integration by implementing regional multidisciplinary organizations. In recent years the number of hospital beds has been steadily declining (9).

Methods

A SWOT analysis was performed among key informants in spring 2012. This method was previously used in policy research to systematically analyse organizations’ environments (47). If used correctly, SWOT-analyses can offer policy makers a sound basis for strategy development and formulation.

Sample recruitment and selection

A purposive sampling technique targeted key informants involved in chronic care delivery at the micro and meso level in the French and Dutch speaking communities of Belgium. Micro and meso levels of health care are based on the WHO-definition(47). The meso level comprises the health system at both the local and the organizational level, such as hospitals. The main roles include the provision of health services, as well as the coordination, supervision and training of service providers. The micro level includes the citizens, local providers and services, local authorities and the interactions between them. Inclusion of both groups was
considered crucial to obtain individuals’ perceptions, and information on interactions and on organizational levels of primary care practices.

Stakeholders were identified through formal and informal networking, reflecting both the views of patients as well as the disciplines/functionalities involved in the care for people with chronic conditions. Selection aimed to have a maximum of 12 people per group so as to represent the different professional profiles (i.e. physicians, social workers, nurses, pharmacists and representatives of patients and informal caregivers) and the various domains of activity (i.e. direct care, management, coordination). If invited people were unavailable or refused, people with a similar profile were invited in a second wave of invitations.

**Data collection and analysis**

Stakeholders from the micro and meso levels were interviewed to provide a SWOT analysis of the Belgian health care system. They were invited to four separate sessions, two per language group (French and Dutch). The rationale behind the different language groups was to (1) enhance fluent communication within groups sharing the same language and (2) have a coherent discussion within groups as the regulations regarding accreditation of health care institutions are different in the French and Dutch speaking parts of Belgium.

The interview guide was structured following the domains of the adjusted Chronic Care Model, a framework for the effective organization of chronic care (8). The interview guide is provided in Appendix 1. This step was completed with two additional semi-structured individual interviews with informants who were not able to attend the focus groups.

Data were collected primarily by the means of focus groups. Focus groups are particularly well-suited for our purposes as they have multivalent functions: (1) a pedagogical function, involving collective engagement to promote dialogue and to achieve higher levels of understanding, (2) a political function, to transform the conditions of existence for particular stakeholders and (3) a research function, which can certainly be considered a main element here, since it allows for “...the generation of rich, complex, nuanced and even contradictory accounts of how people ascribe meaning to and interpret their experience with an eye toward how these accounts might be used to affect social policy and social change.” (p.546) (48). Focus groups and interviews were audio-taped after written informed consent was obtained. For focus groups, audio-tapes were supplemented by field notes of two observers. Researchers coded the data from the two focus groups independently,
conducting a thematic content analysis (48) and a meeting was held to discuss the final themes with the whole research team. Based on these emerging themes, a SWOT analysis was performed and organized according to the domains of the Chronic Care model.

**Ethical approval**

The Ethics Committee of the University of Antwerp approved this study (B300201214276).

**Results**

In April and May 2012, four focus groups, two per language group, were organized with stakeholders from the micro and meso levels of chronic care. The 31 participants are presented in Table 1. Each focus group lasted two hours.

Table 1. Focus group participants and interviewees

<table>
<thead>
<tr>
<th>Representatives of ...</th>
<th>Focus group members (n)</th>
<th>Interviewed (n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient organizations</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Informal caregiver organisations</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Pharmacist organisations</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>General practitioner organisations</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Nursing home managers</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Specialists</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Primary care nurses</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>Regional care organisations</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Advanced nurse practitioner (hospital-based)</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Key results of the SWOT analysis of all focus groups were grouped into six themes listed below.
Theme 1: Continuum of care within and between lines: a call for coordination

Participants highlighted the lack of integration of care as one of the largest weaknesses of today’s health care system. Patients with chronic conditions often ‘navigate’ between various health and social care providers. This situation calls for better coordination in primary care and for the organization of seamless care among secondary care providers.

(Nurse, 2nd focus group) “There is a tension when we work together with different care providers around a single patient: you need a team attitude. You must know the boundaries of your work. With how many people can you work without losing control?” Multidisciplinary coordination of care was crucial, especially for complex situations. Formal coordination of care could help to identify resources for patients living with complex conditions, particularly for problems that extend beyond their medical conditions.

Strengths: The informants mentioned several initiatives which are currently promoting seamless care, e.g. discharge policies from hospitals for older patients (external liaison) and federally/regionally funded coordination centres that not only coordinate care at the primary care level but also between hospitals and primary care.

Weaknesses: Coordination initiatives are fragmented and overlap for many reasons: (1) coordination initiatives are either organization-centred (e.g. home care organization offering a care package including nursing care, family and household support, meals on wheels, etc.), or single disease-centred (e.g. care pathways for diabetes or chronic kidney failure). (2) general practitioners’ integration in these structures is almost seen as incidental. Even if everyone agrees that the general practitioners’ role in primary care is crucial, there are many barriers preventing him/her from playing this role. For instance, general practitioners are expected to makes certain decisions, e.g. about the right moment for hospital discharge, but when it comes to assess the preparedness of a home situation, he/she does not necessarily have the required information to decide:

(Nurse, 2nd focus group) “We see that general practitioners are overburdened, they become less accessible, but they are still given the central role, even though they are not in the middle of information when there is a complex situation. Decisions are not always made by persons who are best informed.”
(3) Care and help organizations are structured in many ‘silos’, such as health care versus support care, private organizations versus public-funded organizations, primary care versus institutional care, silos per discipline, etc. and each of these entities does not know about the functioning of the other entity (4). In many situations, no one is formally designated as responsible for care coordination.

**Opportunities** were not mentioned in this domain.

**Threats:** (1) Patients’ freedom of choice of care provider, a major concept in the Belgian system, was a threat to care coordination, as these care providers can be hired by different organizations. These care providers come from different structures or are independent and therefore do not share the same values, visions, clinical information tools, etc. (2) Informants expressed a form of hierarchy between physicians; hospital specialist did not consider primary care general practitioners’ opinion as valuable, nor did they ask for previous treatments:

(general practitioner, 2nd focus group): “They (i.e. teaching hospitals) think that the world stops at the limits of the hospital and they do not even consider the time between the discharge of the patient one year before, for vascular surgery, and his admission one year later. The specialist did not even contact me to know about the current treatment.”

**Theme 2: New definition of the roles of care professionals and their training**

The second important theme was related to the clear definition of the roles and functions of health professionals. This topic is related to the previous theme of coordinated care.

**Strengths:** In hospitals, disease-specific teams prepare the patient for discharge, e.g. for chronic heart failure or transplantation. In these teams, roles and functions are clearly defined; professionals are highly specialized and skilled within their (sub)discipline.

**Weaknesses:** These roles are sometimes well-defined within single-disease pathways in hospitals but this is not the case at home, especially for patients with multimorbidity. There is therefore a need for generalist care providers, as opposed to specialist care providers, who are trained to take up the role of coordination of care. This training does not exist yet in Belgium. Moreover, most of the general practitioners, seen as crucial to the coordination of care, are working in solo practices and their training focuses on acute and specialized care:
(general practitioner, 3rd focus group) “There is a problem with the training of general practitioners, which focuses on acute and specialized care. I think that general practitioner care should be more present in medical faculties (...). Only in general practice is one aware of the fact that there is more to it than disease: the home and the family must be accounted for, but this is not part of our training.”

Finally, the current legislation makes task delegation difficult because there are no financial incentives in a fee-for-service system.

No opportunities and threats were mentioned for this domain.

**Theme 3: Patient empowerment and support for informal caregivers**

Two key issues emerged in the focus groups: (a) patient education to support self-management and (b) support activities for informal caregivers in order to enable them to keep on caregiving in adequate conditions.

(Patients and informal caregivers’ association, 2nd focus group) “If we hope that a patient decides for his/herself, we have to be sure that he/she understands the options. We should enable him/her to meet his/her peers, and we should provide information about support groups. This is not systematically offered by professionals.”

**Strengths**: The necessity to empower patients is clear to care providers. Health and patient education are being professionalized through better training of care providers; patient empowerment is central to patient education. This means that patients are better able to express their priorities and preferences, which may not be the same as the ones of the care providers:

(Network coordinator, 2nd focus group) “We often see that medical doctors’ priorities are different from patient priorities. The thing that interested the patient in the first place was his housing and food problems, because the only food he had in his fridge was a soda can, to treat hypoglycaemia”.

The education role by nurses is enhanced by the work of patient associations, who bring an added value to education by the means of peer education. Secondly, some organizations provide telemonitoring and this is also seen as a support for care management.
Two strengths were highlighted in relation to informal caregivers as (1) there is a law project under way which will establish an official status for informal caregivers, so that the time spent in informal care is taken into consideration for the calculation of their pension, or social security, (2) A minimum wage is supplied for informal home caregivers in Flanders.

**Weaknesses:** Informants stressed the fact that patient education is mostly (single)-disease centred. Patients lack accessibility to relevant information because (1) the legal framework organizing reimbursement systems and care delivery is too complex; (2) the role of patient organizations is too weak; and (3) information is not well-organized and is obsolete. Thus, patients (a) miss information and therefore lack access to tools to make informed choices and (b) are rarely included in the quality evaluation of the services provided, which may, in turn, have an impact on the service.

Concerning the informal caregiver, support and respite structures are insufficient, as are incentives to suspend or reduce their professional activities. Overall, informal caregivers are not considered partners in care.

(Patient association, 3rd focus group) “It often happens that, in cancer patients, communication with health care providers is difficult. Informal caregivers do not find their place, and are caught between the beneficiary and the health care providers. They are afraid to express themselves, afraid to be ill-perceived and cumbersome.”

No opportunities were mentioned for this domain.

**Threats.** Participants stressed that the coordination role is often taken on by a professional despite the willingness of the patient or his/her informal caregiver to coordinate his/her own care.

(Patient association, 1st focus group) “The informal caregiver is sometimes willing to coordinate. However, professionals take on this [coordinating] role, which seems logical, because it’s part of their training. But this means that it is such a knot to undo, that it discourages families to ask for help from the coordination services.”
Theme 4: The payment system: an obstacle to integrated care

The Belgian health care system mainly relies on fee-for-service in ambulatory care but other payment mechanisms coexist (capitation, lump sums for specific services). The fee-for-service system is perceived as a barrier for task delegation and for the provision of integrated care by a multidisciplinary team.

Strengths: Some stakeholders suggested that a capitation system would offer an added value for the provision of care to patients with complex chronic conditions.

(general practitioner, 4th focus group) “Palliative care is not financed by a fee-for-service system. This is a dream for a general practitioner who works with these palliative teams because they have time. Working with nurses in a fee-for-service system is unbearable because they are always under stress.”

Capitation is already the case in some medical centres; nursing care facilities for dependent patients use payment per episode through care pathways and lump sum reimbursement systems.

Weaknesses: The coexistence of different payment systems is also a weakness, because (1) in each area, similar providers use different types of payment systems and (2) because the system is hard to understand for care beneficiaries and even for care providers. Moreover, the predominant system is fee-for-service, which may lead to (a) a push for quantity and professional stress and (b) difficult task delegation, because the professional who is delegating is not paid if another care provider delivers the health care. Thirdly, some care provision is not reimbursed; e.g. monitoring of vital parameters is not properly financed, the social worker is not reimbursed, etc. Finally, when capitation systems are used, difficulties arise because (1) most payment systems are disease-oriented (e.g.: diabetes); (2) reimbursement criteria are ill-adapted (e.g. patient dialysis is reimbursed if the patient lives at home, but not if he/she undergoes auto-dialysis in a nursing home). (3) general practitioners’ “Global Medical File”, an incentive for comprehensive care by general practitioners, is underused.

No opportunities and threats were mentioned for this domain.
**Theme 5: Clinical information systems**

Important changes in the clinical information systems are expected to have an impact on the organization of care for chronic patients.

**Strengths:** The progressive generalization of electronic patient records within settings and the ICT federal platform of social security (eHealth) have allowed for shared information. Input of electronic data should help obtain quality (self-) assessment of care provision. Moreover, linking clinical files with built-in algorithms should support clinical decision-making.

**Weaknesses:** First, in many cases, communication around a single patient living at home occurs by the means of paper documents, which are considered suboptimal. Secondly, indices show a lack of an overall, coherent vision of the health care system. This is evident when looking at the myriad of pilot experiments, each using its own tools, leading, for instance, to incompatibility between software. Thirdly, the lack of uniform care language hinders information sharing across settings. Therefore, there is currently a lack of aggregated data for quality management purposes. Informants also stressed the lack of built-in algorithms for assessing the incompatibility between drug prescriptions. Fourth, information about these tools and systems is not available. For instance, care providers in the study had heard about the ICT federal platform for the first time during our focus groups.

**Opportunities:** (Social worker, 1st focus group) “It should be made possible for the patient to access his data, to claim the care or service provision to which he is entitled: preferential reimbursement rates, etc.”

**Threats:** Professionals and patients expressed fear regarding the security and privacy of sensitive data, leading to a reluctance to use shared electronic data files. Professionals fear (external) quality control, leading to intrusion in clinical in clinical decision-making from the authorities.

(general practitioner, 3rd focus group, about electronic patient records) “This is very positive, but raises some ethical questions, because the patient might be unwilling to share his/her data. Important safety procedures should be set up.”
Theme 6: Accessible care

Accessible care is a key issue for people with chronic care needs (i.e. timely care that is provided by the right professional, in the right setting and at an affordable price).

(Director of a nursing home, 4th focus group): “There is a shortage of accommodation for chronic care patients. There are too few housing facilities; we are regularly confronted with demands from people we are unable to even enrol on a waiting list.”

Strengths: Participants stated that overall, care is timely as well as financially and geographically accessible. Because emergency rooms are open 24/7, where payment is delayed, in most cases, a hospitalization can be an easy solution for a crisis at home (e.g. acute overburdening of the informal caregiver). In addition, emergency telephone lines for off-hour services within the primary care practice appear to be effective. Aside from this overarching network of reimbursed, accessible healthcare, some local initiatives provide support for patients with chronic conditions, who are at risk of being rejected from insurance companies.

Weaknesses of the system include long delays (1) for specialist consultations, especially in remote areas (e.g. ophthalmologists) and (2) nursing homes, who work with long waiting lists. At the same time, financial accessibility is hindered for middle class chronic patients, who do not have access to non-health care or family aids: they are both too wealthy to benefit from social security funds and too poor to pay for it. Finally, the payment system does not account for the real care needs and provisions (see above). For instance, at-home care services are not affordable for most chronic patients.

No opportunities and threats were mentioned for this domain.
Discussion

This study illustrates the importance to involve stakeholders in future reforms in a health care system. A robust qualitative methodology allowed for the collection of important elements for future reforms. Stakeholders’ perspectives highlighted major issues in relation to the organization of the Belgian health care system and its capacity to answer to the needs of the patient with chronic disease.

Firstly, priority should be given to the organization of care at the patient level (49). Proposals for improvement in this domain include the intervention of a case manager. For many chronic patients, comprehensive care is becoming too complex for a general practitioner to handle during routine care (50). Indeed, biomedical needs are often linked to psychological and social needs (51). The role and function of a case manager should therefore encompass the latter and should be well-defined (24). This position requires specific training (52), legal and cultural changes (53), and adequate financing (54). In Belgium, these conditions are not yet adequately addressed and urgent attention of all players in the field is needed. In addition, the role of the case manager is rather undefined at present. Should they have medical background (i.e. nurses) and what should be their optimal level of expertise and education? Furthermore, one must decide at what level in the health system case managers should work. In some countries, these case managers work at the level of primary care practices (53). However, Belgium currently lacks these practices; many of them are independently working general practitioners (9).

Secondly, shared electronic files should allow adequate data transmission between professionals and multiple disciplines, and also between primary and secondary care (55). Legislation issues (i.e. privacy) need to be tackled (55). Moreover, information systems in this country are highly diverse with poor interoperability (56), which may lead to communication gaps between providers and subsequently to fragmented care (55). In addition, evidence demonstrates the importance of built-in guidelines for supporting clinical evidence-based decision-making (55). Policy makers in Belgium seem to be willing to support the integration of several pre-existing tools that were developed for specific users. This is particularly challenging in Belgium as ICT networks are often different for French and Dutch communities and between all disciplines of primary and secondary care. It was acknowledged that there is an urgent need to share platforms (like eHealth), compatible with comprehensive geriatric assessments (BelRAI, a Belgian version of the InterRAI) (57), with links to validated guidelines for Belgium (EBMPracticeNet) (56), and with high level security access and the necessary legal privacy clearances. However, many barriers exist, one of them being the low ICT literacy of (elderly)
health care providers and the inability of the programs to properly communicate with each other.

Thirdly, empowering patients should be addressed by the means of participation and self-determination in health decision making (58). However, results show that this informed decision making is hindered by the difficult access to relevant information about the available financial and material resources, as the Belgian system is very complex both to beneficiaries and even to care providers. Alas, this complexity is even expected to increase as the Belgian health care system will undergo an important reform, by the means of transfer of skills from the Federal to the Regional level in the forthcoming months.

Fourthly, adequate payment systems are needed to support comprehensive care. The prominent payment model in this country is pay for service (59). This model does not foster the implementation of task sharing and delegation (60). Capitation systems in this country can be adopted in primary care practices but this is, to date, not very popular as only minorities of less than 5 percent of general practitioners adopt this schema. It has been suggested that capitation based payment may result in lower than average care. However, previous research has shown that primary care practices that adopted the capitation schema showed better adherence to guidelines and provided better preventive medicine (61, 62).

Limitations of the analysis

Stakeholders’ consultation can help identify strengths and weaknesses for health care reforms in a specific context. We tried to ensure that all important groups be consulted e.g. patients, informal caregivers and professionals working on the field (at the micro and meso level).

Several steps in this study aimed at decreasing as much as possible the subjectivity that might have influenced the results and interpretations:

- **Multidisciplinary research team.** The researchers had diverse clinical and cultural backgrounds, from the French-speaking parts and from the Dutch speaking parts of the country. Their skill-mix allowed for adequate reflection on the views expressed during the interviews.
- **Informants with diverse experiences.** Informants were selected from diverse domains, functions, professions, to reflect the views and concerns of a variety of disciplines and interest groups.
- **Information gathering process.** A key issue was the choice of challenging propositions whilst minimizing the possible subjectivity during this phase. Still the approach allowed us to build statements on the situation as experienced by the stakeholders on the field.

Few opportunities and threats were identified by the stakeholders, which might be a limitation of the SWOT methodology, preventing the identification of the external factors influencing chronic care in the very dissimilar organisations in which the stakeholders worked in or belonged to. Some of them even worked independently, such as general practitioners or pharmacists working in solo practices.

**Conclusion**

This qualitative study with stakeholders working with chronic diseases at the micro and meso level allowed us to formulate some important building blocks for a future health care system oriented towards the needs of patients with chronic conditions. Further research will clarify how the Belgian policy makers can implement the findings of this stakeholders’ analysis. The methodology used in this research could inspire other countries faced with the challenge of drafting reforms to take up the challenge of chronic care.

**Competing interests**

None declared by all authors.

**Authors’ contributions**

All authors contributed equally to the study design, data collection and data analysis. TVD wrote the draft of the paper and all other authors reviewed and approved the final version of the paper.

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The previous chapter shed light on key features of the Belgian healthcare system designed to provide care for people with chronic conditions. Given the needs for reform identified by stakeholders of the healthcare system, could we consider case management for home-dwelling frail older people in Belgium as one of the strategies for future changes?

To answer to such a question, one would classically try to study the question of the effectiveness of case management for home-dwelling frail older people in Belgium. But how to approach it?

Should it be limited to a specific outcome (i.e. definitive institutionalisation)? Or should it include other outcomes? Can it be studied for the whole population of home-dwelling frail older people? Or should it target specific groups of the population? Can we expect similar effects in all contexts of Belgium? Or is it dependent on features of the context?

To respond to such questions, we used a “realist” approach by addressing the now classical “realist-driven” questions: If case management is effective, how does it achieve a given outcome (e.g. better perceived quality of life)? For which frail older people? In what contexts is case management successful in achieving this (or not)?
Methodological approach

Justification

To respond to the questions, it is important to frame case management as a complex intervention but also as a series of activities, delimiting a complex adaptive system, as we did in the introduction. Indeed, case management shares the characteristics of both definitions.

Therefore, it can be claimed that the effectiveness of complex interventions/complex adaptive systems, such as case management, occurring in the multi-layered reality of the health system, are better evaluated by means of a realist approach.

More specifically, realist approaches are useful in addressing the limits of the “golden standard” (RCTs) for evaluating the effectiveness of complex phenomena, such as the processes of case management. First, they allow the understanding of the processes of case management in each context. Second, they allow theory building and/or refining (and transferability of the results). Third, they allow participation in evaluation (e.g. involvement of active stakeholders, including users of the evaluation, in data collection activities and interpretation of the findings). These different features explain why this approach is suitable to enhancing the usefulness of the results of the approach and its transferability into other contexts, in our case, also to contexts outside the Protocol 3 projects, and even outside Belgium.

This is argued in the following paragraphs, which explain this approach.
The method itself: the realist approach

So far, we have argued that case management is a complex intervention, even a type of complex adaptive system. What, then, is the best way to evaluate case management? We agree with authors such as Köpke et al. that complex interventions or complex adaptive systems are not amenable to evaluation through classic RCT study designs alone (21, 63). Moreover, to account for and evaluate complexity in health care we suggest abandoning linear models, and responding flexibly to emerging patterns and opportunities. One of the interesting methods in addressing complexity in evaluation is the realist approach.

Realist approach

The realist approach can be used for systematic reviews, called ‘realist synthesises’ (64, 65). These are particularly useful when, as is the case here, classic reviews of case management interventions fail to show consistent evidence of effectiveness in achieving desirable outcomes in older people living in their own homes. A realist synthesis can identify and understand the mechanisms through which case management could achieve desirable outcomes for this population in different contexts. Realist approaches can also be used for the analysis of primary data and are first and foremost used for the evaluation of interventions, i.e. realist evaluations (19).

The understanding of the definition of a mechanism in scientific realism is central. The focus is on mechanisms that can explain the observed changes (of outcomes). Mechanisms are underlying processes, used to describe how things happen beyond the observable reality. A useful analogy can be found with a clock: we do not understand how it works simply by observing the clock face and its revolving hands. We need to go beyond the observable reality (the clock face) and look into the mechanism (the cogs and their workings, not visible when looking only at the clock face), to understand why these revolving hands move (or do not move). Another, more complicated, definition is provided by Pawson and Tilley “Mechanisms are the combination of the people’s choices (reasoning) and capacities (resources)” (19). Of crucial importance is that mechanisms occur in a stratified social reality: context matters, as these mechanisms are (only) triggered in certain contexts. The stratification of reality in multiple layers mean that sometimes mechanisms can be viewed by realist researchers as outcomes or even interventions. In the same sense that the clockwork mechanism (the cogs moving smoothly) can be seen as an
outcome (as a result of the intervention of the clockmaker). As such, the definition of what an outcome, a mechanism or a context is, should always be contextualised within viewer’s understanding of the phenomenon.

Typically, a realist evaluation of an intervention starts with the identification of the logic of the intervention (also called programme theory). This seeks to describe the logical link between the objective of an intervention, the resources used, the activities carried out and the expected results. Second, CMOC (Context-Mechanisms-Outcomes Configurations) are sought, to identify underlying mechanisms explaining why a specific outcome was achieved in a specific context. This can be seen as a mid-range theory. Third, candidate mid-range theories are searched in the literature, amongst experts and researchers to provide an explanatory framework for these CMOC. Fourthly, adjudication between rival theories or refining of existing theories is done through testing them with the empirical data and iterative consultation of the literature and experts (66).

The epistemological boundaries of realist approaches are not clearly defined, as they are situated somewhere between the positivist and constructivist paradigm. Indeed, for realist researchers, reality exists outside the observer/researcher, who interacts with this reality (recursivity). This means that the reality shapes and moderates its interpretation. One important feature of realist researchers is that they focus on underlying mechanisms “in situation”. There is question of generative causality, meaning that the patterns and uniformities identified during the research are the result of underlying mechanisms. These mechanisms depend on the volition of individuals and groups. Moreover, the emergence of social uniformities is always highly context-dependent. Causal explanation is thus a matter of producing theories of the mechanisms that explain both the presence and absence of the patterns and uniformities (64)

Outcomes-focus approach

Searching for Context-Mechanism-Outcomes configurations can start with looking at outcomes to find the rest of the configuration. There was a special focus on “desirable” outcomes. Indeed, evaluation studies of case management often focus on so-called “hard” outcomes, such as (35):

- Cost savings (through measuring the impact of case management, through delay in hospital or emergency room admission, delay in institutionalisation in nursing homes or change in health care consumption);
o Mortality
o Changes in health or functional status, behavioural symptoms, caregiver burden, etc.

We also focused on “soft” outcomes, based on four elements of the “I-statements” programme:

o Information and advice (“Having the information I need, when I need it”);
o Flexible integrated care and support (“My support, my own way”);
o Workforce (“My support staff”),
o Risk enablement (“Feeling in control and safe”).

The reason behind this choice for “soft outcomes” was twofold. First, it is because the care that is suggested and implemented by case managers is more likely to be accepted by older people and their informal caregivers if the focus is on outcomes that are coherent with older peoples’ and informal caregivers’ values, choices and resources (67, 68). Second, because we assume, together with Powell and Tahan (2010) that “soft” outcomes are more sensitive to case management than “hard” outcomes (69). However, the reporting of the impact of case management on these outcomes is not part of this thesis. Only the likely impact of case management on these outcomes will be reported here.

We started the thesis with a SWOT analysis, which paved the way to explaining the context of healthcare reforms for people with chronic conditions, of which frail older people are certainly part. Second, we focus on case management, as one of the strategies to overcome the fragmentation of care often experienced in the population of frail, community-dwelling older people. Then we broaden the scope to include the experience of case management in other countries in our analysis, then once again narrow the scope to focus only on case management in Belgium.

The first part of the thesis focusing only on case management is a systematic review in the form of a realist synthesis to explain why case management can be effective for frail older people, under which conditions and with what outcomes.

9 http://www.thinklocalactpersonal.org.uk/_library/Resources/Personalisation/TLAP/MakingItReal.pdf
The second part focuses on Belgium. An introductory article has already described the context of reform in Belgium. Therefore, this second part reports a multiple, embedded, case study of seven case management pilot projects, out of the 22 projects newly implemented in Belgium, which tries to uncover the theories explaining the effectiveness of this novel approach. It draws on the theories identified in the realist synthesis to refine them with the findings of the evaluation of case management in Belgium.
After the realist approach: multiple correspondence analysis to build a typology

The third part of this thesis is devoted to the classification of case management in Belgium. To build this typology of case management, we used the multiple correspondence analysis (MCA), which can be seen as an extension of an exploratory factor analysis, but for categorical or qualitative variables. The rationale behind this choice lies in the fact that this analysis allows the building of a typology, while removing a priori assumptions about the grouping of certain variables that may be “politically” sensitive. In our case, those variables pertain but are not reduced to the geographic location (French-speaking location versus Dutch-speaking or German-speaking) and the (basic training) profile of the case managers (nurses, social workers, psychologists or occupational therapists). The method then allows to add these “politically sensitive” variables after the typology is made, and check if “better” case management types are linked to nurse case managers versus psychologist case managers, or if “better” case management types are situated in the German-speaking region rather than in the French-speaking Walloon region, etc.
Link with the scientific evaluation of the Protocol 3 projects: practical implications

On a practical level, the author (a specialized nurse with a Master’s degree in Public Health and now a doctoral student) of this dissertation has been involved, since the beginning of the evaluation of the Protocol 3 pilot projects, with the overall coordination of the evaluation. During the period this dissertation draws on (first call for pilot projects: 2010-2014), she therefore helped the team of researchers with the coordination of the daily proceedings and logistics of the evaluation, which involved four universities and twelve researchers (six full-time equivalent) for a period of four years. In addition, she was also responsible for conducting implementation analysis. This implementation analysis was carried out together with three universities of the scientific consortium, consisting of researchers of the catholic University of Louvain (with a sociologist, PhD and a physician, PhD), the University of Antwerp (with a nurse with a Master’s degree in Nursing and Midwifery and also a doctoral student, a sociologist, PhD and a general practitioner, PhD) and the University of Liège (with an occupational therapist with a Master’s degree in Public Health, a researcher in Public Health and a general practitioner, PhD). Data collection was thus performed by the junior researchers involved in the implementation analysis. For the questionnaires, this meant developing the questionnaires, helping with their translation, testing them for understanding and adapting them yearly, based on the findings so far, sending the questionnaires by emails, collecting them and contacting the respondents if answers were not clear. For the focus groups, this meant drawing up (and helping with the translation of) interview guides, based on literature, discussion with peers, analysis of the documents, testing the interview guides, conducting and/or observing the focus groups in French and in Dutch. Data analysis however was performed by the whole group involved in the implementation analysis. First, concerning the seven case studies, for the transcription of the verbatim of the focus groups, the work was distributed among universities, per the language group to which the researcher belonged and according to the geographical distribution. The author of this dissertation proposed data extraction sheets for the coding (and recoding) of the data, which allowed comparison within and among pilot projects, and she also participated in producing the template for compiling and synthesising case study data. For the analysis of the 22 case management pilot projects, she performed independent data analysis of the French-speaking pilot projects and discussed the findings with her Dutch-speaking counterpart from the University of Antwerp. The overall discussion and summary of the findings was carried out, however, with the whole consortium, during regular (i.e. four-monthly) workshops. In between, informal meetings were held, including phone and Skype meetings. The realist
approach chosen meant that the author of this dissertation took the lead in conducting the implementation analysis, because of the deepening and the broadening of the analysis, through the realist lens.
Description and rationale of the different theoretical frameworks used in this thesis

1. The expanded Chronic Care Model

This model can be seen as THE overarching framework of this thesis (8). The aim of the initial version of Wagner’s Chronic Care Model was to transform daily care for patients with chronic illnesses from an acute and reactive approach to a proactive, planned approach (70). The difference with Wagner’s original model lies in three points. First, the expanded version firmly adopts a functional logic, whereas the original model mixes organizational and functional logics. Second, the centre of gravity of the expanded model is ‘plan, provide, coordinate routine care’ and ‘provide acute episode response and specialized services’. Finally, the expanded model includes a module about the ‘implementation and follow-up of a dynamic care model’. This module stresses the importance of regularly reassessing the purpose of the system against evolving values, needs and available resources.

These three differences in the model (i.e. the focus on functional logic, on the trajectory of the person with chronic illness and on the follow-up of the model) are very close to the concept of case management, in which these elements are to be found at the level of interaction between the beneficiary of case management and the professional case manager.

The reader needing more information about the genesis and testing of the expanded Chronic Care Model for Belgium can find it in the position paper for chronic illness care in Belgium of the Federal Health Care Knowledge Centre (KCE)(8). The figure is displayed on page 153 (see Figure 16).
2. Case management as a complex adaptive system (CAS)

As we have seen in the introduction, case management can be seen as a process and even as a complex adaptive system. To make our point, we identified ten features of case management for home-dwelling older people that also apply to complex adaptive systems (23, 71).

- First, case management for home-dwelling frail older people in Belgium has fuzzy boundaries regarding the discipline of the single professional(s) (the case manager), the setting, the activities provided, etc... Regarding the discipline of the case manager, the professional can be a nurse, a social worker, an occupational therapist, a psychologist or even a speech therapist. Regarding the activities provided by case managers, some can mix a role of case manager with professional role related to their primary training: frontline nurse, psychologist, GP etc. For instance, if a community nurse gives information about respite services in response to the burden she has identified in the informal caregiver, does this activity belong to the role of a community nurse (i.e. related to her primary training) or to the role of a case manager? The answer is ‘no’ and in the reality of care, this means that it is often not clear whether the activity is “strictly” case management or not. Regarding the setting - and unlike for instance case management provided in hospitals, e.g. by internal liaison geriatric nurses or “oncologic care coordinators” - case managers often go beyond the classical boundaries of hospital or primary care (i.e. first-contact, accessible, continued, comprehensive and coordinated care). Indeed, case management can imply the monitoring of the trajectory of the older person either at home or in hospital, e.g. during a hospitalisation.

- Second, case management should respond to the environment with commonly shared internalised rules. Internalised rules are “an individual's acceptance of a set of norms and values” (72).This is not the case in Belgium, where no formal training or recognition exist. The absence of clear set of case management rules means that there is often not a shared identity between professionals involved in some form of case management, working in other locations, settings etc.

- Third, both the people involved in case management and the system are adaptive. A novice professional acting as case manager in a new setting may start to include older people who, despite being frail, are not really in need of case management because their situation is not complex enough. This professional experiments with this after having completed a
comprehensive assessment by the means of the BelRAI\textsuperscript{10} during two or three home visits and interactions with other care providers who have a therapeutic relationship with the older person. She/he learns then to identify the features that are the signature of a complex situation (often a plurality of several chronic health conditions, conflict with or absence of informal caregivers, etc.) and shares these findings with other care providers, who are also potential referrers. In response, those referrers will refine their selection criteria for referral to the case managers’ team.

- Fourth, case management is involved in \textit{multi-layered realities}, which means that case management interventions can be seen as systems that are embedded within other systems and with which they co-evolve. For instance, professionals involved in case management are often employed by public centres for social welfare (CPAS/OCMW), coordination centres (CCSADs or GDT/SEL or SISD, etc.), which in turn are embedded in local networks, which are in turn embedded in a regional and federal health care system, itself also embedded in the wider society, etc... A major change, like the transfer from the federal level to the regional level of competencies for the organisation of health and social care for older people, may transform case management. In Belgium, for example, from 2014 on night care was no longer financed by the federal government agency, but by the regional authorities, who applied different reimbursement criteria in the Flemish region and in the French-speaking regions (Brussels and Walloon regions). Consequently, case managers had to adapt their recommendations to the beneficiaries of case management and in some cases, look for alternatives to the government-funded agencies, such as parish charities.

- Fifth, tension and paradox are natural phenomena, not necessarily to be resolved. It can be expected that case managers’ teams interact with other organisations and individuals and that this may lead to tensions and paradoxes. Tensions arising from conflicting disciplinary values, incompatible goals or unrealistic demands may impede or improve the way case management is carried out. In the case of the pilot projects, there was continuous tension between the relative workload of the case managers (i.e. high number of patients per FTE case manager), which was the result of the project designer’s willingness to have their (relatively cheap) project accepted by the funding authority, and the desire to provide good quality of care, recommending a lower number of patients per FTE case manager, especially when the situation was very complicated. In this case, the case

\textsuperscript{10} Belgian Resident Assessment Instrument, the validated version of InterRAI- Home Care for Belgium
managers were not very happy with the unresolved tension, while the NIHDI found this tension interesting, because they could observe how the case managers would adapt to this situation, and with which outcomes. Paradox can occur because of the willingness to formalise the organisation of care for every occasion and for every situation, while it may be better at some times and in some cases, not to formalise the organisation of care.

- Sixth, Interaction leads to continually emerging, novel behaviour. The interaction between different professionals, or between professionals and older people and their informal caregivers, leads to novel approaches. In the example described in the fifth point (related to the tension arising around the “ideal” caseload per FTE case manager), discussions between case managers on the one hand, and between case managers and their organisational managers, on the other hand, led to the definition of the concept of a two-tier case management. This means that situations where the care was viewed as good quality, with high levels of satisfaction beneficiaries, informal caregivers and formal caregivers and in stable situations, needed less intensive follow-up by the case managers, who could even delegate monitoring the situation to primary care providers. Conversely, new “cases” or transitional cases (e.g. after hospital discharge) needed more intensive case management.

- Seventh, inherent non-linearity of the behaviour of a complex system, such as case management (interventions) could be observed when, in some cases, case management teams tried to work together in the same province, to learn from each other, while in other provinces, the fear of competition was so strong that no such collaboration was even thinkable.

- Eighth, the behaviour of a complex system is fundamentally and inherently unpredictable. This is a consequence of the elements cited above, such as emergent behaviour and non-linearity. This means that it is impossible to predict perfectly what a complex system will do; “the only way to know exactly what a complex system will do is to observe it: it is not a question of better understanding of the agents, of better models, or of more analysis” ([23], p.627). One of the most striking unpredictable events we observed was the difficult self-reflexivity of some nurse case managers. It might be expected that nurses who chose to become case managers would be less task-oriented and more management-savvy. However, during the meetings with case managers, we rapidly became aware that this was not the case.

- Ninth, inherent patterns can be observed, despite the inherent unpredictability described in point eight. Despite the differences in settings, local regulations, disciplines involved, caseload, etc., common
behaviours could be identified, such as ways to involve primary care providers, such as general practitioners. More than half of the case managers’ teams repeatedly tried to involve generalists by “simply” writing letters to inform them, but lack of information was not the problem. They knew this move was insufficient to involve them because the feedback they got from generalists and the experience of other, more successful case managers’ teams, taught them that other interventions were needed, such as at least one face-to-face contact and showing the explicit added value of the generalist’s involvement in the case management process. Despite this knowledge, they persisted in their pattern of behaviour.

Tenth, attractor patterns can be observed. Attractor patterns are seemingly simple patterns of a very complex behaviour. An example in the area of the problem described in point nine – the difficulty of engaging generalists in the case management process – may be understood by asking the correct questions instead of labelling it as resistance to change (69). To identify an attractor and understand the behaviour of a type of a professional, in this case a GP is to ask what practice they have adopted to address the difficult management of older patients with complex healthcare needs. We may find that GPs are known for their good care and that they are particularly sensitive to being viewed as the reference person for their patients. The attractor pattern in their behaviour may be associated with being the ultimate person responsible for all the care. The question would then be: what is their understanding of good care for this older population with complex care needs and how does it differ from people’s demands and/or other professionals’ perspectives? The answer may be that they do not agree with the view of big nursing and social care organisations that employ case managers. The next question, then, is to ask what effect the work with the case manager’s team will have on their own practice. Working with case managers is more likely if, for example, it fits with the concept of reducing their own workload while addressing a series of time-consuming healthcare challenges that fall beyond the scope of their practice and if successful collaboration with a case managers’ team is associated with better well-being for people with complex healthcare needs.
3. The following models have been used as initial program theories or to confront the theories identified through the realist approach.

3.1 The Rainbow Model of Integrated Care

This model provides a description of integrated care from a primary care perspective (73). The model’s goal is to offer a comprehensive definition of integrated care that considers both the perspective of the person and the perspective of the population. The model tries to provide conceptual clarity by combining the concepts of primary care and integrated care. The dimensions consider interconnected roles on the macro-level (system integration), meso-level (organisational and professional integration) and micro-level (clinical, service and personal integration), along with the dimensions (functional and normative integration) that enable the integration between different levels within a health system in the provision of continuous, comprehensive and coordinated delivery of services to the individual and population. The model is of great value in illustrating how case management at the primary care level is embedded in a stratified reality. The different levels of care are examples of some layers of this reality, as is shown in the chapter on the realist evaluation of seven projects of case management from the Protocol 3 projects. Even if a distinction is made between levels, case management operates in interconnected ways that clearly transcend these levels.

Figure 3. The rainbow model of integrated care at the primary care level (74)
3.2 The Consolidated Framework on Implementation Research Constructs

Damschroder et al. combined 19 theories of implementation into the Consolidated Framework for Implementation Research (CFIR) (75). The CFIR includes five domains (intervention characteristics, outer setting, inner setting, characteristics of individuals and process). The constructs can be used in three different ways: they may [a] raise awareness of factors of influence, [b] help the analysis of important processes and outcomes and [c] help organise all findings of an implementation process to explain the outcomes. This third feature indeed proved very useful during the overall discussion of the findings (see chapter on the overall discussion). The authors created an online wiki with tools and definitions to help researchers use their framework (76).
3.3 "I" Statements

"I" Statements reflect a vision described by a project in the United Kingdom called "Think Local Act Personal (TLAP)" which is a sector wide commitment to transform social care through personalisation and community-based support (77). The vision is built around “I” statements. These express what the beneficiaries and their informal caregivers want to see and experience; and what they would expect to find if personalisation of care was working adequately.

The six key themes of the ‘I’ Statements

1) Information and advice (‘Having the information I need, when I need it’);
2) Active and supportive communities (‘Keeping friends, family and place’);
3) Flexible integrated care and support (‘My support, my own way’);
4) Workforce (‘My support staff’);
5) Risk enablement (‘Feeling in control and safe’);
6) Personal budget and self-funding (‘My money’)

These statements can be used to guide evaluation regarding the person-centeredness of the care. Indeed, choosing “I” statements as an outcome to evaluate the effectiveness of case management makes sense, as these outcomes are likely to be much more sensitive to case management than so-called “hard” outcomes, such as delaying definitive institutionalisation in nursing homes or mortality. Delaying definitive institutionalisation in nursing homes can be a desirable outcome in some cases (such as in older people with severe cognitive and behavioural disorders), but not in others (such as in older people who suffer temporarily from debilitating conditions, such as depression or acute illness). Mortality is also an outcome which is not very sensitive to case management, as many other determinants and for which case management has no or very low impact (69) may lead to death.
3.4 Self-efficacy theory

Developed in 1997, Bandura’s theory of self-efficacy describes an integrative theoretical framework to explain and to predict psychological changes achieved by diverse types of treatment (78). This theory states that psychological procedures can alter the level and strength of self-efficacy. It is hypothesized that expectations of personal efficacy determine whether coping behaviour will be initiated, how much effort will be expended, and how long it will be sustained in the face of obstacles and adverse experiences. The model describes four core sources of information: [a] performance accomplishments, [b] vicarious experience, [c] verbal persuasion, and [d] physiological states. Consequently, interventions aiming at reinforcing a person’s self-efficacy should focus on enactment, vicarious experiences, being supportive and emotive modes of treatment. This focus on self-efficacy could lead to behavioural changes. As we will see in the multiple, embedded case study of case management in the Protocol 3 projects in Belgium, this self-efficacy belief was found as a proxy to guide the “why” question of the effectiveness of case management in Belgium.

Figure 4. Sources of self-efficacy
3.5 D’Amour’s structuration model for interprofessional collaboration

This model is based on the observation that collaboration is key in community case management (79). But collaboration is also often the central problem in any collective action. Indeed, collaboration assumes that professionals want to work together to provide better care. However, reality shows that they also have their own agendas and interests, and want to maintain a level of autonomy and independence. D’Amour et al. claim that the main instrument for negotiating such autonomy is power. This collective action can be analysed in terms of four dimensions operationalized by 10 indicators. Two of the dimensions involve relationships between individuals and two involve the organisational setting which influences collective action. These four dimensions are interrelated and influence each other. The relational dimensions are: [a] Shared Goals and Vision and [b] Internalization, which refers to an awareness by professionals of their interdependencies. The organizational dimensions are [c] Formalisation (the structuring of the care) and [d] Governance, that is, the leadership functions that support collaboration.

The model makes it possible to analyse collaboration and identify areas for improvement and proved to be very helpful in guiding the analysis collaboration in the case management processes developed in Belgium. The figure below displays the four dimensions of the model and the arrows indicate the interrelationships between the four dimensions and how they influence each other.

Figure 5. The Four-Dimensional Model of Collaboration with the ten indicators associated with these four dimensions.
3.6 Pearl and Schooler’s model of sense of mastery

Mastery is conceptually quite like Bandura’s concept of personal efficacy as reflecting the belief that desired outcomes are achievable and that a person can realise those outcomes (80, 81). Mastery can be seen as an important self-concept that grows out of the structure of experience and (like other self-concepts) that may change with changes in critical experience. It is not a personality trait. The model has been useful, especially within the framework of the stress process and health, where it has been shown to have multiple functions. For instance, mastery is strongly related to perceived health and mental health. It is therefore not unexpected that this mid-range theory found in the literature was closely linked to the CMOC of capacity, as is described in the chapter reporting the realist evaluation of case management in Belgium.
3.7 Antonofsky’s model of sense of coherence

The salutogenic theory “sense of coherence” (SOC) is a global orientation to view the world and the individual environment as comprehensible, manageable, and meaningful. It implies that the way people view their life has a positive influence on their health (82). In other words, the SOC constructs reflects the capacity of the person to respond to stressful situations. Two important concepts pertain to the ‘sense of coherence’ theory. First, the paradigm shifts from the pathogenic focus on risk factors for disease to the salutogenic focus on the strengths and determinants for health. Second, the concept of fortigenesis was added, referring to the origins of one’s overall psychological health.

Figure 6. The three constructs of the Sense of Coherence model, fed by the GRR

Three constructs form the core of the theory: [a] a cognitive element, i.e. the ability for people to understand what happens around them; [b] a motivational element, i.e. the ability to find meaning in a situation and [c] an instrumental-behavioural element, i.e. the extent to which they can manage the situation on their own or through a significant social network. Another concept introduced later was general resistance resources (GRR), such as material, ego identity, knowledge, intelligence, coping strategy, social support, commitment, cultural stability, religion/philosophy,
and a preventive health orientation. Persons with a strong SOC are likely to identify a greater variety of GRRs at their disposal.

Just like Pearlin and Schooler’s mid-range theory of sense of mastery, the sense of coherence was found very close to the SOC theory (see report of the realist evaluation of the Protocol 3 projects).
3.8 Folkman and Lazarus’s theory of stress and coping

This theory focuses on a person’s psychological responses when coping with stressful situations. “Coping, when considered as a process, is characterised by dynamics and changes that are functions of continuous appraisals (i.e. primary and secondary) and reappraisals of the shifting person-environmental relationships, (83) p.3). The authors identified two major groups of factors that are precedent to stress. The first group of factors is person-environmental relationships (i.e. personality, values, beliefs, commitments, social networks, social supports, demands and constraints, social cultural factors, and life events). The second group of factors is related to cognitive appraisals. In this theory, the authors claim that stress is so much more complicated than a simple stimulus and response. For instance, coping is not due to anxiety itself, but to how the person perceives the threat. This perception is in fact a cognitive appraisal. In this view, stress is “a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his resources.” ((83) p.18) Two coping processes are described by the authors: problem-focused or emotion-focused coping. Reappraisal allows for feedback about the outcome and allows for adjustment to new information. Successful coping results in adaption, which is “the capacity of the person to survive and flourish”, (83)p.182. This adaption impacts three interdependent domains: health, psychological wellbeing and social functioning.

In the field of case management, the lens of stress and coping are very useful because the goal of case management is to align the wishes and needs of the beneficiaries to the proposed services and care, which can be seen as a type of problem-focused strategy. The case manager can help with problem-solving to facilitate the situation at home, which can in turn lead to the development of new coping strategies for the older person and his informal caregiver.
Figure 7. Folkman & Lazarus' theory of stress, coping & appraisal
3.9 Robinson’s theory of the evolution of trust in health care relationships

Figure 8. Evolution of trust in health care relationships

This mid-range theory was developed to explain the evolution of trust in the area of chronic illness care (84). The theory proposes three distinct relationship stages configured around three different kinds of trust: naïve trust, distrust, and informed trust. In the first stage, the term “Safekeeping” means the early relationship between patient/family and providers, and is characterized by naïve trust. In this stage family members can experience frustration and growing concern with the relationships they had with health care providers. However, this mistrust may increase in the stage of “Disenchantment”. The experience of the beneficiary of living with chronic illness and their priority of living well were often not in alignment with the system’s focus on addressing immediate, acute problems within the long-term disease/condition. The third stage is called “Guarded Alliance”. There is a need from the beneficiary’s and informal caregiver’s perspectives to trust because of a sense of vulnerability and uncertainty. A new kind of trust called “informed trust” can be constructed based on the altered expectations of both parties. Informed trust is based on a more realistic understanding of the responsibilities, strengths and limitations of both parties. This means that the health care relationships involved form an alliance, which is conditional and guarded.
Results

The chapter reporting the stakeholders’ perception of the organization of chronic care in Belgium provided the justification for investigating the case management process in this country. But before examining how, why and for whom case management could be effective in Belgium, we wanted to study these same questions in the international literature. This provided the impetus to start a realist synthesis of the literature. As described in the chapter about the methodological approach, the rationale underpinning the choice for a realist approach came out of the need for new venues for the evaluation of a complex adaptive system, as is the case for case management.

We stress again that this literature review was conducted parallel to the realist evaluation, so as to inform the evaluation with findings of the review and vice versa.

Part I. Lessons learned from a systematic review of the literature using realist synthesis of case management for community-dwelling older people

This part was submitted to BMC Geriatrics under two parts because of the word count of the journal. More precisely, the methods part was provided as supplementary materials.

Abstract

Classic reviews of case management interventions fail to show consistent evidence of its effectiveness to achieve desirable outcomes in older people living in their own homes. We conducted a realist synthesis to identify and understand the mechanisms through which case management could achieve desirable outcomes for this population in different contexts.

Primary theory building within a group of experts resulted in a six-stepped sequential framework, oriented by a theory-of-change and guided by the review process. Data were then extracted, analysed and synthesised iteratively through a group of stakeholders.

The results refined the initial theory in which case management can be seen as a six-linked chain, in which each of the linked mechanisms can explain the success or
failure of case management in its given context. In total, 42 context-mechanism-outcomes configurations were found.

Case management interventions are both the result of and impact the local healthcare system in which they are implemented. This is the reason why the description of the contexts, interacting with case management is so important for this type of analysis.

**Background**

With ageing, the need for complex health care and health care support increases with the risk of co-occurring morbidities (85, 86). These needs are frequently supported by older people’s social surrounding (informal caregivers), who are often in advancing years themselves, but require frequent help from multiple professionals, coming from different disciplines, organisations, and healthcare levels, leading in turn to a risk of fragmented care when they do not work collaboratively (85, 87).

These issues call for a move towards better integrated care for these people. According to Leichsenring et al. (88), case management is expected to be an essential link in this process. Case management can support integrated care, as it is “a collaborative process of assessment, planning, facilitation, care coordination, evaluation, and advocacy for options and services to meet an individual’s and family’s comprehensive health needs through communication and available resources to promote quality, cost-effective outcomes” (17). Integration in this case, can be seen as an intermediary outcome, focusing either on clinical, organisational, professional or functional aspects around a single beneficiary and move in some cases even towards systemic aspects (89). Interprofessional collaboration is key to integrated care, as integrated care falters without engaging the workforce actively as partners in change (90).

A first literature scoping showed that recent ‘classic’ systematic reviews in this area failed to find consistent effects on mortality, functional status, nursing home admissions, despite moderate evidence that case management for people with dementia may reduce caregiver depression and strain (24-34). The authors discussed these results in view of the different delivery models of case management and the different role definitions for case managers [(24); p.89-90], the lack of precision in the duration and intensity of the interventions, collaboration models with other care providers, modes of contact, average caseload, etc. [(24); p.127]. Moreover, these case management interventions were carried out in
varying and dynamic healthcare, economic, political and social contexts, possibly influencing heavily the models of intervention and the way the trials were conducted. However, these systematic reviews did not include the contexts in the analysis, which could have influenced the outcomes measures and could be considered a shortcoming.

This finding provided a first impetus to conduct realist synthesis. Realist syntheses are rooted in critical realism and seek to find explanations for “what works, for whom, in what circumstances, and why with respect to interventions and strategies related to an intervention to enable positive outcomes for a given population” ([91]; p. 9).

Seminal papers of Pawson and colleagues (65, 92) describe how realist syntheses identify and articulate the mechanisms by which the authors of studies assumed the interventions to work (either explicitly or implicitly) in a given context. In doing so, the review gathers evidence from primary studies about implementation processes. Key in the realist synthesis is the evaluation of the evidence in order to test the integrity of the assumed theory and, where relevant, adjudicate between different theories (91).

A second impetus for this review was the information needed to be able to evaluate the likely effectiveness of case management in Belgium. This literature review is thus part of a larger study entitled Protocol 3 which aims to evaluate the effectiveness of innovative interventions to delay the institutionalisation of community-dwelling frail older persons. The overall study is described elsewhere (16).

Methods

We followed the recommendations of quality standards for realist synthesis of the RAMESES I project and standards for reporting (66, 93). There were two distinct stages to the methods – (1) stakeholder discussion with initial literature review and input from the on-going Protocol 3 evaluation and (2) in-depth literature to develop and refine a programme theory of case management.

(1) Stakeholder discussion with initial literature review

Firstly, the purpose of the review was refined through stakeholder discussion. The group of stakeholders involved in the discussion was composed of a specialised nurse with a master’s degree in public health, a sociologist with a PhD in
anthropology, a health economist and a physician with a PhD in public health. They interacted closely with the other members of the consortium of researchers engaged in the scientific evaluation of three other universities (sociologists, economists, nurses, primary care physicians, occupational therapist) and policymakers who supported the mandate for these pilot projects (senior civil servants of the federal National Institute for Health and Disability Insurance). This group was also consulted at key stages in the review process: question formulation, theory development and evidence synthesis, providing critique and challenge to the method and emerging findings and theory development (91). They were consulted on average on a four-monthly basis during workshops but informal meetings and email discussion occurred in between. The protocol of the synthesis is available as supporting information upon request. Of importance is the fact that the whole process was iterative.

Based on the first probing of the literature and first empirical results of the ongoing evaluation study, the stakeholder’s discussion group came up with a six-stepped, outcome-focused theoretical framework (see Table 2). The overarching theory underlying this framework is a theory of change, here in the care of the older person, in which the most important milestones are made apparent. The underlying assumption is that the programme will work as long as each one of these milestones is working or, in other words, the programme is as strong as the weakest link of its chain (64). The review then aimed at testing the integrity of the overall sequence.

This surfacing and articulation of the programme theory of case management in different environments allowed the harmonised presentation of the interlinked key processes or milestones of case management through initial activities (recruitment), intermediate (care planning, coordination, evaluation and readjustment) and long term outcomes (preventing unwanted institutionalisations, out-of-hours general practitioner’s visits, etc.). This allowed us to proceed to the next stage of the literature review and collect data about each of these milestones, acting as if we were scrutinizing each one of them through a magnifying glass looking for mechanisms leading to specific outcomes and, finally, testing the adequacy of the programme theory with a focus on the facilitating and hindering factors for each of these points.

(2) In-depth literature to develop and refine programme theory of case management

We then conducted a literature review. Databases searched included: MEDLINE, EMBASE, CINAHL, ISI Web of Knowledge, PsychInfo, Sociological Abstracts and
Inclusion criteria included (Population) community-dwelling older people aged 65 and over, (Intervention) “care coordination”, “case management”, “collaboration”, “teamwork”, “continuity of care”, “disease management”, “care management” (Outcomes) “functional status”, “Quality of Life”, “impact on informal caregiver”, “adverse events”, “perceived health”, “patient satisfaction”, “patient participation”. Exclusion criteria were studies about patients aged < 64; elderly suffering from psychiatric illnesses or HIV; when no intervention was evaluated (i.e. no empirical data); no description of case management intervention; studies with an exclusive focus on telemedicine or which included only description of medical outcome or prevention; systematic reviews, meta-analysis, secondary data were also excluded but their reference lists were screened. Languages were restricted to English, French, Dutch and German.

An example of the research string used for Medline via PubMed is available in Appendix 2. This research string was then “translated” to be used in other databases with the help of a documentarist. Reference lists of selected papers, websites of journals specialised in case management and integrated care were hand-searched. Studies published in English, Dutch, German and French and published from 1990 to 2013 were considered for inclusion in this review. The flowchart presenting the number of papers identified, included and excluded, and the reasons for exclusions are presented in the results section.

Appraisal of the retrieved papers was essentially performed at the synthesis stage, as recommended by Pawson et al., by pulling papers based on conceptual richness, rather than methodological quality (94). Two researchers appraised the papers independently and, in case of disagreement, they discussed until consensus was reached. No papers were removed based on their methodological quality. However, claims about the effectiveness of case management or CMO configurations were viewed with more caution in papers of poor quality than others. The results of the appraisal can be found in the Appendices 3-5.

Data were extracted from the included documents, essentially from the methods and the discussion sections, as those were the parts where case management was the best described and theorised. An Excel spreadsheet was used to capture the authors’ descriptions about the likely effectiveness of case management on specific outcomes in a given context – or lack of its effectiveness. The template of the Excel sheet can be found in Appendix 6. Therefore, we started to focus on the outcomes, searching if the authors described how, for whom and in what context such outcomes were achieved, and why. Findings were analysed to build a form of realist
program theory that addressed the questions of the how and why case management was likely effective, and for whom.

Program theories were validated with all stakeholders involved in the initial discussion through regular meetings, along with programme coordinators of case management. This ensured that the theories found could fill any gaps that may have been left by the literature included in the analysis. All the data pertaining to case management was incorporated and annotated in the Excel file. Second, tables were drawn incorporating the context, mechanisms and outcomes involved. The CMO configurations from these tables were organized according to demi-regularities. These demi-regularities were refined as context-mechanisms-outcomes configurations and worded as to provide an explanatory framework capable to explain how, why and for whom case management was likely to be effective. Every time a such a configuration was found, they were copied into another spreadsheet, recoded into groups of context-mechanisms-outcomes configurations through constant comparison among groups and within groups. The grouping followed the logic of the initially defined six-stepped theory, sometimes adding subgroups within the six steps. The sum of the occurrences of context-mechanisms-outcomes configurations was calculated within these groups. The number of referenced citations reflect the number of these occurrences. These findings were cross-checked by at least another stakeholder. All data were again checked by all stakeholders.

Findings

Firstly, the initial six-stepped theory is described. In a second stage, the findings of the literature review, guided by the six-stepped framework are presented. Thirdly, outcomes found in the papers retrieved during this process are structured around the six-stepped framework.

At a first stage, a tentative theory of case management’s functioning, based on the six-stepped approach was proposed and is provided in Table 2. Specific questions to ask in the review to test the theory were suggested and are provided in the same Table.
Table 2. Tentative stepped theoretical framework guiding the realist synthesis

<table>
<thead>
<tr>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
<th>Step 4</th>
<th>Step 5</th>
<th>Step 6</th>
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<tbody>
<tr>
<td>Identification of a complex &quot;case&quot;</td>
<td>Assessment of needs, preferences and resources</td>
<td>Planning and coordination of the care</td>
<td>Care providers’ response: integrated care delivery</td>
<td>Older people and informal caregivers’ response: improved coping</td>
<td>Older people and informal caregivers’ outcomes</td>
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</table>

Problem: older people with complex care needs are cared for by professionals from different disciplines and organisations, who are often not aware of the care provided by other professionals, leading to gaps and overlap in their care.

Solution: Make a comprehensive assessment of the

Based on this assessment, the case manager, a key reference person, works together with the older person, his informal caregiver and professional care providers to co-elaborate a care plan. The care providers deliver timely and adequate care, according to the care plan and in constant communication with the case manager.

The informed and empowered older person and informal caregiver will take measures to minimise the threat of exacerbations and call timely for help in case of deterioration.

The older people and informal caregivers feel they have control and are satisfied with the care they receive. Their well-being increases. Exacerbations are avoided, out-of-hours emergency calls decrease, as decreases the risk of emergency.
Step 1  Identification of a complex “case”

Solution: identify older person with complex health & care needs (health seen as a biomedical, socio-psychological entity) and assist them to integrate the care provided by different professional care provider.

Step 2  Assessment of needs, preferences and resources

situation through a standardized, validated tool, to identify the domains where there is a risk for deterioration.

Step 3  Planning and coordination of the care

this coordination is (1) the profile of the case manager; (2) the quality of the information about the condition of the older person in terms of accessibility, timeliness, and the resources available. And (3) the planned care is based on the best available evidence.

Step 4  Care providers’ response: integrated care delivery

Step 5  Older people and informal caregivers’ response: improved coping

Solution: identify older person with complex health & care needs (health seen as a biomedical, socio-psychological entity) and assist them to integrate the care provided by different professional care provider.

Older people and informal caregivers’ outcomes

room visits, hospital admissions and unwanted nursing home admissions. Hospital stays are not prolonged unnecessarily. Inadequate healthcare costs are avoided.

Step 6  Older people and informal caregivers’ outcomes

Solution: identify older person with complex health & care needs (health seen as a biomedical, socio-psychological entity) and assist them to integrate the care provided by different professional care provider.
Questions to ask in the review

Are the recruitment strategies actually performed sound enough to sustain the rest of the process? What are the conditions facilitating adequate recruitment? Why? For which population? Under which conditions?

Are specific domains at risk of sudden deterioration identified, and addressed adequately? What conditions facilitate or impede adequate assessment? Why? For which population?

(1) Is the access to up-to-date information about the condition of the older person and the resources readily available?
(2) Is the planned care based on the best available evidence?
(3) Is the care plan co-elaborated with the older person/informal caregiver, based on the results of the comprehensive assessment?
(4) What are the roles of the case manager related to the coordination?
(5) What is facilitating the case manager’s role and why?

(1) Is the interprofessional collaboration sound enough to sustain trust among care providers and between older person/informal caregiver and professional care provider/case manager?
(2) Is the awareness of professional care provider increased, enabling them to monitor the situation, thus identifying subtle changes indicating a deterioration of the health or health determinants?
(3) Is constant feedback provided to the case?

Are there signs of increased coping skills, achieved through self-management?
What conditions improve these coping skills (or not)? For which patients? For which informal caregivers? Why?

Are desirable outcomes achieved through adequate coping and feedback? For which outcomes? For which population? Under which conditions? Why?
Questions to ask in the review

(6) What are the functions of the case manager? manager, allowing him to monitor the situation at any time and prevent exacerbations?

(4) Do gaps and overlaps in care still exist?
At a second stage our literature reviews in seven databases based on this framework yielded 4321 hits, to which 72 references were added from the reference lists of the selected papers and specialised websites about case management. The flowchart of the sequences of the search strategies is shown in Figure 9. Even though we did not use the PRISMA checklist due to its tendency towards ‘classic’ systematic reviews and meta-analyses, we chose to present the results by the means of the PRISMA flow diagram, which provides transparent information about the process of paper selection (95). Only papers which we had access to through our institutions were retrieved.

![Figure 9. Adapted PRISMA flow diagram, from Moher et al. (95)](image-url)
A total of 86 papers were found, representing 62 studies, of which 31 were randomised controlled trials, 19 observational studies and 12 qualitative studies.

At a third stage, we described the included papers, regarding outcome trends. This enabled us to link these outcomes to each of the six stepped framework and refine these steps. During this stage we also performed a quality appraisal, which is provided in the three appendices (Appendix 3. Quality appraisal of controlled trials; Appendix 4. Quality appraisal of observational studies; Appendix 5. Quality appraisal of qualitative studies).

**Which studies are showing what outcomes?**

In a next stage, we chose to group studies with similar outcomes, either related to health outcomes, resource utilisation, quality of care ratings, in order to link the components of these interventions and the mechanisms by which they yield specific outcomes in a given context. We grouped outcomes into four types: (1) acute hospitalisation rates, emergency department visits, length of stay and nursing home admissions; (2) functional status and behavioural symptoms; (3) stress and burden of the informal caregiver and (4) quality of care ratings.

The results of this grouping are shown in Table 3 below. Interestingly, only two studies reported negative outcomes on the first group of outcomes, i.e. related to institutionalisation: augmented emergency room visits (96) and increased hospitalisation rates (97). When measured, the delay of nursing home admission was never statistically associated with case management provision. In the category “Functional status and behavioural symptoms”, only one study reported a worsening of the behavioural symptoms associated with case management (98). No negative outcomes were reported in the categories related to the impact on the informal caregiver or quality of care ratings.
Table 3. Grouping studies per outcome

(==: no significant change of the outcomes observed; ↘: observation of a significant decrease – in the case of healthcare consumption or impact on the informal caregiver, this may be seen as a positive outcome; ↗: observation of a significant increase)

<table>
<thead>
<tr>
<th>STUDIES</th>
<th>Hospitalisation rates, emergency department visits, length of stay and nursing home admissions</th>
<th>Functional status and behavioural symptoms</th>
<th>Impact on the informal caregiver (stress, burden, strain or depression)</th>
<th>Quality of care ratings</th>
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<td>Avlund et al., 2002 (99)</td>
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<td>Bernabei et al., 1998 (102)</td>
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<td>Boaden et al., 2006 (104), Gravelle et al., 2007 (105)</td>
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<td>Studies</td>
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Out of the 62 studies, the three most frequently reported outcomes were the hospitalisation rates (22/62), followed by the quality of care ratings (21/62) and functional status (20/62), see Table 3. The tools used to measure some of these outcomes were highly diverse; e.g. the functional status could be assessed by the means of the Physical Functioning Dimension (108), a tool measuring the functional autonomy, the SMAF (127), a subscale of the Ohio Senior Survey (139), Lawton’s ADL-scale(167), etc.

Also, it is important to note that we considered the older person and his informal caregiver dyad as the beneficiaries of case management, because (1) the outcomes described often concerns both of them, (2) if there is an informal caregiver, the health of the beneficiary and his caregiver are intertwined (150), and (3) the presence of the informal caregiver can even compensate the deficits of the care receiver (168).

A total of 86 papers were found, representing 62 studies. Figure 10 shows the 42 mechanisms identified (on the right part of the figure) as a result of the whole process, displayed by each of the six steps identified a priori by the research team. The mechanisms are outlined in black (right part of Figure 10). Additionally, in Step 3, mechanisms are structured by specific features of the care planning interventions, for the sake of clarity.
Mechanisms identified as a result of the realist synthesis, by step
The more detailed description of the findings is presented in the same six steps and articulated following the context (C)-mechanism (M) – outcome (O) configuration.

Step 1: Identification of a ‘complex’ case

One of the main assumptions driving the case management process for community-dwelling older people with complex care needs is the risk of care fragmentation. They often need care from professionals coming from different disciplines and organisations, working within specific professional paradigms and logics. More specifically, case management is supposed to be beneficial for individuals who are at risk of deterioration because of their unstable (“complex”) condition. However, this is underestimated by primary healthcare providers, often unaware of geriatric problems (169).

A first question to be asked then is what triggers the demand for case management or, from a health system’s point of view, how are the individuals at risk of sudden deterioration because of the complexity of their situation identified? In 16 studies, the case finding strategies were not reported. Among the 46 remaining studies, 23 studies (49 %) reported a flagging system built in an administrative database (e.g. Medicaid) to point out the individuals likely to benefit from case management.

A first mechanism identified in this step is that active case finding strategies by the means of flagging systems (= Intervention (I)) ensure proactive case finding strategies (= Mechanism (M)), rather than relying on referrals triggered by crisis situations; this enabled better identification of people with complex conditions (= Outcome (O)) who may not be current service users and may be otherwise missed (104, 105, 114, 116, 117, 142-145, 170). Enabling contexts (C) identified were when these flagging systems were either incentivized by other means or combined with the clinical judgment of trained professionals e.g. (161).

A second mechanism identified for this step was the intrinsic motivation of the target population to be case managed e.g. (142-145). Contexts identified comprised (a) the characteristics of the case managed population itself, likely to influence the motivation of the older people, particularly if there is little room for improvement because the situation is too stable to expect improvement e.g.(99, 128, 152, 153, 171). Therefore, beneficiaries with unstable conditions have to be distinguished from those with stable conditions;
(b) the coherence of the proposed case management intervention with the beneficiary’s own perceived needs or values e.g. (108), as opposed to the biomedical-driven model of case management, when case management is carried out for cost-saving motives focusing (only) on cost-related outcomes;

(c) the healthcare (financial system) context: when case management is one of the mandatory components of some healthcare plan, it is more likely to be acceptable to the beneficiaries compared to systems where the beneficiary is free to choose his care provider (106).

Step 2: Assessment of needs, preferences and resources

For some authors, initial and ongoing assessment of the older person has to be comprehensive, preferably by the means of a tool allowing the sharing of information among healthcare and care professionals (137, 165, 166, 172).

What is it about assessment that fosters desirable outcomes in older people? Landi et al. offer some initial insights through their research on integrated home care in older people in Italy and its impact on quality of life:

“Integrated and collaborative efforts were facilitated and supported by the use of the [tool] that has been specifically designed to assist the staff in charge of the patient in identifying all health and social needs and to highlight possible preventive strategies. Furthermore, comprehensive data collection and the subsequent creation of a database currently appears to be the best approach to monitoring quality of care delivered and its impact on the quality of life.” (133)

Firstly, a comprehensive assessment by the means of a standardised tool indeed contributes to the further identification of high-risk patients (M), enabling the making of tailor-made care plans by a case manager and adequate resource allocation (O) (137, 166, 172, 173). This needs the motivation and the skills of the professionals to use it (C). Secondly, this assessment might allow the identification of blind spots or domains of risk, and, subsequently provide a quick and adequate response (M), avoiding in some cases emergency department visits (121) or exacerbations (O) (136, 165). Thirdly, the repetition of this assessment allowed the monitoring of beneficiaries’ progress in a continuous manner and readjust the healthcare and service provision accordingly (M), also preventing exacerbations (= outcomes) (133). Fourthly, a comprehensive assessment by the means of a web-
based tool (InterRAI), performed by a multidisciplinary team is expected to foster interprofessional collaboration (M), while at the same time, interprofessional collaboration is likely to improve the adequate use of the web-based tool. Among facilitating contexts to trigger these four mechanisms, the training of case managers was found to be of pivotal importance (174).

Step 3: Planning and coordination of the care

(1) Access to information

Better documentation in a shared electronic patient record of the geriatric conditions (I) is more likely to improve care continuity and alignment of care (O), because the proposed services are better suited to patients’ needs through time and induce a sense of adequacy between the needs and care that is required (M). It also allows for the monitoring of quality of care delivered (M) (118, 133, 166, 175, 176) and the monitoring of care coordination (M) (104, 105, 111, 151, 166, 176).

Studies reporting the use of electronic management systems with prompts and reminders also reported more often positive outcomes (37%) than studies not reporting them (10%). One explanation is given by the paper by Martin et al. (141): “An electronic health care management system that delivered information to the case management staff and alerted the team to the clinical status of patient and any changes that may require case management.”, which then triggers a mechanism that will allow an adequate service provision and, subsequently, a positive health outcome.

However, one study reported that case management (done by nurses in this case) often identify documentation as being low on their list of priorities (C); thus, documentation of nursing care is chronically inaccurate, plaguing research and clinical practice (164). In this study, additional training of the nurses improved the correct labelling of observations and interventions, suggesting again that the access to adequate training (C) improves the quality of the documentation and, therefore, care continuity (M).

(2) Evidence-based care planning

Guidelines and multidisciplinary protocols (e.g. about nutrition, medication, etc.) (I) are crucial to help case managers to enhance their performance to conduct home visits (O) (142-145).
The mechanism by which this performance was enhanced was their increased knowledge about the most effective intervention likely to benefit the older person or his informal caregiver, and the context facilitating this was the coordination role of the case manager enhancing the adherence to protocols. Case managers play a significant role to coordinate all disciplines and ensure everyone adheres to the protocol (177).

(3) Co-elaboration of the care plan, based on the result of the assessment
In the 35 studies where a standardised assessment was used, the care plan included the results of this assessment but we found little indications that the care plan was co-elaborated with the beneficiary, even though participation of the beneficiary was reported at this level (29, 114-117). The mechanism through which a co-elaborated care plan is more likely to be carried out (O) is that co-elaboration is more likely to foster a sense of mastery to the beneficiary and his informal caregiver (115). Indeed, resources and preferences are more likely to be considered; goals are set collaboratively, increasing the probability that the interventions will be more accepted by both the older people and their informal caregiver (113). This sense of mastery is supposed to be facilitated by the support provided by the case manager but also by positive outcomes experienced by the older person because of case management (113).

(4) Role of the case manager in the care planning
Most authors agree on the importance of a defined role for the case manager, as opposed to what was previously done by a professional with a similar background. Lack of role definition is constantly described as one of the most important barriers to the successful case management (113, 178, 179). One of the most often cited roles is to be the key person of reference to both the beneficiary and his informal caregiver, as this leads to trustful relationships and satisfaction with care (M). This means that the duration of the relationship between the beneficiaries and the professional who will act (at a certain stage) as a case manager is likely to be one of the determinants contributing to a trust-building relationship (C).

“Clients reported that the relationship between themselves and their case manager was of paramount importance. [...] The trusting relationship that ensued with time helped to provide security, safety, and comfort for the client. Older clients reported that the process of aging was a difficult one.” (179)

Case managers can play a significant role in coordinating healthcare. In this aspect, the collaboration with the primary care physician (I) was considered as highly
important. Indeed, besides being the reference person to the beneficiary and his informal caregiver, the role of the case manager is to support and integrate the primary care physician in the care process (if not yet) and to see how the role of being the reference person can be transferred from or shared with the primary care physician (102, 104, 105, 118, 119).

The mechanisms of care coordination through the primary care physician that could lead to desired outcomes were the following:

1) Collaboration with the primary care physician (I) allowed a fuller assessment of a beneficiaries’ overall health, needs, deficits and skills (M) and therefore, an explicit planning (O) (166, 167).
2) Because physicians may be unaware of beneficiaries’ barriers to adherence, frequent interactions between case managers and physicians (I) might shed light upon this (M) and adapt the medication regimen to these barriers (O) (110, 161).
3) Case managers can make explicit differences of prescription between physicians of a single beneficiary (I), who might be unaware of each other’s care (M), prescribe incompatible or contraindicated treatments, or provide conflicting advice (O) (110, 161).
4) Approval from the beneficiary’s primary care physician of the case management project (I) was key to the success of the case management (O) as this improved the acceptability of the case management (M) (110, 161, 165, 166, 179). A part of this interaction may be enhanced by frequent informal contact opportunities between the care providers (110, 114-116, 125, 161, 165, 166, 179-181).

Determinants found to positively influence the degree of engagement of the beneficiary’s primary care physicians included the primary care physicians’ perception that they were no longer able to provide case management to people with complex healthcare needs (110, 114-116, 120, 154, 156, 157).

Determinants found to negatively influence the degree of engagement of primary care physicians included low caseload per family physician, as physicians then lack the critical mass of patients with complex healthcare needs (100, 138, 171, 178) and are not sensitized to the importance of collaborative practices (100, 138, 171). Moreover, for some authors, the role of the case manager is also to be a knowledge resource for other professionals in primary and secondary care (113, 120, 154, 156, 157, 182). In doing so, they can provide leadership as case managers play a significant role in coordinating all disciplines and ensuring that everyone adheres to the agreed protocol (140, 177).
Facilitators of the case manager’s role

Skill-mix of the case management team

The case managers worked either alone or in a monodisciplinary team for most of the studies (n=38/62); they worked in a multidisciplinary team in 22 studies and this enhanced interprofessional continuity. Only one study made explicit that despite relational continuity (M) was key to enable building trusting relationships (O), this relational continuity could be supported by a team with adequate skills (C) (161).

Amongst other facilitating factors, again access to adequate training for the case manager (C) was found to be key for the success of the intervention; on the one hand, case managers with no experience in community healthcare may underestimate the importance of social and environmental factors influencing the beneficiaries’ health while (M), on the other hand, case managers with condition-specific training (C) would be central to the success of their case management (O) because their intervention is more likely to be accepted (167). Regardless, training of case managers (i.e. not only nurse case managers) should include case management skills (ability to design care plans and coordinate available agencies) and geriatric assessment technology (104, 105, 124, 165, 174, 183, 184).

Regular multidisciplinary team meetings were seen as a type of ongoing training of the case managers, because this allowed them to discuss problems emerging from home visits and enhancing their case manager’s skills (M) (98, 102, 124, 125, 127, 129, 130, 166, 172, 185). According to the authors of the studies, these meetings should be attended by geriatricians or primary care physicians. So, availability of the latter (C) was seen as important, to strengthen the interdisciplinary linkages and provide a mentorship (O) (96, 104, 106, 107, 118, 124, 136, 159, 160, 175, 179, 186).

Accessibility of the case management team

Continuous availability of the case manager or case management team was found to improve the perceived sense of continuity (M), hereby anticipating "crisis situations" and emergency department visits (O) (100, 103, 113, 127, 131, 138, 154, 156, 157, 166, 171). This sense of continuity was enabled by the availability of shared patient records, allowing all professionals to have updated information at all times (C).
Better role definition

As mentioned before, recognition of the specific role of the case manager by both beneficiaries and other professionals is very important. Indeed, the introduction of case managers can be conflictual as it brings change to the beneficiary's environment. Therefore, the case manager must earn recognition as the patient’s key worker (M), especially if it was previously unclear on who was responsible for communicating with the patient or other healthcare providers and, therefore, an inefficient primary care network (O) (100, 110, 127, 161, 171, 172, 176, 178, 181, 187).

Better role definition can be facilitated by the means of team meetings among collaborators of the multidisciplinary team and multidisciplinary protocols (C). (166, 186).

(6) Functions of the case manager

Education

Education of the beneficiary and his/her informal and professional caregiver was considered as a central component to case management in 31 studies e.g. (141, 166, 187). This education could be either specific (e.g. about lifestyle adjustments, psycho-education for dementia caregivers) or general (e.g. about the case management process or local resources) (141).

Monitoring

According to 19 studies, monitoring of the health condition and subsequent symptom management allow for early intervention (M) and, thus, prevent multiple trips to the emergency department (= outcomes) (96, 100, 102, 103, 106, 107, 110, 112, 114-119, 121, 140, 161, 163, 166, 167, 171, 179, 183, 184). This monitoring occurs in the natural environment of the beneficiary (C) therefore (1) enabling the case manager to learn individual idiosyncrasies (M), (121, 140) but (2) will also provide significant information that is typically not discovered in a clinic setting (M), also leading to adequate resource allocation (O) (121, 166). Secondly, frequent home visits as context of these assessments permit the building of trusting relationships between the case manager and the beneficiary (M), leading to more satisfaction with case management (O), (163). The reported frequency of these visits were, on average, once per month but were more frequent (i.e. weekly) in the starting phase and in case of exacerbations.
Psychosocial support

Provision of psychosocial support was said to be highly valued by both the beneficiary and his/her informal caregiver (O). This is especially the case when this psychosocial support helps improve communication with health professionals, e.g. between the beneficiary and his/her primary care physician (M) (131, 140, 161, 162, 166, 167). From the beneficiary’s point of view, the relationship to a key reference person improves self-care and coping skills through care provision in the beneficiaries’ own space and time (M). This enables re-establishing a sense of control for the beneficiary (O), (148, 166, 179, 187). Again, access to adequate training for case managers to be able to provide this support, was found to be an enabling factor.

Accountability

In some countries, the legal framework and training allow nurse practitioners to prescribe community nursing services (114, 143) or to decide the moment of patient discharge from a hospital (100, 101) a task usually restricted to medical doctors in other countries (C). This intervention enabled the adequate mobilisation of additional professional resources (M) leading to a more adequate service use (100, 171).

(7) Characteristics of case management

Face-to-face contacts

Home visits, rather than contacts mediated by phone, are more likely to lead to positive outcomes, as familiarity with beneficiaries and informal caregivers allows for earlier identification of beneficiaries’ (subtle) deterioration. Preventative action can therefore be taken at an early stage, e.g. notifying the care provider before an exacerbation of a chronic illness occurred (121, 122, 140, 161, 162, 166, 181, 187, 188).

Maximal caseload

As case managers value the time they have to meet the beneficiaries’ medical and social needs (M), a maximum suggested caseload is 40 older persons per full-time equivalent case manager; otherwise the care moves from pro-active to reactive (O) (113, 118, 187). Minimum caseloads were not discussed, for instance to keep the skills up-to-date.
Moreover, this caseload (C) allowed a smaller delay between a demand and the response, as a quick assessment of the situation and quick response (M) may prevent emergency visits (O) (121, 185).

Step 4: Care providers’ response: integrated care delivery

In most the studies, the nature of interprofessional collaboration, seen either as a contextual factor or as an outcome of case management, was poorly described.

When the case management process is implemented as planned, provided the planned activities are adequate, it is expected that care providers deliver timely and adequate care, according to the care plan and in constant communication with the case manager, in order to update flexibly the care. Their awareness is increased (M), enabling them to monitor the situation (I), thus identifying subtle changes indicating a deterioration of the health or health determinants (O) (114, 116, 124, 189). Constant feedback is provided to the case manager, allowing him to monitor the situation at any time (C). It is expected that gaps and overlaps in care do not exist anymore (O), as high-quality; efficient care is delivered timely, reducing exacerbations through secondary and tertiary prevention (M) (96, 100, 102, 109, 110, 112, 114-119, 121, 140, 141, 161, 166, 167, 171, 179, 183, 184, 190, 191).

However, time is needed for the care providers (C) to adapt to the novelty of case management (I) because the implementation process results in a paradigm shift that takes time (M), alters community of practices, which in turn hinders significant outcome measures (O). Coming from monodisciplinary, mono-organisational perspectives, (health)care professionals have to change their work habits, i.e. spend time in meetings and take into account the perspective of other providers (100, 106-108, 110, 111, 113, 118, 119, 122, 127, 129, 130, 132, 140, 164, 171, 175, 178, 181, 185, 187, 191).

Continuous performance monitoring and group meetings of case managers and supervisors (I) are important to the fidelity of the planned care (M) (109, 124, 165, 166, 183, 192). As described above, better documentation in the electronic patient records of geriatric conditions (C) improves the effectiveness of the case manager (O), because the proposed services are suited to patients' needs (M), accessible by all caregivers. It also allows the monitoring of quality of care delivered (M) (104, 105, 111, 118, 119, 127, 133, 151, 165, 166).

We found also evidence that the case manager provides direct care (I) (167). Some guidelines ask that the case manager does not provide direct care, to ensure an
objective needs assessment (M) and to provide beneficiaries’ advocacy (O). The trade-off is a possible loss in oversight in the quality of care and of beneficiaries’ changing needs (O) (154, 156, 157). In the meantime, authors observed that tasks performed beyond the call of duty, during the initial contacts with new beneficiary, can be part of a process of relationship building (110). We did not find any clues about enabling or hindering contexts in these aspects.

Step 5: Older persons and informal caregivers’ response: improved coping

Increased coping as a mechanism of success was reported in several studies:

(1) Improved coping by the beneficiary, as reported earlier, through care provision in the beneficiaries’ own space and time (C) (149, 166, 179, 187).

“Coping assistance is likely to be an important intervention provided by nurses and coping is a key construct in achieving good health. As people age, accumulated and continuing changes and losses occur in all spheres, including health, financial, emotional, mental, social, and functional” (164).

(2) Improved coping by his informal caregiver, especially in the case of the care provision of an elderly with behavioural problems (147, 148, 150).

“The finding that the intervention was strongly associated with a positive change in caregiver mastery supports the idea that case management activities connected with the home environment affect the informal caregiver’s self-appraisal of personal capabilities, such as perceived coping and cognitive control. These in turn influence the effect of personal empowerment over challenges of dementia caregiving.”(115)

Step 6: Older persons and informal caregivers’ outcomes

Some authors focused on intermediate, process-related outcomes, such as continuity of care or integration of care, focusing on interprofessional continuity and, if possible, even interpersonal continuity (O) (110, 122, 123, 127, 176, 188, 193). This was facilitated by the use of electronic (shared) patient records and inter-organisational agreements, and hampered by the high level of turnover of case managers in pilot projects (C) (133).
Despite the fact that case management was planned to increase the coping skills of the beneficiary, this was not often reported as an outcome in the studies. The older persons and informal caregivers felt they had control (114-117) and were satisfied with the care they received (122). One of the only mechanisms identified here was that trusting relationships allows for risk enablement, which makes that the beneficiary feels in control (O); again this was facilitated in contexts where the case manager had time to build this trusting relationship (C) (187). Other mechanisms were speculated by the research group but we could find no evidence in the included papers.

Discussion

We have tried to stress how case management is a process with a long series of functions articulated within a stepwise chain and like a chain, the strength of case management is as strong as its weakest link (65). This chain illustrates the process starting with the initial intuition that older people with complex care needs require integrated care into case management through the chain from care providers from different disciplines, organisations, care levels, to the case manager and, finally, to the older people and their informal caregivers. At each stage, the stakeholders must make decisions on how to respond to the programme strategy. Successful implementation of case management needs a careful analysis of the many mechanisms at stake in the various steps of the chain. The review has shown that some key concepts emerge in each of these steps, influencing the adhesion - or not - to the case management process by the different stakeholders (64). This chain occurs in an open, multi-layered system, which explains that the flow (i.e. the trajectory of the older person) is non-linear through the chain. This means that at each stage, the person can need to go back to a previous step because of the decision made, based on an outcome, which then becomes a context triggering a mechanism (i.e. a decision based on resources and reasoning of the stakeholders involved).

The review was able to show that in the first step, proactive case finding strategies by flagging systems may foster adequate enrolment and be acceptable for the people they target in enabling contexts, such as structured health care organisations where case management is already part of the care provision but that they may not be acceptable in less structured health and financing systems. In other words, these data suggest the adequacy of “automated” case finding strategies, when based on flagged systems, preferably in addition to the clinical judgment of a
care provider, rather than to rely only on the clinical judgment of primary care teams. It is expected that the inclusion of older people in case management programmes by the means of these flagging systems is more likely accepted by them when case management is already part of the structured health system. The middle-range theory identified here is very close to the social exchange theories, in which the individuals involved in the case management process (i.e. older people, formal and informal caregivers) are not perfectly rational but they engage in calculations of costs and benefits in social transactions (194). Moreover, it has also been noted that this first step calls for a population-based approach, while the subsequent steps occur within a set of “clients” that were already identified.

In the second step, the assessment of needs, preferences and resources must be done collaboratively, to allow the adjustment of the care in coherence with those needs, etc. in a later stage. If other care providers are already involved in that stage and are triggered by a sense of urgency because of this identification, it is likely that they will want to be actively involved in the care at a later stage of the case management and, thus, professional collaboration will be enhanced by the identification of common goals among care providers. This middle-range theory is close to D’Amour’s structuration model of interprofessional collaboration (79).

The third step describes the multicomponent domain of planning and coordination of the care. In this step, the sense of coherence is pivotal (alignment of needs, preferences and resources with the adequate level and recommended (i.e. based on the latest evidence) type of care). Therefore, adequate information at all levels (from information about an individual to information about adequate services and reimbursement systems) is key, to align the needs, preferences and resources of an older person with the services and resources the system can offer. This middle-range theory could be linked to Antonovsky’s sense of coherence theory (195). Another close middle-range theory in this step is Pearlín’s sense of mastery, well-described in Skaff’s illustration among caregivers (80).

The fourth step, care provider’s response: integrated care delivery, puts the focus on the paradigm shift needed from care providers, in order towards collaborative care. This step is also in line with D’Amour’s model of collaborative care with the limit that this model was mainly build for the analysis of interprofessional collaboration within organisations, while case management for community-dwelling older people can also occur between different organisations, or between organisations and independent care providers (79).
In step five, older persons and informal caregivers’ response: improved coping, the findings highlighted the importance of coping as a mechanism explaining positive outcomes, that could be triggered by the provision of care delivered in the older people and informal caregivers’ own space and time. This CMO is linked to Lazarus’ theory of stress and coping (83).

Finally, in step six, older persons and informal caregivers’ outcomes, one of the most cited mechanisms was about the building of trusting relationship, enhanced by personal continuity and impaired by the rate of turnover of professional case manager. Close to this mechanisms, Robinson’s interpersonal theory views the evolution of trust in the area of chronic illness care (84). Health care relationships involved in case management form an alliance, which is conditional and guarded. There is a need from the beneficiary’s and informal caregiver’s perspective to trust because of a sense of vulnerability and uncertainty. A new kind of trust called “informed trust” can be constructed based on realistic expectations of both parties.

However, some limitations should be mentioned. Two are linked to the quality of the reporting, two are linked to the context in which the studies took place and the last is inherent to the realist approach.

Firstly, because case finding strategies were only reported in 46 out of the 62 studies, we do not have information about the other remaining studies and the middle-range theory could only be tested in the articles describing this important step of case management. Secondly, findings should be viewed with caution because in most of the articles, it was difficult to make the distinction between some related concepts. For instance, case finding strategies used for case management versus the recruitment strategies for the study.

Thirdly, most studies about case management have been carried out in North America and, to a lesser extent, in European countries. This geographical context matters in the analysis, not in the least because the theories attempt to explain the effectiveness of case management in health care systems that can be different from each other, without the authors of the studies explaining why case managements’ outcomes could have been affected by this broader context. Indeed, differences in implementation occur from country to country, local healthcare region to another healthcare region, setting to setting, professional to professional, which were inconsistently reported. The result is that older people with similar profiles will, probably, fare differently as they pass through the process in different contexts. For instance, a general practitioner in the Netherlands is the gatekeeper of the healthcare system and has, on average, five patient contacts a year for older people
over 65 (134, 135), while this frequency is over 12 per year in Belgium, which has a similar healthcare system but the general practitioner is not the gatekeeper (9). Consequently, one might expect a different impact on the nature and the frequency of interactions between case managers and general practitioners in both countries.

Fourthly, like other complex interventions, case management interventions occur in multi-layered, embedded contexts, in which the outcome at a macro-level of the context-mechanism-outcome configuration may become a context at a micro-level. Outcomes of this subsequent mechanism-outcome configuration at the micro-level can, in its turn, impact the macro-level. We acknowledge that these constant interactions between the different levels can sometimes be very confusing for the reader.

Fifth, the identification of demi-regularities (context-mechanism-outcome configurations) in the literature by a group of researchers was quite challenging, especially in terms of the explanation of the method to researchers to whom this method was new. This required multiple discussions about the precise definition of the jargon specific to realism, such as mechanisms and contexts. However, once engaged in the process, these researchers acknowledged the added value of this approach. In this respect, the use of the data extraction headings in the spreadsheet was very helpful, as the list was built inductively and the formulation of the headings was agreed upon before adding the heading in the sheet, which was a useful clarification exercise.

Sixth, the aim of the synthesis was to refine the initial theory by stringing together nuggets of context-mechanisms-outcomes configurations like beads on a string or chain and we appraised the quality of the sources, based on methodological grounds, rather than the quality of the nuggets, as is recommended by Pawson’s paper about “digging for nuggets” (94). We chose to view the claims of the authors of methodologically weaker papers with more caution than others because of the risk of too strong claims about why the theory described worked – or not, without sufficient confidence about the robustness of the empirical basis for these claims. This caution seemed particularly justified when there was no clear conceptual link between the analytic commentary and presentation of the results related to context-mechanisms-outcomes configurations.

Seventh, by doing extraction of context-mechanisms-outcomes configurations mainly on introduction methods and discussion sections of included papers.
Eight, methods like all realist synthesis, this review is a work in progress and should be seen as one of the steps to build knowledge about the underlying mechanisms explaining the effectiveness – or lack of effectiveness of case management for this population.

Despite these eight limitations, we are convinced that this realist synthesis, by summarising and interpreting the recent research findings about case management are an important addition to classical systematic reviews which merely aggregate the studies and do not sufficiently consider the context in which case management occur and the interaction between the context and the mechanisms it triggers to lead to desired outcomes. Moreover, by addressing the “why?” question, this synthesis broadens our insight about the reasons why previous systematic reviews showed mixed results.

Conclusions

Case management interventions are both the result of and impact the local healthcare system in which they are implemented. This theory-of-change driven realist synthesis provided a sequence of attention points in the long sequence of these case management processes, allowing the refinement of the a priori formulated six-stepped theory. However, poor description of the contexts in which case management occurred hampered our analysis. Primary studies reporting the effectiveness of case management interventions should absolutely pay attention and describe the elements of the contexts likely to impact implementation processes and interventions outcomes.

Acknowledgements

This review was undertaken during the scientific evaluation of bottom-up designed alternative interventions to help frail older persons to stay at home. Both these pilot projects and the scientific evaluation of their effectiveness were financed by the National Institute of Health and Disability Insurance (NIHDI).

Declaration of Interest

The authors report no declarations of interest.
Part II. Lessons learned from the implementation of case management for frail older people in Belgium

Introduction

The realist synthesis has shown that some key mechanisms emerge in each of the six important steps that constitute case management. They may influence the adhesion- or not - to the case management process by the different stakeholders. Key in this process is the identification of a “complex” case. Indeed, by default, the older person should be the case manager. When this is not possible for any reason (complexity of the case, cognitive, mental issues, health illiteracy, etc.), the second in line is the informal caregiver. If the informal caregiver cannot be the case manager, the case manager should be the general practitioner. Only if one of these three stakeholders cannot be the case manager of the older person should a professional case manager be appointed.

These mechanisms identified pertained, but were not limited to (in the assessment phase): Room for improvement. This means that at the population level, proactive identification of complex cases should be carried out. However, preventive case management hampers the acceptability of the intervention and automated flagged system are not sensitive enough to identify complex cases, as there is more to complexity than (biomedical) multimorbidity alone. Case-finding strategies should be carried out at the whole primary care system level and not be the prerogative of case managers or primary care physicians.

- (in the care planning phase): Acceptability (for the older person, his informal caregiver and for the other care providers);
- (in the integrated care delivery phase): Credibility of the case manager and Trust;
- (in the older people’s response phase): Sense of mastery of older people and their informal caregiver.

Having identified these mechanisms in the international literature, the next step was to refine these findings through the evaluation of case management in Belgium.
1st lessons. Is case management effective and if so, why? A realist evaluation of case management for frail, community-dwelling older people: lessons learned from Belgium

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Abstract

Despite many attempts to evaluate the effectiveness of case management for frail older people, systematic reviews including experimental designs show inconsistent results. Starting from the view that case management is a complex intervention occurring in multi-layered realities, we conducted a realist evaluation of case management in Belgium, where this type of intervention is new. Realist approaches are particularly well suited to evaluate complex interventions as they seek to investigate iteratively the literature and empirical data to uncover mid-range theories underpinning the intervention under study. As such, realist evaluations are works in progress which provide tools to describe how, why and for whom an intervention is supposed to work. In this paper, we describe two mid-range theories that can explain why case management can help frail older people to remain at home, through the lens of capacity and social support.

Introduction

Frail older people often have complex care needs, especially when frailty is the result of the co-existence of two or more chronic conditions (196) and involves receiving care from different healthcare professionals such as general practitioners, home care organisations (nurses, nurse assistants, social workers) and medical specialists. During exacerbations of their condition or new diagnoses, additional involvement of emergency care and other specialisms may be needed (197). Allowing older people to stay at home has become a universal aim of health and social care agencies across the Western world, to address the combined factors of growing numbers of frail older people and the strain on the health care budgets. Agencies are tackling these problems through the drive for innovative approaches to care. To overcome this fragmentation, the concept integration of care has been widely ‘reintroduced’ and is central to health and social care policy in many countries (198). This has introduced more layers of complexity, as there are many ways of defining, explaining or implementing the concept through frameworks. For example, several definitions of integrated care exist, from an operational perspective through to a more person-centred approach. Taking the person
perspective, it is widely agreed that this should be at the heart of any discussion about integrated care (199). Achieving integrated care requires that those involved with planning and providing services should “impose the patient’s perspective as the organising principle of service delivery”(200). National Voices (2013) offer user-based definitions of integrated care such as “My care is planned with people who work together to understand me and my carer(s), put me in control, co-ordinate and delivery services to achieve my best outcomes” that not only serve to create a better understanding between service providers and users of integrated care, but are increasingly being used as outcome measures (77).

When it comes to frameworks and theoretical underpinnings, integrated care has synergy with the chronic care model (70). This model focuses on six major requirements needed to provide integrated care for people living with chronic conditions, i.e. a tailored system redesign, an appropriate workforce, an appropriate budget and financial incentives, processes to support quality of care, knowledge management and decision support, and clinical information tools. In addition, Vlayen et al.(201) put forward notions of high-quality care which encompass seven dimensions: safety, clinical effectiveness, patient centeredness, timeliness, equity of care, efficiency of care and finally, continuity and service integration. Caring for the frail population enhances the opportunity for continuity and service integration to happen because of the fragmentation of care. Such frameworks have however failed to connect to integrated care delivery in a meaningful and pragmatic way creating a gap between theory and practice (202).

A further consideration is the method of care delivery, and how the service should best be configured to deal with small numbers of frail older people who have a very high level of complex care needs where regular care by the primary care team may not be adequate. Case management is suggested to be an important means to help achieve integrated care to help this population to remain in better health and, if possible, at home (5). Case management is defined by the Case Management Society of America (17), p.10) as “a collaborative process of assessment, planning, facilitation, care coordination, evaluation, and advocacy for options and services to meet an individual’s and family’s comprehensive health needs through communication and available resources to promote quality, cost-effective outcomes”. Case management is brought about in highly diverse ways according to its intensity (frequency and duration of the contacts), its embeddedness in the local care network, the profile and training of the case managers (e.g. nurse-led case management versus social worker-led case management) working either alone or in a team, benefiting or not from intervisions or supervisions, the inclusion criteria or triggers to identify the population likely to benefit from case management.
(prompted by routinely collected data or on request of the care provider, the informal caregiver or the beneficiary himself)(24).

However, evidence of the effectiveness of case management for frail older people is hard to establish. Hard outcomes may encompass, among others, delay of institutionalisation, impact on the number of emergency room visits, healthcare consumption, mortality rates, etc. while the impact on so-called “soft”, patient-reported outcomes include, for instance, satisfaction or perception of coordination of care (174). In other words, case management is more likely to have an impact on better quality of care as a process as this is conducive to better outcomes and, at the same time “hard outcomes” are more likely to be influenced in this population by determinants which are not related to the quality of care, such as the negative interactions within long-term illnesses and treatments (203).

It is also important to highlight that because of the high level of interaction between community-dwelling frail older people and their informal caregivers, they are considered here as a dyad (204). This is the reason why in most instances case managers’ interventions will target the dyad instead of each one of them separately, thus making this a more holistic form of care provision.

Because of the heterogeneity of case management’s characteristics and interacting contextual components, traditional evaluation designs are ill-suited to evaluate the effectiveness of this type of complex intervention (24, 205). A realist evaluation may help to respond to our research question, which was to understand the how and why of the effectiveness of case management, and shed light on specific conditions and why approaches with case management could be effective in health care. The focus will therefore be about the development of mid-range theory to create explanations for these research questions with the help of empirical data gathered in Belgium.

**Methods**

A realist approach was used to evaluate the effectiveness of case management in the Belgian context. Described by Pawson and Tilley in 1997 (64) realist evaluations are particularly useful for the evaluation of complex interventions because they take into account the interactions between an intervention and its context. Indeed, case management can be seen as a complex intervention occurring within a complex system because multiple, interacting agents are involved. These agents interact with their environment and these interactions are non-linear and interdependent. In the community and the home care setting variables may not be
easily controlled and during an intervention many interactions make standardisation not possible. Without central control, emergent behaviours can be observed and the information about the interactions is assimilated by the agents. Finally, as the system evolves over time the partners in care processes learn and evolve. The health system may be expected to improve as a result of this process (206).

The epistemological stance of realist evaluations is rooted in critical realism (92). Although realists acknowledge an “objective” reality existing outside of the observer, there is a certain level of interaction with the observer (so-called recursivity). This means the interpretation of reality is moderated by the observer. Moreover, the focus lays on mechanisms, which are contextualised, i.e. mechanisms are only triggered under specific conditions or in specific contexts and lead to specific outcomes. Mechanisms are the causal forces, powers, processes or interactions that generate change, combining the use of resources and reasoning that people make (207). The overall aim of a realist evaluation is to come up with an explanatory mid-range theory about the effectiveness of an intervention, to allow theoretical replication.

Typically, a realist evaluation of an intervention starts with the identification of the logic of the intervention (also called programme theory). This seeks to describe the logical link between the objective of an intervention, the resources used, the activities carried out and the expected results. Second, CMOC (Context-Mechanisms-Outcomes Configurations) are looked for, to identify underlying mechanisms explaining why a specific outcome was achieved in a specific context. This can be seen as a mid-range theory. Third, candidate mid-range theories are searched in the literature, amongst experts and researchers to provide an explanatory framework for these CMOC. Fourthly, adjudication between rival theories or refining of existing theories is done through testing them with the empirical data and iterative consultation of the literature and with experts (66).

Case study design was also employed alongside this realist evaluation approach. These two methodological stances have much synergy and potential in studies of this kind (George and Bennett 2005), an aspect explained further below.

We followed the recommendations of the RAMESES II project for the reporting of realist evaluations (208).

_Bottom up projects in Belgium: setting and first steps for the realist evaluation_
The National Institute of Health and Disability Insurance (NIHDI) created funding in Belgium to identify which alternative interventions of care or support of care were the most effective to help frail older people to stay at home at a reasonable cost. This prompted a large-scale programme implementation and evaluation. Amongst other pilot projects, 22 new bottom-up designed case management projects started in April 2010. They were selected by the NIHDI and were financed over four years. Inclusion criteria for the older people to benefit from these projects were defined by Royal Decree (7 July 2009): to be aged 60 or more, living at home, being frail and willing to participate in the scientific evaluation of the pilot projects. Frailty was defined as (1) to have a score of six or over on the Edmonton Frail Scale (209) or (2) to be dependent for ADL or IADL, as defined by a Katz lump sum (210) or (3) to have a diagnosis of dementia made by a neurologist, geriatrician or psychiatrist. Moreover, care providers of the projects should assess whether the person was likely to benefit from case management during a baseline interview, i.e. have a sufficient level of complex care needs. A consortium of four universities (Université catholique de Louvain, KULeuven, UAntwerpen and Université de Liège) was asked to evaluate the cost benefits and effectiveness of these projects as a programme evaluation.

The protocol describing the overall design of this evaluation has been described previously (16). Six researchers were involved in this part of the evaluation. The data collection relied mainly on project data, which were collected during four years and comprised official documents, such as the submission files of the projects, administrative databases from NIHDI, websites, yearly questionnaires about the organisational functioning, adaptation strategies for the implementation and embeddedness of the projects. This data collection was completed by yearly interviews with the coordinators and case managers of the projects. Because of the number of researchers involved, an audit trail was agreed upon and followed, to ensure the similarity of the data collection and first descriptive analyses. The template to collect these data can be found in Appendix 7., as well as the yearly questionnaires sent to the projects (Appendix 8). The process was discussed and refined during iterative group sessions amongst researchers. Moreover, to be sure that the results would be useful for the civil servants of the NIHDI, they were also involved repeatedly in the discussion. This helped to define the breadth and depth of the analysis within the given timeframe.
First step: description of the logic of the interventions

As recommended by Wong et al. (211, 212), we chose to start from the outcomes to describe the logic of case management. These outcomes should reflect meaningful results for the older people and, in some cases, their informal caregiver. Therefore, we chose to use I-Statements as a starting point. I-Statements are patient-reported outcomes and reflect the users’ perspective about coordinated care: “My care is planned with people who work together to understand me and my carer(s), put me in control, co-ordinate and deliver services to achieve my best outcomes” and reflect a nationwide commitment in the UK to let the users’ perspective guide the quality improvement strategies in this country (77).

Second step: confrontation with the empirical data

Some authors, such as Alexander George and Andrew Bennett strongly advise the use of realist approaches in case studies (213). At the interplay of both approaches lays the focus on looking extensively for causal pathways between phenomena. In case study terms, this is called process tracing, i.e. looking for causal chains, to uncover evidence of causal mechanisms at work or to explain outcomes. In realistic terms, this can be phrased as “causal mechanisms are central to causal explanation” (19). Process-tracing is therefore an operational procedure for attempting to identify and verify the observable within-case implications of causal mechanisms (214). At an epistemological level, the two approaches share the view that social facts exist independently of the observer and can be the subject of defensible causal inferences (213).

A multiple, embedded case study design was thus carried out among seven projects to identify explanatory theories about what made a project successful in its given context and why. Cases were chosen based on the diversity of their components (213, 215-217), such as the profile of the case manager(s), the location (urban versus rural), the structural partnerships with general practitioners, the caseload per full-time equivalent (FTE) case manager, the systematic use of the results of a tool for making a comprehensive geriatric assessment (BelRAI, the InterRAI-HC instrument) validated for Belgium (218) for making a care plan, the existence of an electronic patient record – or the absence of these characteristics. The choice was validated by a scientific steering committee, at the request of the NIHDI. Thematic content analysis and considering the logic of the intervention as described by the project engineers within each project and constant comparison amongst projects allowed the identification and testing of the logic of the interventions in their own
context (91). This led to the further refinement of context-mechanisms-outcomes configurations explaining the success or not of the interventions in their contexts.

**Third step: identification of mid-range theories in literature**

In the meanwhile, a literature review was carried out to identify candidate mid-range theories likely to support the logic of the interventions. These candidate theories were then confronted with the empirical data coming from the case studies and discussed within the group of researchers who helped to adjudicate between rival theories or, in some cases, to refine or expand existing theories in order to apply them to case management interventions under study.

**Fourth step: adjudication between rival theories or refinement of existing theory**

Here again, iterative discussions with the members of the consortium involved in the data analysis provided insight into the theories capable of explaining the results coming out of the empirical analysis and the literature review. The findings of these discussions were then submitted to the civil servants of the National Institute of Health and Disability Insurance, case managers and project coordinators.

**Results**

a. **Programme theory of the interventions**

The logic of the interventions is described per case in the overall report (219). Summarised, professional case management is expected to organise care in a meaningful way and anticipate the negative consequences of adverse events, such as a new illness or exacerbations, by the means of a structured, yet highly individualised approach including close monitoring of the care plan and the individual situation at home. To achieve this, the following activities were carried out: comprehensive standardised geriatric assessment at intake and at least every six months (more if the situation worsened), regular home visits, consultation and coordination meetings with healthcare providers involved, together with the older person and his informal caregiver, use of the results of the standardised assessment for making and prioritizing the goals of the care plan, follow-up and evaluation of this care plan by the means of a (preferably shared) patient record, use of (a) evidence-based and interdisciplinary agreed protocols and (b) Registry (list of beneficiaries of the projects) – including prompts for care plan implementation and finally, intervisions to discuss the activities of the case managers and the possible strategies for improvement. Finally, the type of case management provided should
be linked to the profile of the beneficiary: the higher the dependency level (i.e. cognitive and functional), the higher the need for clinical case management. Reversed, frail older people whose functional impairment is lower than 3 on the ADL and 24 on IADL scale could in most cases manage their care on their own. Only if this is not possible, coordination of their care could be supported effectively by a coordinator from a coordination agency, such as GDT/SEL in the Dutch-speaking part of Belgium (“Geïntegreerde Dienst voor Thuiszorgverzorging/Samenwerkingsinitiatief Eerstelijnsgezondheidszorg”) or their French-speaking counterpart, CCSAD (“Centre de Coordination des Soins et de l’Aide à Domicile”), who only coordinates the required care, without the intensity and means included in clinical case management (220). In between those two extreme situations, social case management would be recommended, in which the case manager is most often a social worker and/or a psychologist.

b. Confrontation with the empirical data

During the four years of the evaluation, 4711 frail older people were included in the 22 case management projects. Their median age was 81 years (76-86); 68.2% were women and 53.1% lived alone. Among them, 17.5% had a low level of deficiency (defined by having CPS and ADL scores below the cut-off of three on both scales), 35.18% had a mean level of deficiency (defined as having ADL or CPS ≥ 3 but no hospitalisation during the three months preceding the inclusion in the case management process) and 9.78% had a severe level of deficiency (defined as having a ADL or CPS ≥ 3 and a hospitalisation during the three months preceding inclusion). Some features of the seven cases under study are shown in Table 4.
Table 4. Some features of the seven projects of the case studies

<table>
<thead>
<tr>
<th></th>
<th>Project 1</th>
<th>Project 2</th>
<th>Project 3</th>
<th>Project 4</th>
<th>Project 5</th>
<th>Project 6</th>
<th>Project 7</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Profile of the case managers</strong></td>
<td>Social workers and educators</td>
<td>Nurses</td>
<td>Social workers and occupational therapists</td>
<td>Nurses and social workers</td>
<td>Nurses and psychologists</td>
<td>Psychologists, occupational therapists and social workers</td>
<td>Nurses</td>
</tr>
<tr>
<td><strong>Active caseload per FTE case manager</strong></td>
<td>1:63</td>
<td>1:67</td>
<td>1:37</td>
<td>1:17,4</td>
<td>1:37</td>
<td>1:20</td>
<td>1:21</td>
</tr>
<tr>
<td><strong>Area</strong></td>
<td>Rural</td>
<td>Urban</td>
<td>Urban</td>
<td>Rural</td>
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</tr>
<tr>
<td><strong>Region</strong></td>
<td>German speaking</td>
<td>Flanders</td>
<td>Flanders</td>
<td>Flanders</td>
<td>Wallonia</td>
<td>Brussels</td>
<td>Flanders</td>
</tr>
<tr>
<td><strong>Formal agreements with a coordination centre</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Use of the results of BelRAI for the care plan</strong></td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Use of an electronic health record</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
Firstly, we found an overall theory of the likely effectiveness of case management to help frail older people to stay at home, in the different levels of integration in the rainbow model of Valentijn et al. (73)

IDENTIFICATION OF THEORIES IN LITERATURE

Figure 11. Situation of case management in Belgium within the different levels of care provision
Where does case management fit in?

The care is provided at the individual level, to the frail older people and their informal caregivers (if any), but in coherence with the care provided by primary care providers, which is consistent with the rules of their own organisations (the case management team and the umbrella organisation to which they belong), dependent of existing rules and conventions between organisations (if these exist) and their own corporations (e.g. nurse, psychologist, physician, social worker, etc.), in accordance with regional and national regulations and paid by NIHDI. Because of this, case management starts at the clinical level but transcends all levels.

Secondly, Wagner’s Chronic Care Model was chosen as candidate theory, potentially capable to explain how the components of the interventions interacted with each other to lead to meaningful results for the older people receiving case management.

c. Identification of two candidate theories to refine the initial programme theory of the interventions

Context-mechanism-outcomes configurations (CMOCs) can be seen as mid-range theories. In this paper, the outcomes of the CMOC are presented from the users’ perspective. Enabling contexts will trigger mechanisms leading to positive outcomes. Conversely, hindering contexts will not trigger them, leading to negative outcomes. These contexts can be elements from the inside or the outside of the interventions. Only the CMOCs of the two most frequently reported outcomes are presented in here.

The two main mid-range theories are that the frail older people are staying at home despite their frailty because they (1) feel capable of this and (2) they feel socially supported. Table 5 shows in which contexts and by which mechanisms these outcomes are made possible. Mainly, the resources needed by frail older people to trigger reasonings leading to the feeling of capability are linked to their initial status (= context). Findings suggested that the more severe the cognitive impairment, the more the need for clinical case management. Two examples are provided in Figures 12-13.
**First mid-range theory: the frail older people are staying at home because they feel capable of it.**

Table 5. First mid-range theory: perception of the frail older person and his informal caregiver about having the capacity – are auto-determined to remain at home – or not

<table>
<thead>
<tr>
<th>CONTEXT</th>
<th>MECHANISM</th>
<th>OUTCOMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Having neither ADL nor cognitive impairments</td>
<td>Care coordination provided by a coordination centre</td>
<td>Feeling capable to remain at home</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The focus is on facilitation of the access to the care and support needed. “If any crisis situation appears I am, or my ICG is, able to call for adequate help.”</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having only a low impairment in ADL (lowADLonly),</td>
<td>Care coordination provided by a coordination centre</td>
<td>Uncertainty about feeling capable to remain at home or not</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In this situation also, the focus is on facilitation, especially through adequate utilisation of information by the frail older person and his informal caregiver</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having a high level of ADL impairment (highADLonly)</td>
<td>Social case management</td>
<td>Exacerbations and worsening of the situation are anticipated and prevented.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having a high level of cognitive impairment (highCPS)</td>
<td>Clinical case management</td>
<td>Not feeling capable to remain</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Exacerbations and worsening of the situation are anticipated and prevented and, in most cases, cared of.</td>
</tr>
</tbody>
</table>

The first context where case management with a professional case manager is likely to affect the perceived capability of the frail older people to remain at home:
older persons with a high level of functional impairment. In this case, social case management seems more relevant. Figure 12 shows the configuration of several mechanisms sitting within the CMOCs and can be seen as finer hypotheses about specific causal links and processes within them.

![Diagram showing the configuration of several mechanisms sitting within the CMOCs](image)

Figure 12. Likely effectiveness of social case management for frail older people (FOP) with a high level of functional impairment on their perceived capability to stay at home

The second context is where a professional case manager is likely to affect the perceived capability of the frail older people to remain at home for older persons with a high level of cognitive impairment. Findings showed that older people with high cognitive impairment could not live at home without an informal caregiver and therefore, clinical case management for this population systematically concerned the older person-informal caregiver dyad. In comparison with Figure 12 reflecting social case management, changes appear in bold in Figure 13.
However, case management can also trigger negative reactions, such as the perception by the beneficiaries that the care is too intrusive, including the care recommended by the case managers. “My home has become a renovated church, in which everyone can enter and I don’t recognize it any more” (older person, offered case management). This is the case with any type of case management.
Figure 14. Risk of possible adverse effects of case management for frail older people (FOP) having a high level of impairment regarding ADL
SECOND MID-RANGE THEORY: THE FRAIL OLDER PEOPLE ARE STAYING AT HOME BECAUSE THEY FEEL SOCIALY SUPPORTED.

The second most cited intermediate outcome in the findings was related to the experienced social support. Four elements of the contexts were identified to trigger positive mechanisms in this domain: the access to adequate training for the case managers, physical accessibility of adequate day care centres, financial and physical access to the relevant services and an adequate caseload for the case managers (i.e. less than 40 beneficiaries simultaneously per full time equivalent case manager). In Figure 13, the interacting components are shown, starting with the case management providing by a professional having access to adequate training and leading to the outcome of perceived social support. These same mechanisms are triggered by the other contexts mentioned in Table 6, highlighting the importance of the accessibility of meaningful activities, often delivered in day care centres. Also, a caseload under 40 per full time equivalent case manager is essential because sufficient time is needed to identify significant others who can support these meaningful activities.

Table 6. Second mid-range theory: The frail older person can remain at home because he and his informal caregiver experience social support and feel they have a place in the community.

<table>
<thead>
<tr>
<th>CONTEXT</th>
<th>MECHANISMS</th>
<th>REASONING</th>
<th>OUTCOMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical accessibility of adequate day care centres</td>
<td>The case manager encourages meaningful activities to the older person, such as weekly visits to day care centres</td>
<td>The proposed activities make sense to the frail older people and their informal caregivers</td>
<td>The older person experiences social support</td>
</tr>
<tr>
<td>Existing training (including supervisions) to enhance case manager’s skills</td>
<td>The case manager has the skills to recognise the signs of social isolation, based on the multidimensional geriatric assessment and clinical judgment during regular home visits</td>
<td>The older people and their informal caregivers feel recognized in their needs of meaningful social contacts</td>
<td></td>
</tr>
<tr>
<td>CONTEXT</td>
<td>MECHANISMS</td>
<td>RESOURCES</td>
<td>REASONING</td>
</tr>
<tr>
<td>---------</td>
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</tr>
<tr>
<td>Financial and geographical accessibility to services</td>
<td>The case manager identifies barriers to access the meaningful activities and proposes services to address them (financial, geographical)</td>
<td>the reciprocity of the social interaction. The older people feel they are able to access these activities and anticipate they can benefit from them. Observing peers with similar conditions strengthen the older people’s and their informal caregivers’ belief that they can succeed in remaining at home.</td>
<td>The older person does not feel supported socially.</td>
</tr>
<tr>
<td>Adequate caseload of the case manager (&lt; 40 frail older person/FTE case manager) allows for sufficient time spent to identify significant others</td>
<td>The case manager identifies significant others who can support meaningful social interactions with the frail older persons</td>
<td>The older people and their informal caregivers feel socially and emotionally supported by significant others.</td>
<td></td>
</tr>
</tbody>
</table>
Figure 15 shows the configuration of several mechanisms embedded within the CMOCs and, as done for the first mid-range theory, can be seen as finer hypotheses about specific causal links and processes within them.

Figure 15. Likely effectiveness of case management providing by professionals having access to adequate training for older people with a cognitive impairment on their perception of social support
Discussion

In this paper, we described how two mid-range theories could foster an adequate framework explaining how and why case management can be effective for frail community-dwelling older people with complex care needs and under what conditions.

First, the older person’s perception of its own capability, along with the perception of the informal caregiver can lead to desired outcomes because they can influence the choice of activities (e.g. accepting the services and care offered) and the belief in possible success (remaining at home). It can also influence coping efforts once they are initiated. This is very close to the self-efficacy beliefs of Bandura (78). Indeed, these efficacy expectations will modulate how much effort will be needed by frail older people and their informal caregivers and how long they will persist to face the difficulties inherent to their complex care needs. Even small adverse events, such as a phone failure, can lead to chain reactions of negative events, leading in turn to self-debilitating expectations (as opposed to self-efficacy beliefs) and feelings of helplessness. This capability can be successfully supported by an adequate type of case management, as severely cognitively impaired frail older people are more likely to be helped by clinical case management, in which case the intervention also encompasses support to medication adherence and a strong focus on the capabilities and needs of the informal caregiver.

Second, perceived social support was identified as a mediator for helping frail older people to stay at home. This can be successfully influenced by the skills of the case manager, who should have access to adequate training and sufficient time to fulfil this important function. Moreover, there is also a need for access to meaningful activities, which in turn can support the need for the feeling of belonging to a community, by learning from each other’s shared experiences and contributing to others. This notion of reciprocity in care is absolutely crucial, and can be seen as a “manifestation of mutual respect, which recognises that there is the potential for virtually all kinds of caring relationship to be of mutual benefit” (221).

This does not imply that capability and perceived social support are the only determinants of desirable outcomes for this population. Other skills and resources are also important. However, this analysis showed that beliefs about capability and social support can be an important part of older people’s actions and decisions, such as the acceptance of services or activities, how much effort they will expend and how long they will sustain the effort in dealing with the stressful situation inherent to living at home during the old age with complex care needs.
To support these outcomes, some contextual elements are shown to be important. First, there is the crucial point of the identification of the correct beneficiaries, in order to support their care with the adequate level of management. Our results have shown that beneficiaries having neither ADL nor cognitive impairments nor a low level of ADL impairments can sufficiently be supported by coordinators, hired by coordination centres, such as GDT/SEL or CCSSD and do not need the input of professional case managers. Conversely, beneficiaries with a high level of ADL impairment could adequately be helped by a more social type of case management, while beneficiaries having a high level of cognitive impairment need clinical case management. Therefore, careful assessment of the situation, which can evolve rapidly in this population, should be assessed and monitored constantly by primary care providers, if not by the case managers themselves. Second, case managers should be aware that their intervention is also likely to lead to adverse outcomes and take actions to prevent these and, if needed, address them timely. Third, case managers and care coordinators should have access to adequate training in order to provide them with the skills to function as case managers and be able to, among other skills, recognize the situations of social isolation. This is an issue in Belgium, where no specific training for case managers is organised. Part of these skills could be acquired through continuous professional development or service-based training, especially if these are supported by cross-training of health professionals through multidisciplinary education opportunities (222). Fourth, access to the recommended services should be made possible in a timely manner, especially access day care centres, which can act as an important starting point to (re)connect beneficiaries to their social network, while offering them the opportunity to conduct meaningful activities. Unfortunately, these centres currently have long waiting lists despite their efforts to open their services to as much beneficiaries as possible, e.g. by admitting beneficiaries with cognitive problems immediately, even for only one day per week, while the average frequentation is three times a week. Furthermore, some regions in Belgium do not have such day care centres (e.g. in German-speaking Belgium). In this study, we only acknowledged the importance of these centres because of the social-related outcome but other studies have shown the benefits of these centres on the burden of the informal caregiver, especially in patients with cognitive impairment (223). Finally, case managers should have a caseload that does not exceed 40 frail older people – as defined in our study – per full time equivalent case manager. Indeed, the constant monitoring of the situation, directly or by the means of primary care providers who are already in contact with their patient on a daily basis (224). The latter are also called “sentinel” professionals, who can contact the case manager immediately in case of need of their intervention. This is important to be able to follow-up the situation of the
patient on a social level, but of course also on the biomedical and psychological level.

The iterative four-stepped approach recommended by Pawson et al. proved very useful to identify and refine two mid-range theories likely to explain why, how and for whom case management could be effective for this population. The strength of this method lays in the possibility to zoom in on context-and-outcome-related mechanism in a highly structured way to unveil explanations about why case management can lead to desired outcomes. The weakness is closely related to this strength. Indeed, because of time constraints, we were only able to unveil a part of the process, i.e. those related to the most cited outcomes. This is the case for most of the realist evaluations, can be most frustrating, has to be seen as work-in-progress and calls for further research to unveil the other CMOC in this area (212). However incomplete, the approach used to identify and refine mid-range theories can be of use for evaluation teams of other bottom-up projects.

Study limitations include the indirect report of the perspective on frail older people, as perceived by the care providers included in the case management projects, as we did neither collect data directly from the beneficiaries of case management nor from their informal caregivers. These results will be confronted when the second part of the evaluation will be carried out, as the evaluation is still ongoing. For this, we plan to interview dyads of older people benefiting from case management and their informal caregivers, along with other care providers at the primary care level, to include their point of view on what is it about case management that causes desirable outcomes, for which frail older people, under which conditions and why.

Conclusions

Because of a realist evaluation of case management’s effectiveness to yield desirable outcomes for frail, community-dwelling older people, we used the capability and perceived social support framework as a mid-range theory. This approach enabled us to explain why, how and for whom case management is likely to foster positive outcomes. It should be able to guide professionals, teachers and case management supervisors to strengthen case management teams and individual case managers’ skills to support beneficiaries’ beliefs about their own capabilities and perceived social support, as an important means to help them to remain at home in good conditions for as long as they wish.
Funding acknowledgement

This work was supported by the Belgian National Institute of Health and Disability Insurance (NIHDI).
2nd lessons. A comprehensive instrument to evaluate case management’s effectiveness for community-dwelling frail older people: results from a multiple, embedded case study.

Introduction

The realist evaluation conducted in Belgium allowed us not only to identify two important mechanisms occurring at the level of interaction between the beneficiary and the case manager (i.e. capability and perceived social support). These mechanisms are closely linked to the findings of the realist synthesis. First, capability as a mechanism unearthed in the realist evaluation can be linked to the findings of step five of the realist synthesis – the level of “Older people and informal caregivers’ response: improved coping” is very closely linked to the capability of the older people because capability is precisely the target of improved coping. Second, perceived social support was not identified as a mechanism as such in the realist synthesis but the importance of social support was clearly stressed through the fact that training for case managers should encompass the acquisition of skills to estimate adequately the importance of social factors influencing older peoples’ health. Therefore, training of case managers should help them to acquire the necessary skills to intervene adequately to strengthen this social support.

Moreover, this process of the identification of these mechanisms enabled us to identify at the same time, 23 important features for case management for this population, linked to the relevant elements of context and the mechanisms they trigger. Among these, incentives for interprofessional collaboration, such as structural and financial incentives for independents’ participation in multidisciplinary meetings, are important requirements in supporting the paradigm shift needed towards interprofessional collaboration. How we came from these 23 features to use them to build a bottom-up typology of case management is described in the next part, which was published as a paper in BMC Geriatrics, 2015; 15: 67.
Abstract

Background. Case management is a programme expected to improve the quality of care for frail, community-dwelling older people and thus, their quality of life, while delaying institutionalisation in nursing homes. However, the heterogeneity, the multidimensionality and complexity of these interventions make the evaluation by the means of classical approaches inadequate. Our objective is to propose a mixed methods approach allowing for the identification the key components explaining the success of case management for this population.

Methods. Using the results of multiple embedded case studies to identify these components, the method uses multiple correspondence analyses to propose a typology of case management programmes, based on these interacting key components. The overall approach is guided by Wagner’s Chronic Care Model.

Results. The typology makes a distinction between three types of case management, situated on a continuum going from a “social” type of case management towards a “clinical” type of case management. The main component which makes the difference between these types is the type of feedback provided to the general practitioner about both the global geriatric assessment and the result of the intervention.

Conclusion. This typology allows us to distinguish between programmes of case management, to enable further study of their effect on the beneficiaries of the programmes on the delaying of institutionalisation, functional and cognitive status, quality of life and societal cost.

Keywords

Case management; frail elderly; programme evaluation
Background

Like many high-income countries, the Belgian healthcare system is considered to be complex for people needing long term care. Frail older people often show the coexistence of multiple, interacting morbidities and incapacities. They need therefore care of different providers, both from the health care and the social care sector. The health care system, supposedly capable of providing an adequate answer to these peoples’ needs is in fact (a) mainly driven by a logic of acute care, while this population needs chronic care (225); (b) single-disease-centred, while the majority of this population has at least two or more chronic conditions(3, 226); (c) hospital-centred, while most of them still remain at home (198); and (d) characterized by a poor level of organisation at the primary care level, in spite of mainstreaming primary care in the agenda of health care system organisation(9). The risk of worsening this situation in Belgium is high because the split and evolving decision-making power between different policy levels for connected issues, leading to a high risk of delivering fragmented care (9). This means that the information about the available care agencies and reimbursement statuses is scattered around different levels, changing all the time and very confusing for the care providers, and all the more for the older people and their families.

Navigating through such a complex health care landscape, in order to get the appropriate (health) care can be very difficult. Moreover, once the care providers have been identified, their intervention needs to be integrated, so that it is not overlapping and that people know and realize what the other care provider does (225). The chronic care model proposed by the WHO is believed to provide a frame to restructure the health system towards integrated, proactive, consistent and continuous care, and thus, anticipate some acute exacerbations or lessen their consequences (8, 88, 198).

Case management for people with complex care needs could be one of the effective strategies within that frame (26, 227). Namely, it is expected to support the provision of integrated care, as it is “a collaborative process of assessment, planning, facilitation, care coordination, evaluation, and advocacy for options and services to meet an individual’s and family’s comprehensive health needs through communication and available resources to promote quality, cost-effective outcomes” (Case Management Society of America, 2010)(17).

Healthcare professionals proposed case management interventions within the frame of a call by the National Institute of Healthcare and Disability Insurance (NIHDI) launched in 2009 (11). The aim of this call was to generate innovative forms
of care, to enhance the capacities of frail older people to remain at home if they wanted to. Besides the financing of those pilot projects during four years (2010-2014), the NIHDI asked a consortium of universities to evaluate their effectiveness to delaying definitive institutionalisation in nursing homes, to maintain or improve the functional status and quality of life while assessing their cost, for NIHDI, the older people, and the impact on the burden of their main informal caregiver.

Among the 67 approved projects were 22 projects with a focus on case management projects. They were designed bottom-up by health care providers of home care organisations. These projects met at least four of six of the elements of the Case Management Society of America’s (CMSA) definition of case management (17). However, there is no agreement in Belgium about who should take on this role and which functions should be carried out to achieve positive outcomes.

Besides being a complex intervention, the case management projects showed a high level of diversity, because they were (a) bottom-up designed projects and (b) despite including only frail older beneficiaries (attested by either a score on the Edmonton Frail Scale (209) of 6 or more or having a diagnosis of dementia), the manifestation of frailty could be very diverse and (c) because there are currently no standards of practice for case management available in Belgium, the case management differed in size (number of professionals involved and caseload), in location (French speaking, Dutch speaking, German speaking regions of Belgium, each presenting different policies possibly influencing case management implementation), in the profile of the case manager (nurses or non-nurses, sometimes even nursing aids), the degree of involvement of the primary care agencies (among which the general practitioner (general practitioner)), the use of the results of the comprehensive geriatric assessment, i.e. the InterRAI Home Care instrument (HC), that was a cornerstone in the projects (228) and in time spent on case management.

The evaluation of this type of complex intervention, affecting possibly the health system in which it is implemented calls for mixed-methods approaches (63, 229). Therefore, the evaluation of these case management projects followed a triangulation process in order to build a comprehensive perspective including: (1) the description of the projects as a set of interventions aiming at improving outcomes for frail older people and their informal caregivers; (2) the evaluation of the (statistical) association between a given type of population, intervention, outcome and cost; (3) the analysis of the implementation process as a way to identify mechanisms and conditions for project effectiveness in a given context. Outcomes under study were mainly the delay of permanent institutionalisation,
maintaining or improving physical functioning (ADL (230), IADL (231)), cognitive functioning (CPS, (232)), depressive status (DRS (233)), quality of life (234) and, for the informal caregiver, perceived burden (235). The overall design of the evaluation is described elsewhere (16).

Alongside the evaluation of whether these interventions affected frail older people’s outcome when implemented in their local context, we chose to start by “opening the black box” and have a thorough look at the components and implementation processes of these diverse case management projects. Therefore, we build a normative grid that would allow an evaluation of the projects, taking into account their implementation process, along with their structural characteristics. At the core lies the identification of the components and processes of the projects which, from the actors of the project’s point of view, explain the successes or failures of their projects and the likely positive outcomes for the beneficiaries. This paper describes the empirical, theory-driven elaboration of this grid, leading to a proposal of a typology of case management interventions.
Methods

A. Elaborating the grid - Multiple, embedded case studies

The process started with multiple, embedded case studies of seven projects (217). Those were performed by a multidisciplinary team of five researchers with a background in public health, sociology, nursing and occupational therapy (OS, MLH, PM, SD & TVD). The unit of analysis (cases) were the innovative case management projects. The three aims of the case studies were: (1) to provide a precise and narrative description of the project components over time (structure and process factors) that would likely lead to positive outcomes; (2) to identify the contextual factors that played a role during the implementation process of the projects and the way they adapted to changes (i.e. external, like changes in partnership, or internal, like turnover of professionals etc.); (3) to build an overall analytical framework to explain the success or failure of projects [23]. As the relation between the type of projects and the outcome for frail older people was initially unknown, cases were selected to obtain as much diversity as possible in the projects’ characteristics [24,25]. These features included the profile of the case manager, the geographic location, the size of the project (staff or intended caseload), the definition of the target population, the number of different disciplines, the type and size of the partnership, etc. This diversity increased the credibility concerning the richness of the contextual and structural variables taken into account in the study. The variables description enabled the transferability of the results in other contexts [26].

(a) Data collection and audit trail

Typically, case studies combine multiple sources of qualitative and quantitative data, used in a complementary way [22,23] The following sources of qualitative data were used: (1) project submission files, in which projects described how they intended to support the frail elderly to stay at home, with which means (staff and equipment), which partners, etc.; (2) annual semi-structured interviews with the key professionals working in the projects (coordinators, persons responsible for the implementation of the project and frontline workers); (3) yearly questionnaires collecting data about the organisational functioning and about adaptations in the components of their projects. Researchers took the extra precaution to provide feed-back of their own understanding of the data, in order to validate the results and (4) written documentation about projects was also gathered by means of documents publicly available, such as advertising flyers, projects website, etc. An
example of an interview guide can be found in Appendix 9 and the yearly questionnaire in Appendix 8.

It is important to highlight at this point that all these data were self-reported data, gathered by the professionals in the projects, except for the field notes, which were written by the members of the research team. They reflect the perception of the reality of the members of the project teams, i.e., coordinators (nurses, psychologists, physicians and social workers) and frontline workers (also nurses, psychologists and social workers but also nurse assistants, occupational and speech therapists or, in some rare cases, remedial educationist and even a sociologist).

For the organisation of the data, templates were used. They allowed for the standardised collection of data of the seven cases among the five researchers involved in the process (217). Moreover, the method aimed at summarising in a dynamic way all the available information about each project over time. These elements of information were stored under different headings, representing the different contextual and organisational components of the projects, such as the context in which the project was implemented, the preparatory process of the project, the description of the project as planned and, eventually, the description of the project as implemented in real-world conditions, including the adaptive methodology of the projects, the factors having facilitated or hindered the implementation process regarding specific challenges of their context. The main “lessons learned” or emerging themes were also described. They dealt with the implementation process of the project, including the description of the differences between the ‘model’ of the project as planned and the project as implemented in practice. An example of such a template is provided in Appendix 7.

(b) Data analysis

Data were then analysed to allow for explanation building and the proposition of logical models, representing the logic of the intervention, or “programme theory”. As such we aimed at responding to the following questions: What were the objectives of the projects? Which activities were implemented to reach these objectives? Which mechanisms could explain an impact on the frail older people or their informal caregivers’ outcomes? This information, based on the data gathered and summarized in each template, drew upon Ridde and Haddad’s article about pragmatic evaluations of complex interventions (236).

The next step included an across-cases analysis of the projects, trying to identify the essential components of the projects and of the context in (1) achieving their
implementation and (2) being successful in reaching the desired outcomes for the older people. So-called “hard” outcomes, as reported by the projects, were identified (i.e. delaying institutionalization, improving functional status and health, alleviating the burden of their informal caregivers, etc.) but also “soft” outcomes, such as enhancing coping skills, access to adequate information and service options.

Thereafter, the identified components were to be seen from a normative point of view. This means that the researchers described how the projects expected their services to improve older people’s outcomes, if they were delivered in a logical way. Therefore, they looked into the objectives set by the projects, which activities they planned to perform to achieve these objectives and if, according to their statements, they actually did these activities. For each of the components, the researchers proposed four levels of achievement; the lowest score (0) was given to the component in the least favourable situation and the highest score (3) to the most favourable one. These levels of achievement of the normative components were reviewed by another researcher who had participated in the case study analysis. These components were then displayed along with Wagner’s Chronic Care Model (70) that was adapted by the KCE (Belgian Healthcare Knowledge Centre) to the Belgian context (10). The main difference with the original model lies in the fact that the model is translated into activities and that they need some requirements to achieve the effectiveness of the Chronic Care Model (arrows in blue in Figure 16). Only the domains and requirements deemed relevant for the evaluation of case management projects were used, which explains that in the results section, not all domains and requirements of the model are displayed.
Finally, each project was then assessed with the support of the grid by at least two researchers independently. Results were discussed and, in case of disagreement, the discussion went along until consensus was reached.
B. Testing the grid – analysis of multiple correspondences

The grid for the normative evaluation was then tested by the means of a factorial analysis of multiple correspondences (MCA) using STATA 11®. This technique is an extension of the factor analysis of correspondences and allows for the study of the statistical association between several qualitative or categorical variables (237-239). This method explores the relationships among a set of multiple variables in a table by decomposing the deviation from independence of this table (i.e. independence of the variables of the columns against the rows of the table). When performing a correspondence analysis of a table, it is possible to make a graph in which each point represents either a variable of a row or of a column. A row point will be close to a column point if there is an attraction between this row and this column and this attraction is seen by the means of a strong deviation from independence (237). By doing so, it is then possible to identify the responses of the normative grid which show an attraction to each other and build a typology of case management projects. This is done by grouping the modalities of variables which are very closely situated in the graph and calculating then the number of projects sharing the same response modalities. A satisfactory approximation of a type is provided when projects are grouped when sharing at least the half of the maximum response modalities of their type (237). Once the typology is done, so-called supplementary variables are added, such as the profile of the case manager, the geographic location, etc. This avoids a projection of the typology of projects from a priori ideas (237). Because STATA 11® does not allow showing the labels in the graph, Trideux® software was used to display the results of the MCA (240). The significance level for the deviation from independence was set at 5%.
Results

A. Basic description of the case management projects

All case managers in the projects were working as a team, consisting of only nurse case managers (n=7; i.e. 33.3%); nurses and social workers (n=8; i.e. 38.1%); nurses and occupational therapists (n=1; 4.7%) or social workers and other professionals (i.e. psychologists or occupational therapists; n=5 or 23.8%). Whether the case managers were nurses, social workers, occupational therapists or psychologists, they carried out different functions, independently of their initial training. One of the most specific task performed by the case managers in these innovative projects, namely the use of the results of a comprehensive geriatric assessment (InterRAI-HC) for the creation of the care plan, were not more frequently carried out by nurses or case managers’ teams including nurses, compared with non-nurses.

B. Presentation of the normative grid

Based on the qualitative data retrieved in the multiple case studies, and reflecting the perspective of the various actors in the projects, eight domains were identified as the most relevant explaining the success of and the implementation of case management: the appropriateness of the workforce, the tailored service design and organisation, the self-management and support, the community linkages, the appropriate financial incentives, the processes in support of the quality of care, the knowledge management and decision-support and the clinical information tools.

An operational definition and rationale of each domain is provided below and the criteria used to assess the level of achievement of each criterion within these domains are provided in Annex 1.

(a) The appropriateness of the workforce

Professionals of the projects reported that an important requirement to be able to achieve desired results was related to the adequate workforce, i.e. the recruitment of skilled and trained professionals to deliver case management to this population and, as the case manager must be the reference person for the frail older person, stability was also seen as a crucial component. A point that came out recurrently was the fact that the project coordinators were eager to hire an experienced professional, with either an expertise in geriatric care or a specific knowledge about the local resources. Whenever this professional was on sick leave and had to be temporarily replaced, projects favoured experience over a specific profile (e.g. they
preferred to hire an experienced occupational therapist as a case manager instead of a newly trained community nurse). However, in general the preference expressed was for a community nurse, who is supposed to (1) be trained to be able to care for the frail older people in a holistic perspective and (2) have a good knowledge of the resources of the local system, including a clear view on the roles of other (health and social) care providers. Regarding implementation issues, being able to recruit these kinds of professionals was also regarded as important.

(b) Tailored service design and organisation

As these were pilot projects, of which the financing depended on the achievement of their expected caseload, this was seen an important component, that was closely linked to the adequacy of their inclusion or exclusion criteria. For example, some projects expanded their recruitment area to be able to achieve their caseload without changing their clinical inclusion criteria. This could also reflect the flexibility of the project to adapt its inclusion or exclusion criteria to the demands of the potential clients and referrers. Indeed, as the innovative project grew in maturity, the awareness for inclusion criteria allowing the identification of older people to whom the case management would benefit the most, increased. Finally, the decision process regarding the internal organisation of the project itself should be shared with all the actors of the project, because this was seen as a safeguard for the adequacy of the tailored service design and organisation (e.g. related to the adequacy of the inclusion criteria, as described above).

(c) Self-management and support

Even if this was often mentioned as an important feature of the process, the only variable used to assess this dimension was by measuring the degree to which the concerns of the older people and their informal caregivers were considered in the care planning and the degree in which they were involved in multidisciplinary meetings.

(d) Community linkages

To be able to achieve their caseload and to include beneficiaries who were most likely to benefit from case management, the existence of a structural link with organizations that could refer beneficiaries was important. This, in turn, also enabled the referral from the case manager to the services needed by the older people, based on the comprehensive geriatric assessment. This was observed
through formal partnerships with coordination (home nursing agencies) and community agencies (Public Centres for Social Welfare)

(e) The appropriate financial incentives

To benefit from the intervention, the care had to be affordable for the beneficiary. On the one hand, if case management was free for the beneficiaries, the additional services provided by the projects (i.e. psychological support by a psychologist or nursing care provided during the night) were still to be paid by the older people. On the other hand, inadequate financing of the project, because of over- or more frequently, underestimation of the financial cost of staff, could lead to having to accept high workloads, resulting in pressure on the time spent in case management. Furthermore, in the same dimension, financial incentives for general practitioner’s participation was also seen as important, as they are crucial partners in case management and in the Belgian mainly fee-for-service system, participating in coordination activities is not adequately structurally financed.

(f) Processes in support of quality of care

The use of quality or performance indicators was seen as important to monitor both the implementation process and the effectiveness of the project. In most cases, projects planned patients’ satisfaction surveys; along with performance indicators (e.g. number of services delivered per older person, according to their status of dependence). At the beneficiaries’ level, the monitoring of the care plan was seen as crucial to make sure the current organisation of the care was still adequate and this monitoring should be structurally planned. At the same time, provision of feedback about the condition of the frail older people to their general practitioner was in line with this rationale.

(g) Knowledge management and decision-support

Professionals reported that the use of results of research was important to foster high quality care, ideally also leading to the use of evidence-based protocols or guidelines, and when possible shared with professionals outside the project organisation. Intervisions or planned supervisions and multidisciplinary group meetings were viewed as important to enhance the knowledge of case managers.
(h) Clinical information tools

The presence and use of an electronic patient record and a registry, including a list of beneficiaries of the projects and reminders to providers to plan care were seen as important facilitators of the process.

Projects also reported the importance of “soft” outcomes, besides the “hard” outcomes asked for by the NIHDI. Amongst these, the projects identified nine desired outcomes of case management, such as (a) improving health and healthcare literacy (including about the project’s functioning); (b) older people’s, informal and professional caregiver’s satisfaction with care; (c) (health)care providers and frail older peoples’ access to the relevant information; (d) better detection and anticipation of crisis situations; (e) lower threshold for help-seeking behaviours; (f) increasing sense of security; (g) decreasing of social isolation; (h) frail older people’s sense of belonging to a community and (i) increasing coping abilities and sense of control.

C. Testing of the normative grid

In a second stage, a multiple correspondence analysis was performed. Firstly, the 23 categorical variables reported in Table 7 (Appendix 10) were included. By default, STATA uses Burt’s table to display all the variables. The total inertia of the cloud of points depends on the number of modalities and variables in the analysis and was in this case = 0.32. The principal inertia was rather low, i.e. 0.12 and 0.056 for the two first dimensions, predicting a poor level of explanation (i.e. 54.89%) of the total inertia. Secondly, only eigenvalues higher than the mean eigenvalue were searched, as recommended by Benzécri [32], in this case 1/23=0,04. This led to four dimensions. A next step was then to try to show the quality of the representation and the relative inertia of each of the modalities of the two main first dimensions. For this, the weight of each modality and its contribution to the total inertia of the cloud of points was searched. Only the modalities showing the best quality of the representation of the factorial axes and those which were the most contributive were retained (i.e. ≥ 0.04; [32]). They are shown in Table 8.
Table 8. Most contributive modalities to the factorial axes, displayed along the domains of the Chronic Care Model [5]

<table>
<thead>
<tr>
<th>Domains of the Chronic Care Model</th>
<th>Criteria</th>
<th>Abbreviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate workforce</td>
<td>Turnover of the case manager</td>
<td>tur</td>
</tr>
<tr>
<td></td>
<td>Skills of the case managers</td>
<td>ski</td>
</tr>
<tr>
<td>Tailored service design and organisation</td>
<td>Adequacy of the inclusion criteria</td>
<td>ade</td>
</tr>
<tr>
<td>Community linkages</td>
<td>Partnership with coordination centres</td>
<td>par</td>
</tr>
<tr>
<td>Appropriate financial incentives</td>
<td>Financial accessibility to the programme</td>
<td>fin</td>
</tr>
<tr>
<td></td>
<td>Financial incentives to engage the general practitioner</td>
<td>inc</td>
</tr>
<tr>
<td>Processes in support of quality of care</td>
<td>Feed-back to the general practitioner</td>
<td>fba</td>
</tr>
<tr>
<td></td>
<td>Monitoring of the care plan</td>
<td>mon</td>
</tr>
<tr>
<td>Knowledge management and decision-support</td>
<td>Use of evidence-based, multidisciplinary protocols</td>
<td>ebp</td>
</tr>
<tr>
<td></td>
<td>Presence of intervision</td>
<td>int</td>
</tr>
<tr>
<td>Clinical information tools</td>
<td>Use of a registry</td>
<td>reg</td>
</tr>
<tr>
<td></td>
<td>Reminders and prompts to organise the care</td>
<td>rem</td>
</tr>
</tbody>
</table>

These dimensions were confirmed by the graphics made of the analysis, highlighting the attractivity of these responses within the dimensions and their repulsion (or opposition) between these two responses. The threshold was augmented; until the single most contributive response was identified, i.e. the
feedback provided to the general practitioners. In a second stage, the threshold was again lowered to 15% and the responses were grouped by proximity of this most contributive response (feedback to the general practitioner; “fban”), in Figure 17 below.

Three types of projects could be identified, and they are grouped here by the type of response provided to each of the criteria. They are graded from one to three and can be seen as a continuum, going from “social” case management towards “clinical” case management.

Type 1 (right part of the graph in Figure 17)

In this type of case management project, there is no feedback provided to the general practitioner of the beneficiary (fba0), these general practitioners are not involved and there are no indications that the projects thought of it (inc1). Moreover, the turnover rate of the case managers is very high (tur1). The inclusion criteria were reportedly not very adequate (ade0). However, the projects declare that they organise intervisions that include an external supervisor (ebp3). The case manager teams in these types of projects do not include nurses nor social workers.
This led us to view this type of case management as a social strategy, in which the level of integration of the care poorly integrates the clinical components.

Type 2 (in the left corner of the same graph)

The level of feedback to the general practitioner is still very low, as it only includes the information that the beneficiary benefits from case management (fba1). The care plan is poorly monitored (mon1) and there are no protocols available (ebp0). On the positive side, these projects reported that they could recruit beneficiaries to whom case management would benefit the most (ade3); that the professionals delivering case management were adequately skilled (ski2), that their training was adequately sustained by interventions including external supervisors (int3) and the care provided was supported by software assisting the organisation of the care (reg3) but without prompts to providers (rem0). The team of case managers include social workers and a psychologist or an occupational therapist (IDC1). In this type, the focus is on integration of the care at a social level. However, in comparison with the previous type, their intervention is likely to be more supported by the input of the other professionals, as they benefit from interventions including professionals from outside their organisation and the information about the beneficiaries is shared and organized through structured software.

Type 3 (centre of the graph)

This type of projects includes the ones providing a high level of monitoring of the care plan (mon3) and whose professional profile of case manager was the most satisfactory, as they included experienced professionals whose training was supported by regularly planned interventions (int2). Feedback to the beneficiary’s general practitioner, including the results of the comprehensive assessment, was systematically provided (fba3). The work of the case managers was facilitated by the means of formal agreements with coordination centres (par2) and they could rely on shared software for the organisation of the care, allowing queries to sort beneficiaries by priorities and include specific information for the team about the results of the BelRAI (reg2). However, the inclusion criteria for the beneficiaries were not found very adequate (ade1), possibly impairing the benefit the latter could experience from the project. The financial access to this type of case management could be impaired by the cost of the intervention, as they had to pay more than 10€/day for the services recommended by the case managers (fin1). This can be seen as a clinical case management type of projects.
As a result of this typology, the 22 projects were assigned to a type of project if they shared at least half of the response modalities of that particular type. In total, 9% were allocated to the Type 1 case management, 41% to the Type 2 case management and 50% to Type 3.
Discussion

The method we used proved extremely helpful for the rigorous elaboration of a normative grid. It enables the identification of components of case management interventions for older people living at home that contributed the most to the success—or the failure—of their functioning and implementation from the point of view of the projects implementers. Moreover, this method allowed us to shift away from a priori assumptions about the likelihood of success of a case management process based on too obvious factors, such as the professional profile of the case managers.

This led to the distinction between three types of case management designs, in which the first type, acting in a social dimension, was marked by the poor level of collaboration with the beneficiaries’ general practitioner. This was also associated with a high level of turnover rate of case managers, which were nor nurses, neither social workers. The inclusion criteria chosen were not seen as adequate while it is expected that case management will be more profitable to people deliberately identified as those with complex care needs (5, 10, 33). The fact that in this type of case management interventions, interventions were organised can maybe be seen as a compensation mechanism to counterbalance the lower skills of case managers regarding the complex care needed by this population (241). An assumption regarding the high turnover rate is that this can both be a result and the cause of a low quality of case management. Indeed, on the one hand, if case managers perceive their care being of low quality they will also be dissatisfied with their job, in its turn linked with low retention rates. On the other hand, high turnover rates impede the building of the trusting professional relationships between the different care providers (242). In the second type of case management, where the focus is also on the integration of the care at a social level, the intervention is likely to be more supported by the input of the other professionals, as they benefit from intervisions including professionals from outside their organisation and the information about the beneficiaries is shared and organized thanks to a structured software. Therefore, communication flow between professionals about the beneficiaries’ complex health care needs is likely to be more fluent than in the previous group (243). Eventually, in the third type of case management with a more clinical focus, the level of collaboration with other professionals was facilitated by external factors, such as formal agreements with other primary care agencies, the use of software for the organisation of the care, including sharing the information about the beneficiaries with other professionals. The collaboration was also facilitated by internal factors, such as the professional skills of the case managers, supported, by former experiences regarding geriatric care and ongoing interventions.
The monitoring of the care plan, which in itself was supported by the means of evidence-based, multidisciplinary protocols was likely to provide positive results in this type of projects, as this enabled an adequate view from the case manager on the possible instable situation of the beneficiary and propose tailored, evidence-based interventions. In its turn, this could lead to the prevention of acute exacerbations or, at least, attenuate their effects. This monitoring should also occur in other domains, such as monitoring of vital or clinical parameters (e.g. weight gain in kidney failure, glucose levels in diabetes), medication intake (e.g. chronic heart failure), depression symptoms, etc. It should be stressed that the aforementioned monitoring cannot take place without the close involvement of the frail older people’s primary care physician, who should agree with what has to be monitored and when, in order to be able to link this function of case management adequately with the other functions of case management. This means that the engagement of the primary care physician goes far beyond what was reported by most of the case management projects and may also be seen as a suboptimal way of providing case management in the observed projects (224).

Some limitations are to be mentioned to the method. Firstly, the sample limited to Belgian context calls for warnings about the transferability of the results of the MCA of case management projects in other countries. We countered this weakness by providing a rich description of the interaction of the components, allowing the reader to contextualise the information provided. Secondly, the frontiers between the types of projects are fuzzy. We indicated the response modalities in the close vicinity of the first response modality chosen, reflecting an attraction between these responses in the multiple component analysis. This means that the result of the typology does not represent an exclusivity of the response modalities. It is a simplification of the reality. In other words, projects attributed to a given type can show response modalities occurring in other types. The strength of this approach lies mainly in the synthesis of the data. This allows for the further testing of hypotheses, namely that clinical case management projects (Type 3 projects) will bring about better beneficiaries’ outcomes. This will be described in another paper.

Conclusion

Other tools have been proposed to measure the quality of chronic care, based on the Chronic Care Model, such as the ACIC tool first proposed by Bonomi et al. (243), measuring the quality improvement, or the PACIC tool (244), reflecting the users’ point of view of the quality of care. Similarly, other useful tools, such as the Pacala scale to assess the intensity of case management (245) have been proposed. To our
knowledge, this is the first attempt to empirically construct a comprehensive scale, based on a theoretical framework, the Chronic Care Model, considering implementation-linked, as well as structural and process-related components that could explain the success or failure of newly started case management projects aiming at community-dwelling frail older people.

The stepwise methodology, based on a rigorous case study analysis, along with a multiple correspondence analysis enabled the elaboration of a multimodal analysis grid, which can be used to make explicit important components of newly implemented case management projects in primary healthcare systems and, in a later stage, test if these components are related with better beneficiaries’ outcomes.

Competing interests

The authors declare that they have no competing interests.

Authors’ contributions

TVD, JM, SC and OS participated in the design and coordination of the study. TVD, OS, RR, JoM, AD, SD, PM and JM participated in the multiple, embedded case study. TVD performed the multiple correspondence analyses. TVD and SA drafted the manuscript. All authors reviewed and approved the final version of the manuscript.

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Overall Discussion

Summary of findings

With this dissertation, we wanted to explore the effectiveness of case management for home-dwelling frail older people in Belgium on outcomes such as delaying of definitive institutionalisation and other outcomes. Because of the complexity of case management and the system in which it occurs, we focused on the question of (1) What does the international literature tell us about the overall effectiveness of case management for older people living at home with complex care needs? More precisely, why, how and for whom is case management effective in improving desirable outcomes? (2) What does the empirical data, collected during the evaluation of the Protocol 3 projects in Belgium – projects aiming at helping frail older people to stay at home as long as they wish – tell us about the overall effectiveness of case management? More precisely, why, how and for whom is case management effective in improving desirable outcomes in Belgium? (3) What are the different types of case management for frail older people in Belgium? Why, how and for whom can these different types be effective?

The goals of case management, the tasks and components of case management, the methods of its implementation and outcome measures used can vary immensely (24). A solution could have been to distinguish specific components of case management and describe the effect of case management, based on a clustering of so-called “essential” components. However, as we have shown in the introduction, case management is a complex intervention (even a complex adaptive system) and as such, the result is not simply the sum of its parts (or, in other words, its effects are non-linear). Therefore, other approaches are needed, such as realist approaches, where mechanisms can be identified, offering an explanatory mid-range theory about the relationship between context and outcome. Indeed, this approach has the potential to provide insights that go beyond the narrowly experimental paradigm of the randomized controlled trial (246). These are the reasons why we proposed using a realist approach employing several methods.
Why is case management effective?

To answer this question, we first conducted a realist synthesis. This synthesis showed how case management is a process with a long series of functions articulated within a stepwise chain. This chain illustrates the process starting with the initial intuition that older people with complex care needs require integrated care into case management through the chain from care providers from different disciplines, organisations, care levels, to the case manager and, finally, to the older people and their informal caregivers. In this chain, the first stage is very important and calls for a population-based approach, in which people with complex healthcare needs can be identified and aided by a professional case manager, if needed. If this does not happen, there is a risk of so-called ‘radar care’, in which the health and well-being of a person risks deterioration because of undetected healthcare needs and, because of this lack of detection, misalignment of care provision and care needs. One of the consequences are avoidable costs, as in emergency care (emergency room visits or out-of-hours health care) (245).

At each stage, the stakeholders must make decisions on how to respond to the programme strategy. Successful implementation of case management needs a careful analysis of the many mechanisms at stake in the various steps of the chain and this chain is only as strong as its weakest link (247). The review has shown that some key mechanisms emerge in each of these steps that make case management implementable, influencing adhesion - or not - to the case management process by the different stakeholders. For instance, in the first step (seeking eligibility criteria for an older person to have his case managed by a professional), the two mechanisms identified that could explain adequate enrolment were (a) proactive case-finding strategies and (b) intrinsic motivation. The enabling context to trigger the first mechanism (proactive case-finding strategies) found in the realist synthesis was the presence of incentives for flagging systems. Such a flagging system is related to ‘External Policies & Incentives’ and was also found to increase the likelihood of implementation success in other frameworks, such as the CFIR (Consolidated Framework on Implementation Research Constructs, (75)). In the realist evaluation performed in the Belgian Protocol 3 case management projects, the mechanism of intrinsic motivation was triggered by the profile of the “case” itself, where there should be enough room for improvement. In other words, in a situation where the care is already optimal (i.e. optimal alignment of care with the needs, resources and preferences of the beneficiary), professional case
management should be discontinued\textsuperscript{11}. However, this claim should be viewed with caution in the case of older people with neurodegenerative conditions, such as Alzheimer’s dementia, because of the ineluctable deterioration of their condition. Consequently, their needs for care, along with their informal caregivers’ need for care, will shift and become more important over time, with the result that there is once again a risk of misalignment between the need for and supply of care. When viewed through the lens of the CFIR, motivation based on the stakeholders perceived relative advantage was noted in our study through perception of sufficient room for improvement (75).

Other important mechanisms pertained, but were not limited, to (in the assessment phase, again): \textit{Room for improvement}; (in the care planning phase): \textit{Acceptability} (for the older person, for his informal caregiver and for the other care providers); (in the integrated care delivery phase): \textit{Credibility} of the case manager and \textit{Trust}; (in the older people’s response phase): \textit{Sense of mastery} of older people and their informal caregiver.

\textsuperscript{11} This means that (a) if the older person and his informal caregiver’s condition still match the level of care they are receiving, (b) if they are still satisfied with the arrangements, (c) if the desired outcomes are achieved and, finally, (d) if the appropriate care providers are involved in the care delivered.
For whom and how can case management for community-dwelling older people be effective?

Second, the realist evaluation – by means of a multiple, embedded case study - of case management’s effectiveness in achieving desirable outcomes for frail, community-dwelling older people showed the relevance of the use of the capability and perceived social support framework as a mid-range theory. These two mechanisms enabled us to explain why older people with more severe cognitive impairment had more need for clinical case management (i.e. by a team at least including nurses with advanced care skills), while older people with no difficulty in ADL or IADL functions could in the best cases manage their care on their own and in the worst cases need a social type of case management (i.e. without nurses with advanced care skills).

During this process of identification and testing of mid-range theories explaining the likely effectiveness of case management in Belgium, we also identified 23 interacting components that were important to case management. These components were recognized by the team of researchers and civil servants as crucial components in the process of community case management for frail older people in the country. These components were stratified along the expanded version of Wagner’s Chronic Care Model that was adapted for Belgium by the KCE (8).
What are the different types of case management for frail older people in Belgium? Why, how and for whom can these different types be effective?

Third, the typology built by the statistical analysis of the components identified by the previously described case study led to the distinction between three types of case management designs, in which the first type, acting in a social dimension, was marked by the poor level of collaboration with the general practitioner. This was also associated with a high turnover rate of case managers, who were neither nurses nor social workers. In the second type of case management, where the focus is also on the integration of the care at a social level, the intervention is likely to be better supported by the input of the other professionals. They participate in reflexive sessions with peers, even with professionals from outside their organisation and the information about the beneficiaries is shared and organized thanks to a structured software. Therefore, communication flow between professionals about the beneficiaries’ complex health care needs is likely to be more fluent than in the previous group (243). In the third type of case management with a more clinical focus, the level of collaboration with other professionals was facilitated by external factors, such as formal agreements with other primary care agencies, the use of software for the organisation of the care, including sharing the information about the beneficiaries with other professionals. The collaboration was also facilitated by internal factors, such as the professional skills of the case managers, supported by previous experience in geriatric care and ongoing reflexive sessions with peers.

The overall synthesis of these findings is summarized in Figure 18. These also illustrate the iterative research process in response to the research questions.
Figure 18. Summarized findings of the dissertation. Each frame represents a different chapter.
Comparison with existing literature using a realist approach

To our knowledge, this is the first time an in-depth analysis using a realist approach has been made to explore the question of the effectiveness of case management for frail, community-living older people. We combined a realist review identifying mid-range theories in the international literature (largely dominated by North-American healthcare models) with a realist evaluation identifying mid-range theories for this intervention implementation in Belgium.

Comparison with existing literature regarding interventions addressing the fragmentation of health care for older people living at home

Care of frail and dependent older adults with multiple chronic conditions is a major challenge for health care systems. Case management is only one of the possible options to address the care needs of this population, who need care from multiple providers. Case management is one of the *individual* strategies that may be employed to progress towards integrated care. Other strategies have also been investigated, such as care coordination, preventive health checks and care home liaison; in-home geriatric assessments performed by a physician, long-term coordinated follow-up, and availability of a round-the-clock geriatric call service (248, 249). For services, which linked hospital- and community-based care, those services include discharge planning, information sharing and rehabilitation services. However, for older people whose care needs and wishes are not met by the care provision, due to the complexity of their case, case management is a viable option in the most complex cases. Therefore, the careful selection of what makes a case complex is key, as was shown in the realist synthesis. This form of integrated care should be offered only for those cases where professional case management can improve the situation.
The Kaiser Permanente healthcare company has made this point in a highly visual way through the pyramid of care provision(250).

In addition to these individual strategies for developing integrated care listed above, group- and disease-specific strategies have also been described, such as PRISMA (Canada (128)), the integrated health and social care teams in Torbay (UK (251)), the integrated care teams in Rovereto and Vittorio Veneto (Italy (174)), integrated care in the Basque country (Spain (252)). Disease-specific strategies for integrated care have also been offered, such as for diabetes mellitus, cardiovascular diseases, COPD and bronchial asthma (253). However, all these strategies include a professional case manager in some way or another, which makes the scope of this dissertation even more relevant.

The results of the papers were not very surprising, because mid-range theories of capability to stay at home and social support and their association with case management are quite familiar associations in integrated care working (69).

We believe that theoretical development based on empirical data collected in Belgium, at the same time as comparing mid-range theories with the international literature, can have useful implications in Belgium. Indeed, the current healthcare
reforms and the rapid changes they imply for clinicians and managers need robust explanatory models to base their decisions upon. For instance, during the recent “Conferentie Eerstelijnszorg” held in Brussels on 16 February 2017, the health minister from Flanders presented professional case management as the sole means of integrating care for people with complex chronic conditions, in addition to care coordination by frontline professionals (254). Careful description of the explanatory models can help all stakeholders (decision-makers, managers and clinicians) to make the correct decisions about the way to implement case management in Belgium, while the explanatory model will help to consider the importance of contextual elements in the implementation. Currently, care coordinators are employed by sickness funds, home care organisations, etc. and case managers should use this existing context to implement their process and not work as if they did not exist.
Reflections of the frameworks

We will only discuss two frameworks here: the expanded Chronic Care Model and the Complex Adaptive Systems theory (10, 23). The other frameworks are linked to initial program theories and theories as the result of the realist approach and, as such, described and discussed within the scope of the programs they belong to.

First, the (expanded) Chronic Care Model proved to be a very useful framework because it operationalizes a vision of integrated care that puts the emphasis on the patient and his life goals (as opposed to his care goals). Moreover, the model is very much in line with international developments and publications within the field of integrated care.

Second, the Complex Adaptive Systems theory also proved to be a useful means of viewing the case management processes which share all ten tenets of CAS (see the section “Case management as a complex adaptive system”). It was also THE rationale for the use of the realist approach. Indeed, during the whole evaluation process, we focused on the adaptations necessary to the case management projects to ‘fit’ within the wider system in which case management was embedded. Indeed, to cope with the issue of evaluating a complex adaptive process such as case management, linear models using successionist explanations should be abandoned and make room for generative causal pathways, as in our case. However, because they depend on individuals’ and groups’ choice-making-capacity, the emergence of mid-range theories is always highly conditional. For instance, during the realist evaluation, the (many) researchers and stakeholders engaged had no preconceptions about the adequacy of case management and its impact on the different populations of older people, or modalities of its implementation. Other stakeholders, perhaps with a political agenda or other constraints, might come up with other mid-range theories. However, using this lens also implies some limits, as discussed in the next section.
Strengths, limitations and future research directions

First, we conducted a SWOT analysis with active stakeholders. We were rapidly confronted with the issue of selecting suitable stakeholders, in this case the representatives of active professionals involved in care at the clinical or managerial level. In this study, we relied on the existing network of the Federal Health Care Knowledge centre to recruit stakeholders. While the most important professional groups working at the primary care level (i.e. general practitioners and nurses) were adequately represented, this was not the case for other professional groups, such as physiotherapists and representatives of social care. We acknowledge that this misrepresentation of the other professional groups might have impacted the results of the SWOT analysis, however slightly. A matter of greater concern could have been the power balances within the focus groups. Indeed, during the same sessions, specialists, general practitioners, nurses and representatives of patient organisations met together and there is a theoretical risk that the power balance, as is seen in the Belgian health care system, would be reflected there. As described in the introduction, a characteristic of the Belgian system is the relation between healthcare providers, in which some ‘upper professions’ are recognized, i.e. physicians and clinical psychologists, who can practise completely independently. The other professional groups can be called ‘support’ professions (i.e. nurses, physiotherapists) because at least a part of their practice needs a prescription of another care provider (i.e. a physician), with whom they have a hierarchical relationship (7). Therefore, there is a risk that the power balances between these groups can affect the freedom of speech within the focus groups. The moderator was very aware of this risk and took extra efforts to frame the context of the focus group, in which no ‘good’ or ‘bad’ answer could be provided and in which everyone was invited to speak in turn and with respect for everyone else’s position. On the other hand, this mixed group allowed the professionals of these different groups to express their perspectives in each other’s presence, which enabled them to speak to each other instead of speaking only about each other.

Second, we came up with a set of studies to try to fill the gap in the literature by means of a realist approach. This approach was particularly relevant because the results of systematic reviews evaluating the effectiveness of case management for frail, community-dwelling older people remain consistently inconclusive in view of the considerable heterogeneity of interventions, outcome measures, and measurement points, (24). Moreover, in line with the editorial of 2015 in the Cochrane library about the latest systematic review evaluating the effectiveness of case management for people with dementia, we agree that for many studies there was not enough information to clearly describe what was done (63, 255).
Therefore, we believe that the case study approach was a good response to this problem. It provided extensive information not only about the components, the resources, the activities of case management in this context, but also about the context, the intended outcomes and the mechanisms through which these outcomes could be reached in each context.

The approach we used in the realist evaluation was indeed very much linked to the beneficiary-related outcomes, themselves linked to the attributes of the services needed, which is a rather new way of thinking about care evaluation. This should receive more prominence in the design of care for older people, so that the care provided focuses on managing at home, on preventing deterioration and maintaining wellness, instead of focusing solely on service utilisation and preventing institutionalisation.

To develop the programme theory, we probed the literature and discussed with stakeholders. This is consistent with one of the approaches described by authors favouring inductive methods, such as Eisenhardt (215), who also suggests triangulating the findings by means of multiple data collection methods and analysis, which we also did. The fact that many researchers were involved in the discussion enabled different perspectives to be exchanged. Finally, because we looked for patterns across studies in the realist synthesis and across cases in the multiple, embedded case study research, we were forced to look beyond initial impressions and see the evidence through multiple lenses.

Realist methods are always work in progress (208). Indeed, because the number of findings is so important, it is not possible to investigate in depth all the mechanisms uncovered in the realist synthesis and evaluation within the time constraints imposed by a Ph.D. thesis. Therefore, we plan to further test the typology of case management by means of an impact analysis, available through the ongoing evaluation of the Protocol 3 projects.

Using the lens of CAS to evaluate case management implies some limits regarding adaption. Indeed, the constraints of the implementation of case management include the legal and financial constraints as imposed by the funder (NIHDI). The funding of the projects was based on a submission file and occurred within a fixed envelope. This meant that when adaptions were needed and asked for by the case managers or project coordinators, this was nearly impossible. This strongly limited the flexibility of the implementation process of case management. This led us to think that, had we known of Normalisation Process Theory at the onset of the analysis, it would have been a useful addition to our evaluation. Indeed, this theory
specifically focuses (amongst other things) on the flexibility and elasticity of the context as an important mediator for the success of the implementation process (256).

Finally, it is also important to highlight that the findings presented here are shown from the perspective of the author, a registered specialist nurse with a Master’s in public health. A researcher performing this study with a different training background would probably come up with different findings and certainly with a different presentation of the findings (48). This leads us to offer some reflections on our development as an advanced researcher in public health, during the completion of the thesis.
Personal reflections during the process of the thesis

First, the option for a PhD.

I was strongly advised to start a PhD thesis during the evaluation of the Protocol 3 projects, on the basis that it was not an option to continue to evaluate interventions at the university without starting a thesis. Financial resources are scarce in the academic world and the funding received for the evaluation of the Protocol 3 studies should also been used for the financing of a PhD thesis. Making a PhD in this context was a real challenge for different reasons.

Second, the choice of the theme

The overall design of the study had already been settled by the consortium of researchers from the different universities. The challenge was therefore to establish a specific space for this dissertation, without overlapping with what was done elsewhere in the evaluation and while remaining close to the centre of gravity of the whole process. The first choice was to focus on the impact of the Protocol 3 projects on the frail older person’s main informal caregiver. Being an informal caregiver of a child with multiple chronic conditions, I had personal experience of the burden related to multiple treatments and conditions that can affect the informal caregiver. Investigating the impact of these multiple interventions on the perceived burden of the informal caregiver made sense to me. However, another researcher from the consortium also wished to investigate this topic, so I preferred to withdraw. The main criterion for choosing another topic would be that it should be useful to the funder and to the other members of the consortium. The choice for case management was appealing because of (a) the different understandings of the concept in Belgium, (b) the lack of evidence of its effectiveness in this population and (c) its closeness to the nursing paradigm of holistic approach to the person and his environment which is, after all, my basic training.

Third, the choice of the realist approach

This was probably the easiest part (the choice, not the approach) because the method is very appealing to researchers such as myself, who have had the opportunity to work as clinicians and managers for several years – I have been working in hospitals and at home for several years, both as frontline nurse and as head nurse. Having worked in the ‘real’ world, I found the positivist paradigm used in most quantitative research insufficient to account for the complexities of real world evaluation, for obvious reasons. Indeed, the robustness of the internal
validity of the quantitative studies, however complicated the design, is always at the cost of an oversimplification of the reality and therefore, inversely proportional to the robustness of its external validity. Therefore, when my supervisor suggested this approach to evaluating the effectiveness of case management, I was immediately seduced.

**Fourth, the articulation of the realist approach with the overall evaluation**

As stated before, the realist approach was not part of the intended design of the study protocol for the scientific evaluation of the Protocol 3 projects. However, the case study design was, and we were lucky to be able to draw upon the first analyses of the case studies to dig into their program theories. Better still, we could engage with the stakeholders involved in the overall evaluation, to identify and refine the initial theories. This meant that the obvious choice to deepen the scope was to conduct a realist synthesis, to be sure of not missing important CMOCs that were described elsewhere. In parallel, we refined the CMOCs within the case studies of the case management projects of the Protocol 3 evaluation, with the other researchers.\(^{12}\)

**Fifth, if I had the opportunity to do it all over again, what would I do differently?**

Two points might have been helpful in this process. First, the inclusion of the perspective of end users, i.e. frail older people and their informal caregivers. This is an important limitation of the evaluation of the Protocol 3 projects of the first call. Fortunately, their perspective was systematically investigated during the evaluation of the Protocol 3 projects of the second call (2014-2017). Their input is invaluable because they make it possible to weight the importance of some CMOCs against others and will help decision-makers to make their decisions about recommended interventions based on their perspective as well. Second, the use of learning communities to test and refine the mid-range theories identified during the course of the evaluation. Here, also, we were able to make adjustments during the evaluation of the projects of the second call. Twice a year, review meetings are held with case managers of all the Protocol 3 projects, officially to identify the best practices they were able to test during the implementation of case management in their own, local contexts. During these meetings, we also encourage them to

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\(^{12}\) As no other researcher within the consortium or my research institute at the university was familiar with the realist approach, as described by Pawson and Tilley, I looked for support elsewhere and was very much helped by the information gathered through the workshops organised by the University of Liverpool (Centre for Advancement in Realist Evaluation and Synthesis – CARES), which I was fortunate enough to be able to attend.
discuss the mid-range theories identified, during ‘realist’ discussions, i.e. by asking them their views on identified CMOCs. Even if the ‘realist’ exercise with realist-naïve clinicians is not an easy one – the exercise calls for repeated explanations about what a mechanism is, or what a context is – the results make the effort worthwhile.
Conclusion and implications for practice

The table below (Table 7) summarizes some key points about case management we have chosen to present. We want to highlight that we only reported the evidence on what we considered to be decisive points gleaned from the literature synthesis and empirical research conducted in Belgium on this topic. We want to stress first and foremost the fact that case managers should be aware of the mechanisms responsible for desirable outcomes for this population, such as capability and perceived social support. Interventions by case managers should focus on those mechanisms, and also on decision points that are part of the explanatory chain of successful case management.

Table 7. Case management - decisions and consequences

<table>
<thead>
<tr>
<th>Decision point</th>
<th>Immediate, intermediate and long term consequences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case-finding strategies</td>
<td>At the population level, proactive identification of complex cases should be carried out. However, preventive case management hampers the acceptability of the intervention and automated flagged system are not sensitive enough to identify complex cases, as there is more to complexity than (biomedical) multimorbidity alone. Case-finding strategies should be carried out at the whole primary care system level and not be the prerogative of case managers or primary care physicians.</td>
</tr>
</tbody>
</table>

Screening tools to assess for eligibility for case management in frail, community-dwelling older people may support the clinical judgment of professionals and should encompass(69):

- Physical and cognitive functioning, assessing a range of physical activities such as self-care, walking, climbing;
- Physical role, assessing the effects of physical and cognitive health on the patient’s life roles and regular daily activities;
- Bodily pain, assessing the severity of bodily pain and its interference with work inside or outside the home;
- General health, assessing the perception of general health, health outlook and resistance to illness;
- Social functioning, assessing the extent and frequency of limitations in social activities due to health problems;
- Emotional role, assessing the effects of emotional problems on the patient’s life roles and regular daily activities;

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<table>
<thead>
<tr>
<th>Decision point</th>
<th>Immediate, intermediate and long term consequences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mental health</strong>, assessing anxiety, depression and loss of behavioural/emotional control versus psychological well-being.</td>
<td></td>
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<tr>
<td>Tools needed for the beneficiary’s assessment of his needs, preferences and resources</td>
<td>There seems to be a consensus about the need to perform comprehensive, standardised assessments, linked to electronic patient records and accessible to all care providers caring for the beneficiary. The sensible nature of the data calls for adequate safety and privacy measures. This assessment should be supervised by the case manager.</td>
</tr>
<tr>
<td>Type of case management by a professional case manager</td>
<td>The type of case management needed should depend on the complexity of the case. Clinical case management, the most intensive type of case management, should be reserved for the most complex cases and its relevance should be assessed regularly. Indeed, the case management should allow the evaluation of the alignment of resources to the needs and preferences of the older person, including the need for professional case management.</td>
</tr>
<tr>
<td>The caseload per FTE professional case manager</td>
<td>A mean caseload of 40 older people per FTE case manager was reported as acceptable by the Protocol 3 projects. Indeed, among this caseload, a case-mix of profiles of older people can be observed. Typically, at inclusion, the case manager discovers a ‘crisis’ situation (i.e. an unstable situation). The management of this situation will require a high level of mobilisation of resources: frequent home visits, sometimes preceded by hospitals visits before discharge, numerous contacts with the family and health and care providers, data collection for the systematic geriatric assessment, etc. However, once the care provision is in place and well-aligned to the desires and needs of the older person and his family and well-coordinated, the case manager can monitor the situation from a distance, delegating a part of the close monitoring to the other care providers. By including a case-mix of people needing a more or less intensive follow-up, the caseload of 40 per FTE case manager was estimated to be an acceptable workload, allowing an appropriate level of monitoring. This number should of course be re-evaluated when case management is provided in rural areas, where distances are longer (e.g. Province of Luxembourg).</td>
</tr>
<tr>
<td>The profile of the case manager should be linked with the type of case management needed</td>
<td>By default, the older person should be the case manager. When this is not possible for any reason (complexity of the case, cognitive, mental issues, health illiteracy, etc.), the second in line is the informal caregiver. If the informal caregiver cannot be the case manager, the case manager should be the general practitioner. Only if these three stakeholders cannot be the case manager of the older person should a professional case manager be appointed.</td>
</tr>
</tbody>
</table>
Credibility of this professional case manager seems to be key, rather than (only) the initial training. If he/she is known by the beneficiary already, this will help in building a trustful relationship, facilitating the support provided by the case management process. The same mechanism operates towards other professionals. Case management carried out by nurses with a specific training in geriatric assessment, in caring for individuals with geriatric syndromes at home and their informal caregivers, in care coordination, in local care resources and having the skills and competencies to be sufficiently credible in their case manager role, is more likely to lead to adherence to interprofessional agreed protocols and interprofessional continuity of care.

Training for case managers in Belgium
However, to date, training for nurses in Belgium is not conducive to carrying out this case manager role in the community, because it does not aim to teach the necessary competencies (i.e. knowledge, aptitude and attitude) for exercising a credible leadership role in community care. Indeed, to date, the legal framework (art. 78 of the Law on the exercise of healthcare professions in Belgium – 10/11/1967), however much amended during the nearly 50 years of its existence, is very much task-focused and not conducive to developing the systemic knowledge required for the case manager role.

Financing of case management
Organisational neutrality should be encouraged, so as to not to be perceived as a threat to existing divisions (e.g. disciplines, organisations, ideological silos or turf wars).

Formal agreements between partner organisations
When case management does not come as part of a health maintenance organisation (as, e.g., in the USA), it involves multiple agencies and can be adequately supported by formal agreements between healthcare organisations in a given area, especially if they are involved in the making of interprofessional protocols. The compatibility of case management with a primary care, network-guided as opposed to an institution-guided configuration of the healthcare has to be discussed among the different partners and agreements have to be found, in order to facilitate a patient-centred, integrated care delivery.

Interprofessional collaboration
Incentives for interprofessional collaboration, such as structural and financial incentives for independents’ participation in multidisciplinary meetings, are crucial to supporting the paradigm shift needed towards interprofessional collaboration.

In view of what we uncovered during this stepped study, we would recommend further exploration of the different mechanisms identified during the process of the
realist synthesis regarding all steps of the synthesis. The results of such research(es) could provide valuable insights for a theoretical framework to lay the grounds for the delivery and conditions for its delivery, such as (inter)organisational features, financing and training of case managers for this population in Belgium.
## List of abbreviations

<table>
<thead>
<tr>
<th>Abbreviations</th>
<th>English</th>
<th>French</th>
<th>Dutch</th>
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<tbody>
<tr>
<td>ADL</td>
<td>Activities of Daily Living scale</td>
<td>Activités de la vie journalière</td>
<td>Activiteiten van het dagelijkse leven</td>
</tr>
<tr>
<td>BelRAI</td>
<td>Belgian Resident Assessment Instrument, the validated version of InterRAI- Home Care for Belgium</td>
<td>Application web BelRAI, la version validée pour la Belgique de l’outil InterRAI Home Care</td>
<td>BelRAI web applicatie, de voor België gevalideerde versie van InterRAI-Home Care</td>
</tr>
<tr>
<td>C</td>
<td>Context</td>
<td></td>
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</tr>
<tr>
<td>CAPS</td>
<td>Clinical Assessment Protocols</td>
<td>Protocoles d’Analyse Clinique (CAP)</td>
<td>Klinische Analyseprotocollen (CAP’s)</td>
</tr>
<tr>
<td>CCSAD</td>
<td>Coordination centre for care and services at home</td>
<td>Centre de Coordination de Soins et de l’Aide à Domicile</td>
<td>Coordinatiecentrum voor thuiszorg en welzijn</td>
</tr>
<tr>
<td>CGA</td>
<td>Comprehensive Geriatric Assessment</td>
<td>Evaluation gériatrique globale</td>
<td>Globale Geriatrische evaluatie</td>
</tr>
<tr>
<td>CM</td>
<td>Case Manager</td>
<td>Gestionnaire de cas</td>
<td>Zorgcoach, Zorgtrajectbegeleider</td>
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<tr>
<td>CMSA</td>
<td>Case Management Society of America</td>
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<tr>
<td>CPAS</td>
<td>Public Municipal Social Service Department</td>
<td>Centre Public d’Action Sociale</td>
<td>Openbaar Centrum voor Maatschappelijk Welzijn</td>
</tr>
<tr>
<td>CPS</td>
<td>Cognitive Performance Scale</td>
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<tr>
<td>DRS</td>
<td>Depression Rating Scale</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EHR</td>
<td>Electronic Health Record</td>
<td>Dossier patient électronique</td>
<td>Electronisch patiëntendossier</td>
</tr>
<tr>
<td>FTE</td>
<td>Full-Time Equivalent</td>
<td>Equivalent Temps Plein (ETP)</td>
<td>Voltjids Equivalent (VE)</td>
</tr>
<tr>
<td>FOP</td>
<td>Frail Elderly People</td>
<td>Personne Agée Fragile</td>
<td>Kwetsbare Oudere</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
<td>French Description</td>
<td>Dutch Description</td>
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</tr>
<tr>
<td>GDT</td>
<td>Centre for integrated home care services</td>
<td>Service Intégré de Soins à Domicile</td>
<td>Geïntegreerde Dienst voor Thuisverzorging</td>
</tr>
<tr>
<td>GP</td>
<td>General Practitioner</td>
<td>Médecin généraliste</td>
<td>Huisarts</td>
</tr>
<tr>
<td>HC</td>
<td>Home Care</td>
<td>Soins à domicile</td>
<td>Thuiszorgdiensten</td>
</tr>
<tr>
<td>HCCC</td>
<td>Home Care Coordination Centre</td>
<td>Centre de Coordination de Soins et de services à domicile (CCSSD)</td>
<td>Coördinatiecentrum voor diensten en zorg aan huis</td>
</tr>
<tr>
<td>I</td>
<td>Intervention</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ICG</td>
<td>Informal Caregiver</td>
<td>Aidant informel</td>
<td>Mantelzorger</td>
</tr>
<tr>
<td>ISHC</td>
<td>Integrated Services Home Care</td>
<td>Services Intégrés de Soins à Domicile (SISD)</td>
<td>Geïntegreerde Diensten Thuisverzorging (GDT / SEL)</td>
</tr>
<tr>
<td>KCE</td>
<td>Belgian Healthcare Knowledge Centre</td>
<td>Centre Fédéral d’Expertise des Soins de Santé</td>
<td>Federaal Kenniscentrum voor de Gezondheidszorg</td>
</tr>
<tr>
<td>M</td>
<td>Mechanism</td>
<td></td>
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</tr>
<tr>
<td>MDM</td>
<td>Multi Disciplinary Meetings</td>
<td>Réunions multidisciplinaires</td>
<td>Multidisciplinair overleg</td>
</tr>
<tr>
<td>NIHDI</td>
<td>National Institute for Health and Disability Insurance</td>
<td>Institut National Assurance Maladie et Invalidité (INAMI)</td>
<td>Rijksdienst Instituut Ziekte en Invaliditeitsverzekering (RIZIV)</td>
</tr>
<tr>
<td>NH</td>
<td>Nursing Home</td>
<td>Maison de repos et de soins ou maison de repos pour personnes âgées</td>
<td>Rust- en verzorgingstehuis of rusthuis voor bejaarden</td>
</tr>
<tr>
<td>O</td>
<td>Outcome</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OCMW</td>
<td>Public Municipal Social Service Department</td>
<td>Centre Public d’Action Sociale</td>
<td>Openbaar Centrum voor Maatschappelijk Welzijn</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
<td>Organisation pour la Coopération et le Développement économique</td>
<td>Organisatie voor de economische samenwerking en ontwikkeling</td>
</tr>
<tr>
<td>OT</td>
<td>Occupational therapist</td>
<td>Ergothérapeute</td>
<td>Ergotherapeut</td>
</tr>
<tr>
<td>PC</td>
<td>Project Coordinator</td>
<td>Coordinateur de Projet</td>
<td>Project coordinator</td>
</tr>
<tr>
<td>PCP</td>
<td>Primary Care Provider</td>
<td>Médecin Généraliste</td>
<td>Huisarts</td>
</tr>
<tr>
<td>PMSSD</td>
<td>Public Municipal Social Service Department</td>
<td>Centre Public d’Aide Sociale (CPAS)</td>
<td>Openbaar Centrum voor Maatschappelijk Welzijn (OCMW)</td>
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<tr>
<td>P3</td>
<td>Protocol 3 Projects</td>
<td>Projets Protocole 3</td>
<td>Protocol 3 Projecten</td>
</tr>
<tr>
<td>RAI</td>
<td>Resident Assessment Instrument</td>
<td>Outil d’évaluation global gériatrique</td>
<td>Global geriatrisch assessment tool</td>
</tr>
<tr>
<td>SISD</td>
<td>Centre for integrated home care services</td>
<td>Service Intégré de Soins à Domicile</td>
<td>Geïntegreerde Dienst voor Thuisverzorging</td>
</tr>
<tr>
<td>SW</td>
<td>Social Worker</td>
<td>Assistant social</td>
<td>Maatschappelijk medewerker</td>
</tr>
<tr>
<td>SWOT</td>
<td>Strengths, Weaknesses, Opportunities and Threats</td>
<td>Forces, Faiblesses, Opportunités et Menaces</td>
<td>Sterktes, Zwakheden, Opportunititen en Bedreigingen</td>
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### Lexicon

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>BelRAI</td>
<td>Is the InterRAI HC instrument, an internationally validated instrument consisting of several domains such as cognitive functioning, ADL, social and psychological wellbeing, health status, environmental characteristics, etc., validated for Belgium (16)</td>
</tr>
<tr>
<td>Case management</td>
<td>is a collaborative process of assessment, planning, facilitation, care coordination, evaluation, and advocacy for options and services to meet an individual’s and family’s comprehensive health needs through communication and available resources to promote quality cost-effective outcomes (17).</td>
</tr>
<tr>
<td>Context</td>
<td>“Context often pertains to the “backdrop” of programs and research. ... As these conditions change over time, the context may reflect aspects of those changes while the program is implemented. Examples of context include cultural norms and history of the community in which a program is implemented, the nature and scope of existing social networks, or built program infrastructure. ... They can also be trust-building processes, geographic location effects, funding sources, opportunities, or constraints. Context can thus be broadly understood as any condition that triggers and/or modifies the behaviour of a mechanism.” (257), p.317.</td>
</tr>
<tr>
<td>Mechanism</td>
<td>Mechanisms are underlying processes, used to describe how things happen beyond the observable reality.</td>
</tr>
<tr>
<td></td>
<td>Mechanisms are the combination of the people’s choices (reasoning) and capacities (resources)” (19)</td>
</tr>
<tr>
<td>Mid-range theory</td>
<td>Mid-range theories are best understood in comparison with other types of theories (258).</td>
</tr>
<tr>
<td>or middle-range theory</td>
<td>1. Metatheory: is a theory about a theory. E.g. about processes of generating knowledge and theory development.</td>
</tr>
<tr>
<td></td>
<td>2. Grand theory: is the most abstract level and is complex and broad in scope. May include numerous other theories. Nursing conceptual frameworks are considered to be grand theories (e.g. Bandura’s self-efficacy theory).</td>
</tr>
<tr>
<td></td>
<td>3. <strong>Mid-range theories</strong>: “A theory that is specific enough to generate hypotheses (for example in the form of propositions) to be tested in a particular case, or to help explain findings in a particular case, but general enough to apply across a number of cases or a number of”</td>
</tr>
</tbody>
</table>
domains.” (259), p. 15; e.g. theory of diabetes self-care management.
4. Practice theories are situation-specific. Contain the fewest concepts and are related to easily defined phenomena – limited to specific populations or fields of practice. E.g. theories of infant bonding of oncology pain management

| **Multiple Correspondence Analysis** | Multiple Correspondence Analysis (MCA) is a method that allows studying the association between two or more qualitative variables. Multiple Correspondence Analysis is to qualitative variables what Principal Component Analysis is to quantitative variables. One can obtain maps where it is possible to visually observe the distances between the categories of the qualitative variables and between the observations |
| **Outcome** | “Realist evaluation uses the term ‘outcome’ to include short, medium and long term changes, intended and unintended, resulting from an intervention. The only difference between the terms ‘impact’ and ‘outcome’ is that ‘impact’ implies changes “for people and their lives”; whereas ‘outcome’ includes change for people and their lives but can also include other kinds of changes (for organisations, workers, governments and so on).” (259) |
| **Primary care** | is first-contact, accessible, continued, comprehensive and coordinated care. First-contact care is accessible at the time of need; ongoing care focuses on the long-term health of a person rather than the short duration of the disease; comprehensive care is a range of services appropriate to the common problems in the respective population and coordination is the role by which primary care acts to coordinate other specialists that the patient may need. Primary care is a subset of primary healthcare (22). |
| **Realism** | describes an approach to applied, empirical inquiry. As such, realist research asks the question of “What works, for whom, in what circumstances and why?”. Rather than seeking to describe a particular issue, or to understand a particular policy, intervention, social movement or social change out of context, realist approaches account for and engage with contextual factors which influence the outcomes of activities, providing useable and useful evidence and insight. |

Realism, as a form of empirical research, involves:
- Evaluation of policy and practice (realist evaluation)
- Reviewing and bringing together existing evidence to test ideas (realist synthesis)
- Using a wide range of different methods to explore and explain issues/problems (mixed methods research)
- Network members have significant experience and expertise in evaluation, synthesis, mixed methods and methodological innovation (260).

| Theory | A set of logically interrelated concepts, statements, propositions and definitions, which have been derived from philosophical beliefs of scientific data and from which questions of hypotheses can be deduced, tested and verified. A theory purports to account for or characterise some phenomena (261). |
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Appendices

Appendix 1 – interview guide for the focus groups of the SWOT analysis
Appendix 2 - Search strategy used in Medline
Appendix 3 – Quality appraisal of controlled trials
Appendix 4 – Quality appraisal of observational studies
Appendix 5 – Quality appraisal of qualitative studies
Appendix 6 – Headings of the data extraction sheet for the realist synthesis
Appendix 7 – Template for the data collection of the case studies
Appendix 8 – Yearly questionnaire for the projects (version 2012)
Appendix 9 – Interview guide for the projects
Appendix 10.- Criteria to evaluate the effectiveness and the implementation of the innovative case management projects
Appendix 1 – interview guide for the focus groups of the SWOT analysis

Guide d’entretien pour le focus group

Au préalable:

- Pour les participants
  o Plaquettes avec le nom, position et numéro pour post its
  o Déterminer les places
  o Enregistreurs
  o Préparation des flipcharts
  o Feuille blanche pour chaque participant
  o Post its blancs et rouges
- Pour l’animateur:
  o Papier avec la disposition des participants
  o Script + modèle conceptuel
  o Feuille blanche
  o Feuilles de résumés et requirements
- Pour l’observateur:
  o Vérifier l’enregistreur
  o Disposition des participants
  o Numéro de Gsm des participants ev. arrivants tardifs (ou absents)

- Signature des consentements éclairés
- Faire signer les feuilles d’information qui n’auraient pas été signées
- Déterminer les cas à discuter (Ceux qui ne sont pas représentés dans le prochain BS)

Timing (165 min)

5 Introduction

5 situation du problème
5 présentation des participants
50 Ouverture- cas (30+10+10)
10 Pause
80 résumé par domaine + identification de nouveaux sujets(4x20)
10 Formalisation des résultats
1. Introduction (5 min)

Merci d’être venus jusqu’ici et de bien vouloir participer à notre étude et cette session de brainstorming.

Présentations.

Jean, Thérèse et moi-même travaillons pour l’Université catholique de Louvain, je suis socio-anthropologue et il m’a été demandé d’animer cette session de brainstorming. Ceci signifie que durant les 3 heures qui suivent, je vous présenterai des sujets et accompagnerai la discussion.

Jean Macq est médecin, il n’interviendra pas dans la première phase de cette session, mais pourra apporter de la structure dans les éléments apportés, en rassemblant les idées et en regardant ce qui pourra être développé ou ce qui n’a pas encore été discuté.

Thérèse Van Durme est infirmière et chercheur en santé publique, elle a le rôle d’observateur. Ceci signifie qu’elle n’interviendra pas, mais notera ce qui est amené par le groupe; ainsi que l’interaction du groupe.

D’autres observateurs sont également présents (courte présentation)

Avec cette session, ainsi qu’à l’aide de sessions avec d’autres groupes, dans les deux langues nationales, nous tentons de répondre à une mission venant du Centre Fédéral d’expertise en soins de santé (le KCE). Nous reviendrons plus tard sur la question de recherche. En gros, il s’agit de voir comment organiser au mieux le système de soin, pour répondre aux besoins des personnes souffrant de maladies chroniques, et l’améliorer là où c’est nécessaire.

Vous avez été invité(e) parce que vous occupez une place importante dans ce système de soins pour les personnes atteintes de maladies chroniques et parce que vous êtes en mesure de nous donner des informations et des
idées qui ne nous viendraient pas à partir de notre écran d’ordinateur. Votre apport, à partir du terrain est donc crucial pour nous et pour le KCE.

Il s’agit donc ici d’une session de brainstorming. Nous aurions pu également prévoir une réunion ordinaire. Mais nous avons choisi cette technique du brainstorming parce que nous voulons permettre l’émergence d’idées nouvelles et créatives, ce qui est possible lors d’un brainstorming. Nous voulons vous adresser la demande suivante : nous savons qu’il ne s’agit pas d’une manière analytique de procéder, qui vous est sans doute plus familière; nous voulons faire appel à votre créativité.

Nous aimerions également que vous apportiez non seulement vos idées personnelles, mais également celles de vos collègues sur le terrain, celles du groupe que vous représentez. En même temps, nous vous demandons de prendre en compte votre propre cadre de travail, mais également votre cadre, tel qu’il peut être perçu par les personnes en-dehors de votre cadre de travail.

Ce qui est important, c’est de ne pas avoir peur d’émettre des idées, à condition de ne pas émettre de jugements! Cela est certainement vrai en début de session, où nous n’évaluerons pas les idées. Nous les émettrons et les listerons.

Au cours des trois heures qui viennent nous partirons des cas que vous avez préparés. Nous vous avons demandé de bien vouloir décrire, à partir de votre expérience, une situation au cours de laquelle une personne, vivant avec une maladie chronique, vivait un épisode nécessitant des soins aigus, afin de pouvoir identifier les points négatifs et points positifs dans les soins.
Les cas qui n’auraient pas pu être discutés serviront à compléter la liste des points positifs et négatifs.
Après la pause, nous creuserons davantage ces points positifs et négatifs, ainsi que les solutions éventuelles proposées.

J’aimerais vous présenter quelques points importants au sujet de cette session de brainstorming :

- Cette session durera environ 3h.
- La session sera enregistrée.
- Les enregistrements ne seront écouter que par les chercheurs et par les commanditaires. Vos noms apparaîtront dans le rapport final. Lorsque nous citerons des extraits des sessions de brainstorming, seule votre fonction pourra être mentionnée (ex. Infirmière à domicile, assistant social ou médecin généraliste), jamais votre nom personnel.
- Cette garantie de respect pour votre vie privée, nous la demandons également vis-à-vis de vous-mêmes. Le but est que vous osiez parler de votre point de vue, que vous soyez en mesure de dire des choses que vous trouverez peut-être non pertinentes par la suite. Pour cette raison, il est très important que ce qui est dit ici, reste entre ces murs, que vous ne racontiez pas au-dehors qui a dit quoi. Nous vous demandons avec insistante de respecter cet engagement. Tout le monde peut-il être d’accord avec ceci ?
- Nous vous demandons également de bien vouloir éteindre vos gsm.

Ce qui vient d’être dit se trouve également dans le document que vous venez de signer.

2. Clarification de la problématique (5 min)
Dans cette partie d’étude, nous utiliserons la vision de soins qui devrait permettre un système de soins idéal pour la prise en charge des patients atteints de maladie chronique.

Bien qu’il serait sans doute passionnant de discuter de cette vision de soins pour les patients atteints de maladie chronique et de ce modèle, nous avons choisi, dans le cadre de cette phase d’étude, de considérer la vision et le modèle comme un élément du contexte, sans le discuter. Le but n’est donc pas de discuter de la vision ou du modèle en tant que tel.

Un système de soins chronique possède une série de propriétés et l’objectif final est d’aider les personnes atteintes de maladie chronique à améliorer leur qualité de vie, tant à la maison, à l’école, dans le milieu professionnel, que dans la société, à un prix acceptable.

Modèle conceptuel

Pour arriver à un système de soins chronique idéal, il faut un dynamisme, afin de pouvoir s’adapter aux réalités sociétales ou scientifiques changeantes. Ces activités peuvent également se situer dans le domaine de la promotion de la santé et de la prévention. Nous n’aborderons pas ce volet dans cette étude. Par contre, nous examinerons les éléments suivants:
Quelles sont les activités nécessaires, au sein du système de soins de santé même, pour parvenir à des soins chroniques idéaux? (les titres des flipcharts se trouvent entre parenthèses)

1. La planification, la délivrance et la coordination des soins de routine (l’offre et l’organisation de soins chroniques)
2. L’organisation des épisodes de soins aigus: la transition des soins de routine vers des soins aigus, et vice-versa doit être fluide et rester intégrée (soins aigus)
3. Promouvoir les auto-soins, ainsi que les soins pour l’aidant informel (promotion de l’empowerment du patient et de son aidant informel)
4. Promouvoir l’intégration des points 1, 2 et 3 (collaboration – coordination – intégration)

Présentation des participants: nom, situation par rapport aux soins chroniques (5 min).

À présent, nous passons à vos cas

Pensez à une situation plus ou moins récente de votre pratique professionnelle, en lien avec un épisode aigu pour une personne souffrant d’une affection chronique. À quoi avez-vous été confronté en tant que soignant, aidant informel ou patient? Qu’est-ce qui s’est bien passé et qu’est-ce qui aurait pu aller mieux? Avez-vous pu observer des hiatus ou des superpositions dans les soins? Comment cet épisode s’inscrivait-il dans le suivi ultérieur?

Ouverture (30 + 20 min)

La parole est à 3-4 membres (3 x 10 minutes)
On veillera à ce que tous puissent participer: les autres participants sont invités à poser des questions de clarification ou d’approfondissement, PAS de jugements.

Choix: de préférence ceux qui ne seraient pas représentés dans le groupe de brainstorming suivant.

2.1 Aprofondissement des cas (30 minutes)

1. Qui voudrait dire quelque chose à ce stade?
2. Qui êtes-vous? Qu’avez-vous vécu comme situation?

Questions éventuelles pour élargir :

- Quelle était votre intention, que vouliez-vous?
- À quoi vous attendiez-vous? Comment ça s’est passé?
- Qui a été impliqué?
- Quel était le problème précis, quel était le noeud du problème?
- Qu’est-ce qui était agréable, qu’est ce qui vous a plu?
- Aviez-vous déjà vécu l’inverse ?
- Qu’auriez-vous eu besoin en plus (qu’est-ce que le patient ou son aidant aurait eu besoin de plus?)

L’animateur garde en mémoire les 6 catégories de ressources nécessaires, qui peuvent servir de questions d’approfondissement. Chacune de ces activités requièrent:

- Une main-d’oeuvre adéquate (nombre et formation)
- Des soins sur mesure
- Des incitants (financiers)
- Des critères de qualité (et son monitorage)
- De guidelines utilisables et de qualité
- Des systèmes d’information pour le patient, aidants informels et soignants

2.2 Compléter à partir d’autres cas (10 min)
Points positifs et négatifs, avec un minimum de données du contexte
2.3 Résumé des points forts et points faibles des cas (10 min)
L’animateur et l’observateur prennent des notes durant l’exposé des participants quant aux points positifs et négatifs par domaine et résument ensuite l’information (demander la confirmation au participant par rapport à la formulation)

Cette information est notée sur les flip charts par Jean à ce moment.

Domaine 1: L’offre en soins chroniques
Domaine 2: Les épisodes de soins aigus
Domaine 3: Empowerment du patient et aidants informels
Domaine 4: Collaboration - coordination - intégration

PAUSE (10 minutes)

Résumé par domaine + identification des sujets n’ayant pas encore été abordés (4x 20min)

À chaque fois, par domaine:

Open brainstorm

Qu’avons-nous à ce stade (forces et faiblesses actuelles, + solutions éventuelles qui ne sont pas actuellement possibles mais le seront peut-être dans le futur)? (Jean) Les points forts et points faibles sont à nouveau parcourus pour

Domaine 1: L’offre en soins chroniques
Jean résume ce qui a été apporté par les cas, par domaine et regarde, avec le public, ce qui peut être élaboré ou aprofondi, afin de ne pas se limiter à ce qui est évident.

L’animateur garde les 6 domaines de ressource à l’esprit, qui peuvent être des questions d’approfondissement

Même scénario pour

Domaine 2: Les épisodes de soins aigus

Domaine 3: Empowerment du patient et aidants informels

Domaine 4: Collaboration – coordination - intégration

Formalisation des résultats (10 minutes) Jean: donne un résumé et aperçu des 4 flipcharts.
Appendix 2 - Search strategy used in Medline

Initial keywords used were (examples provided hereafter were used for MedLine, via Pubmed):

#1 Targets articles addressing case management
"Coordinated care" OR "care coordination" OR "collaborative care" OR "integrated care" OR
"shared care" OR "transitional care" OR "comanagement" OR "Case Management"[Mesh]
"Delivery of Health Care, Integrated"[MeSH] OR "Nursing, Team"[Mesh] OR (care AND (integrat* OR collaborat* OR coordinat* OR transition* OR interdisciplin* OR share OR comanagement OR cooperat* OR "aftercare"[MeSH Terms] OR "aftercare"[All Fields] OR interinstitution* OR synchron* OR harmon* OR manage*))

#2 Targets articles addressing elderly population
"aged"[MeSH Terms] OR aged[Text Word] OR elderly[Text Word]

#3 Targets articles several patient and caregiver outcomes

#4 Care setting

#5 #1 AND #4
#6 #4 NOT #5

#7 (#1 AND #2 AND #3) NOT #6

Managing filters
#1 #2 #3 #4 + #7
Appendix 3 - Quality appraisal of controlled trials (recommended by the HRQ (Agency for Healthcare Research and Quality) (24)

Table 9. Appraisal of RCTs
<table>
<thead>
<tr>
<th>Authors of controlled trials</th>
<th>Question/objective sufficiently described?</th>
<th>Study design evident &amp; appropriate?</th>
<th>Randomisation adequate?</th>
<th>Allocation concealment adequate?</th>
<th>Groups similar at baseline (intervention &amp; control)?</th>
<th>Eligibility criteria specified?</th>
<th>Reporting of attrition, crossovers, adherence &amp; contamination?</th>
<th>Dropout rate &lt;20%</th>
<th>Intent-to-treat analysis?</th>
<th>Appropriate statistical analysis</th>
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<td>Yes</td>
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Appendix 4 - Quality appraisal of observational studies (recommended by the AHRQ (Agency for Healthcare Research and Quality) (24)

Table 10. Appraisal of observational studies
<table>
<thead>
<tr>
<th>Authors</th>
<th>1. Did the study attempt to enroll all (or a random sample of) patients meeting inclusion criteria, or a random sample (inception cohort)?</th>
<th>2. Were the groups comparable at baseline on key prognostic factors (e.g., by restriction or matching)?</th>
<th>3. Did the study use accurate methods for ascertaining exposures, potential confounders, and outcomes?</th>
<th>4. Were outcome assessors and/or data analysts blinded to treatment?</th>
<th>5. Did the article report attrition?</th>
<th>6. Did the study perform appropriate statistical analyses on potential confounders?</th>
<th>7. Is there important differential loss to follow-up or overall high loss to follow-up?</th>
<th>8. Were outcomes pre-specified and defined, and ascertained using accurate methods?</th>
<th>Overall rating</th>
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<tr>
<td>Authors</td>
<td>1. Did the study attempt to enroll all (or a random sample of) patients meeting inclusion criteria, or a random sample (inception cohort)?</td>
<td>2. Were the groups comparable at baseline on key prognostic factors (e.g., by restriction or matching)?</td>
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<td>5. Did the article report attrition?</td>
<td>6. Did the study perform appropriate statistical analyses on potential confounders?</td>
<td>7. Is there important differential loss to follow-up or overall high loss to follow-up?</td>
<td>8. Were outcomes pre-specified and defined, and ascertained using accurate methods?</td>
<td>Overall rating</td>
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Appendix 5 - Quality appraisal of qualitative studies (Joanna Briggs Institute Qualitative Assessment and Review Instrument (JBI-QARI)) (262)
Table 11. Appraisal of qualitative studies

<table>
<thead>
<tr>
<th>Authors of qualitative studies</th>
<th>1) There is congruity between the stated philosophical perspective and the research methodology.</th>
<th>2) There is congruity between the research methodology and the research question or objectives.</th>
<th>3) There is congruity between the research methodology and the methods used to collect data.</th>
<th>4) There is congruity between the research methodology and the representation and analysis of data.</th>
<th>5) There is congruity between the research methodology and the interpretation of results.</th>
<th>6) There is a statement locating the research culturally or theoretically.</th>
<th>7) The influence of the researcher on the research, and vice-versa, is addressed.</th>
<th>8) Participants, and their voices, are adequately represented.</th>
<th>9) The research is ethical according to current criteria or, for recent studies, there is evidence of ethical approval by an appropriate body.</th>
<th>10) Conclusions drawn in the research report do appear to flow from the analysis, or interpretation, of the data.</th>
<th>Overall appraisal</th>
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<tr>
<td>Brown, 2008</td>
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<td>Yes</td>
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<tr>
<td>Authors of qualitative studies</td>
<td>1) There is congruity between the stated philosophical perspective and the research methodology.</td>
<td>2) There is congruity between the research methodology and the research question or objectives.</td>
<td>3) There is congruity between the research methodology and the methods used to collect data.</td>
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<td>5) There is congruity between the research methodology and the interpretation of results.</td>
<td>6) There is a statement locating the research culturally or theoretically.</td>
<td>7) The influence of the researcher on the research, and vice-versa, is addressed.</td>
<td>8) Participants, and their voices, are adequately represented.</td>
<td>9) The research is ethical according to current criteria or, for recent studies, there is evidence of ethical approval by an appropriate body.</td>
<td>10) Conclusions drawn in the research report do appear to flow from the analysis, or interpretation, of the data.</td>
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<td>Authors of qualitative studies</td>
<td>1) There is congruity between the stated philosophical perspective and the research methodology.</td>
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<td>4) There is congruity between the research methodology and the representation and analysis of data.</td>
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<td>6) There is a statement locating the research culturally or theoretically.</td>
<td>7) The influence of the researcher on the research, and vice-versa, is addressed.</td>
<td>8) Participants, their voices, are adequately represented.</td>
<td>9) The research is ethical according to current criteria or, for recent studies, there is evidence of ethical approval by an appropriate body.</td>
<td>10) Conclusion(s) drawn in the research report do appear to flow from the analysis, or interpretation, of the data.</td>
<td>Overall appraisal</td>
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</tbody>
</table>
Appendix 6 – Headings of the data extraction sheet for the realist synthesis

Author, Year
Number
Setting
Setting_recod
Country
Name of the intervention
Cost of the intervention
Duration (Months)
Mode(s) of contact
Contact
Main CM Functions
CM_Fun_Assessment
CM_Fun_PlanningGP
CM_Fun_CarePlanning
CM_Fun_Coord
CM_Fun_Monitoring
CM_Fun_24/7
CM_Fun_Education
CM_Fun_PSSupport
CM_Fun_DirectCare
Contacts (Average)
Caseload
Caseload_Recod
Beneficiaries
Beneficiaires_Recod
Recruitment means (≠ study enrollment)
Recruitment_recod_age
Recruitment_recod_Setting
Recruitment_recod_Setting2
Recruitment_recod_Condition
Recruitment_recod_ServiceUse
Sample size
Role of usual care provider
Supervision by physician
Profession
Profession_0
Profession_1
Profession_1Recod
Profession_2
Profession_3
Profession_4
Preintervention training
Organisational characteristics
Use of protocols or scripts
Health information technology
NTIC Recod
NTIC_Man_recod
Outcomes
Health outcomes_recod
HealthOutcomes_Percehealth
HealthOutcomes_Cognition
HealthOutcomes_ClinicalOutcomeMeasure
HealthOutcomes_FunctionalStatus
HealthOutcomes_Mortality
HealthOutcomes_Depression
HealthOutcomes_Behav
HealthOutcomes_SocialFunctioning
HealthOutcomes_Qol
HealthOutcomes_PsyFunctioning
HealthOutcomes_ICG depression
HealthOutcomes_ICGQoL
HealthOutcomes_ICGBurden
HealthOutcomes_ICGSocialSupport
HealthOutcomes_ICGRelationalStrain
HealthOutcomes_ICGMastery
ImpactICG
Satisfaction
Readmission rate
Health outcomes
Quality of care_recod
Pat & ICG experience
Quality of care
Resource utilisation, cost
Home health care
Home social care
Hospitalisation
LoS
ED visit
NH admission
Cost
Study design
Nature of control interventions
Fidelity of the intervention
Fidelity_Recod
Theories or mechanisms postulated by the authors
Funding
Measurement limits
History of project
Appendix 7 – Template for the data collection of the case studies

**Number and name of the project:**

*De aanpassingen in het grijs geven de veranderingen t.o.v. 2012 weer. De gegevens komen uit de jaarlijkse vragenlijst (YQ12), LimeSurvey (LS12) of de door het RIZIV doorgestuurde gegevens ivm de gevraagde wijzigingen van de conventie, na het doorsturen van de "knipperlichten".*

‘SHORT HISTORY’ OF THE PROJECT

*(this first section is, in fact, the result of what follows in the second section...)*

- Korte omschrijving
- Project als gepland
- Aanzet tot het project
- Geografische context
- Voorbereiding
- Interventies
- Doelgroep
- Doelstellingen
- Partnerschap
- Personeel
- Middelen
- Verwachtingen
DATA COLLECTION – only headings are mentioned

Documents used:

- Submission file (31/10/09), including the jury’s comments;
- Collaboration agreement (20/05/10);
- Convention (18/05/10)
- Interviews: 28/02/12 (Int12) & 29/04/13 (Int13)
- BelRAI data: October 2011 and May 2012
- LimeSurvey data (LS11 & LS12) and Yearly questionnaires (YQ11 & YQ12)

Jury’s comments:

1. A brief description of the project (what is proposed?)

*In this first section, it is proposed a brief description of the intervention proposed, located in the local health system of the services available to the target population.*

Sources:

2. Context of implementation

Sources:

3. Preparation of the project

Sources:

Part I. Implementation of the project, as planned

*Conceptually, the “project” is viewed as an intervention including different key components as a target population, located in an area of activity, some means (organizational, staff, formation…), combined in a way (organizational model), and with a defined outcome (expected).*

1. TARGET POPULATION, area of activity, expected caseload

Sources:

Recruitment of the clients

Sources:
2. Volume of activities

Sources:

3. OBJECTIVES of the project

Sources:

4. MEANS / RESSOURCES (partnership, staff)

(*how the project aims to reach its objectives*)

5. The organisational Partnership

Sources:

6. The staff

Sources:

   Training of the staff

Sources:

7. Promotion of the project

Sources:

8. Logistic means

Sources:

HOW

9. The time sequences of the intervention

(*The intervention can be decomposed in its different steps or sequences by which it is offered*)

Sources:

10. The coordination of the interventions

Sources:
11. The coordination of the partnership

Sources:

12. Expected OUTCOMES

*(in terms of delay of institutionalization or other outcomes)*

Sources:

**Part II. From plan to implementation**

*(What happened between the different phases of implementation of the project?)*

Sources:

1. The implementation process

Key components of the projects as concretely implemented

2. TARGET POPULATION, area of activity, expected caseload

Sources:

3. Recruitment of the clients

Sources:

4. Volume of activities:

Sources:

5. OBJECTIVES
   a. Voor de patiënt

Sources:

   b. Voor de mantelzorger

Sources:

   c. Voor de dienstverlening zelf

Sources:
MEANS

d. The partnership

(organizational level)

Sources:

e. The Staff

(how the professionals have been recruited and trained ?)

Sources:

f. Training

Sources:

g. Logistical resources

Sources:

6. Organisational

a. The organisation of the intervention

Sources:

b. Coordination of the partnership

Sources:

c. Inter-professional coordination

Sources:

7. Evaluation means

Sources:

8. LESSONS LEARNED

9. GREY ZONES
Appendix 8 – Yearly questionnaire for the projects – version 2012

Cher Coordinateur de projet,

Comme convenu, voici le questionnaire annuel qui devrait nous permettre de mieux saisir le fonctionnement de votre projet, environ deux ans après le démarrage de votre projet.

Comme l’année dernière, la partie concernant les coûts vous est envoyée sous la forme d’un questionnaire électronique LimeSurvey. Cette partie du questionnaire, qui porte davantage sur le fonctionnement de votre projet, est un peu différente de celle de l’année dernière, afin de mettre davantage l’accent sur ce qui a changé depuis lors. D’autres points portent sur des questions de clarification, afin d’encore mieux pouvoir saisir ce en quoi les services offerts par votre projet sont innovants, et auraient tout intérêt à être financés de manière structurelle à l’avenir. Nous vous remercions de répondre de la manière la plus pragmatique possible, en décrivant précisément comment fonctionne votre projet.

Si les possibilités de réponses ne vous semblent pas suffisantes, nous vous invitons à noter des options de réponse supplémentaires.

Afin de pouvoir vous contacter en cas d’imprécisions, nous vous demandons de bien vouloir renseigner ci-dessous un numéro de téléphone et un horaire où nous pouvons vous joindre.

Nous restons à votre disposition pour toute question et vous remercions vivement de votre précieuse collaboration.

Pour l’équipe Protocole 3,

Christiane Gosset, Samuel Delye & Patrick Maggi (ULg)

Sophie Cès, Jean-Christophe Chiêm, Jean Macq, Olivier Schmitz & Thérèse Van Durme (UCL)
Maja Lopez-Hartmann & Roy Remmen (UA)
Anja Declercq & Johanna Mello (KUL)
Quel est le nom de votre projet ? : Cliquez ici pour taper du texte.

Numéro INAMI du projet (75…) : Cliquez ici pour taper du texte.

Quel est votre nom ? Cliquez ici pour taper du texte.

Quelle est votre formation ? Cliquez ici pour taper du texte.

Depuis quand travaillez-vous dans le projet ? Cliquez ici pour taper du texte.

Quelle est votre fonction au sein du projet ? Cliquez ici pour taper du texte.

En cas de nécessité, merci de nous donner votre numéro de téléphone professionnel Cliquez ici pour taper du texte. et de nous indiquer à quel moment de la journée ou de la semaine vous êtes joignable Cliquez ici pour taper du texte.

Veuillez indiquer ici la date à laquelle vous remplissez ce questionnaire :

Question 1 : Les objectifs principaux de votre projet

1.1. Pouvez-vous décrire brièvement (max 100 mots) quels sont, aujourd’hui¹³, les objectifs de votre projet ? Cliquez ici pour taper du texte.

1.2. Ceux-ci ont-ils changé par rapport au démarrage ?

☐ Non

☐ Oui, précisez et expliquez (max 100 mots) Cliquez ici pour taper du texte.

Question 2 : Les services de votre projet

¹³ C’est-à-dire deux ans après son démarrage.
2.1. Avez-vous rencontré des difficultés particulières dans la mise en œuvre de ce(s) service(s) ?
☐ Non
☐ Oui, précisez ces difficultés et expliquez (max 100 mots) Cliquez ici pour taper du texte.

2.2. Depuis le démarrage de votre projet, le(s) service(s) offerts par le projet ont-ils été modifiés ?
☐ Non
☐ Oui, précisez et expliquez (max 200 mots) Cliquez ici pour taper du texte.

2.3. Si vous deviez soumettre à nouveau un projet, avec l’expérience que vous avez acquise par le projet actuel, que changeriez-vous dans la manière de délivrer ce service, de manière à éviter ces difficultés ? (max 100 mots) Cliquez ici pour taper du texte.

Question 3 : Les bénéficiaires de votre projet

3.1. Pourriez-vous décrire le « bénéficiaire-type », c’est-à-dire celui qui bénéficie au mieux de votre projet (pour certains projets, cela peut être plusieurs types de bénéficiaires) (Maximum 100 mots) ? Cliquez ici pour taper du texte.

3.2. Par rapport au démarrage de votre projet, avez-vous changé :

a) les critères d’inclusion des bénéficiaires (âge, localisations, profils...) ?
☐ Non
☐ Oui, précisez et expliquez-en les raisons (max 50 mots) Cliquez ici pour taper du texte.

b) les critères d’exclusion pour les bénéficiaires (idem) ?
☐ Non

☐ Oui, précisez et expliquez-en les raisons (max 50 mots) Cliquez ici pour taper du texte.

3.3. Demandez-vous qu’un diagnostic (de démence, par exemple) soit posé avant d’inclure un bénéficiaire dans votre projet ?

☐ Non

☐ Oui

3.4. Avez-vous rencontré des difficultés pour atteindre le nombre de bénéficiaires par an?

☐ Non, nous avons atteint le nombre prévu.

☐ Non, mais nous avons dépassé le nombre prévu. Cela a-t-il eu des conséquences sur le fonctionnement du projet ? Précisez comment votre projet s’est ajusté à ce dépassement (max. 150 mots). Cliquez ici pour taper du texte.

☐ Oui, ce nombre n’a pas ou a été difficilement atteint. Précisez et expliquez les problèmes rencontrés (max 50 mots). Cliquez ici pour taper du texte.

3.5. D’où proviennent les bénéficiaires de votre projet (de quelle organisation, de quels professionnels, etc.) ?

S’ils proviennent de nombreuses sources, identifiez la source majoritaire. Expliquez (100 mots) Cliquez ici pour taper du texte.

Question 4 : Les partenaires14 de votre projet

4.1. Composition du partenariat. A l’heure actuelle, quels sont les partenaires essentiels pour le fonctionnement de votre projet (sans lesquels votre projet ne

14 « Partenaire » : service, groupement ou institution de soins, d’aide ou de services, y compris les services intégrés de soins à domicile (SISD), concernés par la prise en charge des personnes âgées. En vue de la réalisation d’un projet, plusieurs partenaires peuvent s’associer en concluant entre eux un accord de collaboration. Les partenaires doivent conclure avec le Comité de l’assurance la convention visée à l’article 2 (AR 2 juillet 2009)
pourrait pas fonctionner) ? Pouvez-vous préciser en quoi chaque partenaire contribue-t-il au projet ? Quelle est sa valeur ajoutée au projet ?

Partenaire 1 : Cliquez ici pour taper du texte. **Quel est son apport** pour votre projet ? (max. 50 mots) Cliquez ici pour taper du texte.

Partenaire 2 : Cliquez ici pour taper du texte. **Quel est son apport** pour votre projet ? (max. 50 mots) Cliquez ici pour taper du texte.

Partenaire 3 : Cliquez ici pour taper du texte. **Quel est son apport** pour votre projet ? (max. 50 mots) Cliquez ici pour taper du texte.

Partenaire 4 : Cliquez ici pour taper du texte. **Quel est son apport** pour votre projet ? (max. 50 mots) Cliquez ici pour taper du texte.

Partenaire 5 : Cliquez ici pour taper du texte. **Quel est son apport** pour votre projet ? (max. 50 mots) Cliquez ici pour taper du texte.

4.2. Modification de la **composition** du partenariat (organisations, services, institutions)

4.2.1 **Depuis le démarrage de votre projet**, des « partenaires » (ceux qui avaient signé la convention) ont-ils **quitté** votre projet ?

☐ Non, le projet collabore avec les mêmes partenaires.

☐ Oui, le ou les partenaires suivant(s) a/ont quitté le projet :

Partenaire 1 : Cliquez ici pour taper du texte. **Veuillez expliquer le motif de son départ** (max 50 mots) Cliquez ici pour taper du texte.

Partenaire 2 : Cliquez ici pour taper du texte. **Veuillez expliquer le motif de son départ** (max 50 mots) Cliquez ici pour taper du texte.

Partenaire 3 : Cliquez ici pour taper du texte. **Veuillez expliquer le motif de son départ** (max 50 mots) Cliquez ici pour taper du texte.

4.2.2 **Depuis le démarrage de votre projet**, de nouveaux partenaires ont-ils **rejoint** votre projet ?
Non, le projet collabore avec les mêmes partenaires.

Oui, le ou les partenaires suivants a/ont rejoint le projet :

Partenaire 1 : Cliquez ici pour taper du texte. Veuillez expliquer sa contribution dans le projet (max 50 mots) Cliquez ici pour taper du texte.

Partenaire 2 : Cliquez ici pour taper du texte. Veuillez expliquer sa contribution dans le projet (max 50 mots) Cliquez ici pour taper du texte.

Partenaire 3 : Cliquez ici pour taper du texte. Veuillez expliquer sa contribution dans le projet (max 50 mots) Cliquez ici pour taper du texte.

4.3. Modification du contenu et de la forme du partenariat

Depuis le démarrage de votre projet, des partenaires (ceux qui avaient signé la convention) ont-ils modifié la teneur de leur collaboration avec votre projet (changement de rôle, prise en charge de nouvelles tâches, etc.) ?

Non, les partenaires collaborent de la même manière qu’au démarrage.

Oui, le ou les partenaires suivants a/ont modifié la teneur de la collaboration :

Partenaire 1 : Cliquez ici pour taper du texte. Veuillez indiquer en quoi cette collaboration a changé (max 50 mots) Cliquez ici pour taper du texte.

Partenaire 2 : Cliquez ici pour taper du texte. Veuillez indiquer en quoi cette collaboration a changé (max 50 mots) Cliquez ici pour taper du texte.

Partenaire 3 : Cliquez ici pour taper du texte. Veuillez indiquer en quoi cette collaboration a changé (max 50 mots) Cliquez ici pour taper du texte.
Question 5 : Les « participants »\(^{15}\) n’ayant pas signé de convention mais collaborant avec le projet

5.1. Modification de la composition des participants

5.1.1 Depuis le démarrage de votre projet, des participants ont-ils arrêté de collaborer au projet ?

☐ Non, le projet collabore avec les mêmes participants depuis le début.

☐ Oui, le ou les participants suivants ne participe(nt) plus au projet :

Participant 1 : Cliquez ici pour taper du texte. Veuillez expliquer le motif de son départ (max 50 mots) Cliquez ici pour taper du texte.

Participant 2 : Cliquez ici pour taper du texte. Veuillez expliquer le motif de son départ (max 50 mots) Cliquez ici pour taper du texte.

Participant 3 : Cliquez ici pour taper du texte. Veuillez expliquer le motif de son départ (max 50 mots) Cliquez ici pour taper du texte.

5.1.2 Depuis le démarrage de votre projet, de nouveaux participants collaborent-ils avec votre projet ?

☐ Non, le projet collabore avec les mêmes participants depuis le début.

☐ Oui, le ou les participant(s) suivant(s) collabore(nt) au projet :

Participant 1 : Cliquez ici pour taper du texte. Veuillez expliquer sa contribution dans le projet (max 50 mots) Cliquez ici pour taper du texte.

Participant 2 : Cliquez ici pour taper du texte. Veuillez expliquer sa contribution dans le projet (max 50 mots) Cliquez ici pour taper du texte.

\(^{15}\) « Autres participants » : autres services, groupements de soignants professionnels et/ou personnes directement impliqués (AR 7 juillet 2009)
Participant 3 : Cliquez ici pour taper du texte. Veuillez expliquer sa contribution dans le projet (max 50 mots) Cliquez ici pour taper du texte.

5.2. Modification du contenu et de la forme de la collaboration avec les participants

Depuis le démarrage de votre projet, des participants ont-ils modifié la teneur de leur collaboration avec votre projet (changement de rôle, prise en charge de nouvelles tâches, etc.) ?

☐ Non, les participants collaborent de la même manière au projet depuis son démarrage.

☐ Oui, le ou les participants suivants a/ont modifié la teneur de leur collaboration :

Participant 1 : Cliquez ici pour taper du texte. Veuillez indiquer en quoi cette collaboration a changé (max 50 mots) Cliquez ici pour taper du texte.

Participant 2 : Cliquez ici pour taper du texte. Veuillez indiquer en quoi cette collaboration a changé (max 50 mots) Cliquez ici pour taper du texte.

Participant 3 : Cliquez ici pour taper du texte. Veuillez indiquer en quoi cette collaboration a changé (max 50 mots) Cliquez ici pour taper du texte.
Pour les questions qui suivent, nous faisons la distinction entre trois types d'activités (3 niveaux) :

L’organisation des activités liées à la délivrance des soins au(x) bénéficiaire(s) (personne âgée et/ou aidant naturel) ;

L’organisation des interactions entre professionnels faisant partie du projet (p.ex. l’organisation des horaires de travail ou l’élaboration de plans de soins) ;

(3) L’organisation des relations entre le projet et son environnement (autres organisations, autres services, entités régionales...)

Question 6 : L’organisation des activités de délivrance des soins et services auprès des bénéficiaires du projet (la personne âgée et/ou son aidant naturel)

6.1. **Qui participe** à la prise de décision concernant les activités liées à l’organisation individualisée de la délivrance des soins ?

*(Plusieurs réponses possibles)*
☐ Aidant informel
☐ Aide-soignante
☐ Assistante sociale
☐ Bachelier en psychologie
☐ Bachelier en science de la famille
☐ Educateur santé (Master)
☐ Educateur spécialisé
☐ Ergothérapeute
☐ Généraliste
☐ Gériatre
☐ Infirmière
☐ Kinésithérapeute
☐ Logopède
☐ Personne âgée
☐ Psychiatre
☐ Psychologue
☐ Psychothérapeute
☐ Autre (précisez) Cliquez ici pour taper du texte.
6.2. Quelle est la ou les personne(s)-clé qui prend(nent) la décision concernant l’organisation individualisée de la délivrance des soins ? (Plusieurs réponses possibles)
☐ Aidant informel
☐ Aide-soignante
☐ Assistante sociale
☐ Bachelier en psychologie
☐ Bachelier en science de la famille
☐ Educateur santé (Master)
☐ Educateur spécialisé
☐ Ergothérapeute
☐ Généraliste

☐ Gérontologue
☐ Gérontologue
☐ Infirmière
☐ Kinésithérapeute
☐ Logopède
☐ Personne âgée
☐ Psychiatre
☐ Psychologue
☐ Psychothérapeute

☐ Autre (précisez) Cliquez ici pour taper du texte.

Expliquez (max 50 mots) Cliquez ici pour taper du texte.
6.4. **Quels outils** de communication et de coordination utilisez-vous pour assurer l’organisation des soins et services au bénéficiaire ?

☐ Réunions

☐ Compte-rendu des réunions

☐ Cahier (reste au domicile de la personne âgée)

☐ Dossier patient (version papier)

☐ Dossier patient (version électronique)

☐ Plan de soins.


- pluridisciplinaire ? Lequel...

☐ Téléphone et/ou courrier et/ou courriels

☐ Outil BelRAI


☐ Logiciel de coordination de soin. Détailllez Cliquez ici pour taper du texte.

☐ Autre (précisez) Cliquez ici pour taper du texte.

6.5. **Concernant le remplissage du BelRAI** :

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6.5.1 Qui réalise l’évaluation gériatrique globale BelRAI ?

**Merci d’indiquer ici sa profession** Cliquez ici pour taper du texte.

6.5.2 Si plusieurs personnes réalisent l’évaluation BelRAI, veuillez l’indiquer ici leurs professions Cliquez ici pour taper du texte.

6.5.3 Utilisez-vous les résultats du BelRAI (CAPs et résultats d’échelles) pour planifier les soins auprès du bénéficiaire ?

☐ Oui

Qu’est-ce qui est utile pour vous ?

Comment choisissez-vous les résultats qui sont les plus utiles pour le bénéficiaire ? Cliquez ici pour taper du texte.

☐ Non.

Pourquoi ?

6.6. Suivi et évaluation du plan de soins. Comment faites-vous pour suivre et évaluer le plan de soins ?

A quelle fréquence (en moyenne) ? Cliquez ici pour taper du texte.

Quel(s) professionnel(s) est/sont responsable(s) de cette réévaluation ? Cliquez ici pour taper du texte.

Comment ce suivi et cette réévaluation se font-ils dans la pratique? Décrivez (maximum 100 mots) Cliquez ici pour taper du texte.
6.7. Le médecin traitant du bénéficiaire

6.7.1 Collabore-t-il au projet ?


☐ Non

6.7.2 Qu’avez-vous mis en place pour encourager la participation du médecin traitant du patient au projet ?

☐ Nous l’avons informé (par courrier, courriel, folders, etc.)

☐ Nous lui avons rappelé l’existence d’un numéro de nomenclature pour la participation à la concertation multidisciplinaire

☐ Nous lui offrons un financement sur le budget du projet

☐ Au cas où rien n’est prévu, expliquez pourquoi (100 mots) Cliquez ici pour taper du texte.

6.7.3 Quel feed-back donnez-vous au médecin traitant du bénéficiaire, à propos de votre intervention ? Précisez (100 mots) Cliquez ici pour taper du texte.

6.8. Quel feed-back donnez-vous aux autres professionnels qui interviennent auprès du bénéficiaire, mais qui ne font pas partie de votre projet ? Précisez (100 mots) Cliquez ici pour taper du texte.
6.9. Qu’est-ce qui vous aide le plus pour l’organisation de la délivrance des soins au bénéficiaire ? Cliquez ici pour taper du texte.

Question 7 : Concernant l’organisation des interactions et échanges entre professionnels faisant partie du projet

7.1. Qui gère l’emploi du temps des professionnels dans le projet ?

Veuillez préciser  Cliquez ici pour taper du texte.

7.2. Quels outils de communication et de coordination utilisez-vous pour assurer la collaboration et l’échange d’informations entre professionnels du projet ?

☐ Réunions

☐ Compte-rendu des réunions

☐ Cahier (reste au domicile de la personne âgée)

☐ Dossier patient (version papier)

☐ Dossier patient (version électronique)

☐ Plan de soins. Précisez  Cliquez ici pour taper du texte.

☐ Téléphone  et/ou courrier et/ou courriels

☐ Outil BelRAI

☐ Logiciel de coordination des horaires. Détailllez  Cliquez ici pour taper du texte.

☐ Autre (précisez) Cliquez ici pour taper du texte.

7.3. Utilisez-vous des protocoles pour organiser ou délivrer les soins ?
☐ Non, nous n’utilisons pas de protocole

☐ Oui, des protocoles monodisciplinaires existants. Expliquez Cliquez ici pour taper du texte.

☐ Oui, des protocoles multidisciplinaires existants. Expliquez Cliquez ici pour taper du texte.

☐ Oui, des protocoles multidisciplinaires spécialement créés pour Protocole 3. Expliquez Cliquez ici pour taper du texte.

7.4. Pour le registre de vos bénéficiaires, utilisez-vous

☐ Seulement le nom, le diagnostic, les coordonnées et la date du dernier contact dans un dossier papier ou électronique

☐ Un logiciel qui permet d’organiser les soins

☐ Un logiciel qui permet d’organiser les soins et de générer des rappels par rapport à l’organisation des soins

☐ Rien de ce qui précède

7.5. Si vous avez coché en 7.4. « Un logiciel qui permet d’organiser les soins et de générer des rappels par rapport à l’organisation des soins », ces rappels à l’attention des prestataires

☐ Ne concernent que la présence du bénéficiaire dans le projet, mais ne décrivent pas le service dont il a besoin

☐ Décrivent le service dont le bénéficiaire a besoin
Décrivent le service dont le bénéficiaire a besoin, sur base d’un algorithme dont les résultats sont basés sur une évaluation gériatrique globale (BelRAI ou autre).

7.6. Qu’est-ce qui vous aide le plus pour vous organiser entre professionnels ?
Cliquez ici pour taper du texte.

7.7. De quoi auriez-vous besoin (et que vous n’avez pas encore…) pour mieux vous organiser entre professionnels à ce niveau? Cliquez ici pour taper du texte.

Question 8 : Concernant les activités liées à l’organisation « stratégique » du projet (orientation générale, recrutement du personnel, communication avec l’extérieur, prises de décisions importantes, etc.)

8.1. Qui participe à la prise de décision concernant les aspects stratégiques du projet ?

(Plusieurs réponses possibles)

☐ Directeurs d’organisations et de services partenaires. Précisez lesquels. Cliquez ici pour taper du texte.


☐ Le(s) coordinateur(s) du projet.

☐ Autres ? Précisez Cliquez ici pour taper du texte.

8.2. Quelle est la personne-clé (ou les personnes-clé) qui prend la décision concernant l’organisation stratégique du projet ? Précisez Cliquez ici pour taper du texte 8.3. Quelle est l’organisation qui gère le budget financier du projet ?
Cliquez ici pour taper du texte.
8.4. Utilisez-vous des indicateurs de qualité ou de performance pour le suivi de votre projet (autoévaluation) ?

☐ Non

☐ Oui, Précisez lesquels. Cliquez ici pour taper du texte.

8.5. Qu’est-ce qui vous aide le plus pour l’organisation stratégique du projet ? Cliquez ici pour taper du texte.

Question 9 : les différents types de réunions

9.1. Les réunions organisées autour de l’organisation des soins délivrés au bénéficiaire ou à son aidant informel (au sujet d’une personne particulière, par exemple, réalisation d’un plan de soins, problèmes communicationnels avec une famille en particulier, …)

Réunion 1 :

Intitulé de la réunion : Cliquez ici pour taper du texte.

Fréquence de la réunion (par semaine, par mois, par année) : Cliquez ici pour taper du texte.

Thème de la réunion : Cliquez ici pour taper du texte.

Durée de la réunion : Cliquez ici pour taper du texte.

Où cette réunion se déroule-t-elle ? Cliquez ici pour taper du texte.

Profil des participants à la réunion (il peut s’agir de professionnels comme du patient ou de son aidant proche) : Cliquez ici pour taper du texte.

Qui prend le leadership de la réunion ? Veuillez inscrire ici son profil et sa fonction au sein du projet (10 mots) : Cliquez ici pour taper du texte. A quelle organisation appartient-elle (il) ? Cliquez ici pour taper du texte.

Un compte-rendu de la réunion est-il réalisé ☐ Non ☐ Oui

Si oui, à qui est-il diffusé ? Cliquez ici pour taper du texte.

Réunion 2 :

Intitulé de la réunion : Cliquez ici pour taper du texte.
<table>
<thead>
<tr>
<th>Réunion 3 :</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intitulé de la réunion : Cliquez ici pour taper du texte.</td>
</tr>
<tr>
<td>Fréquence de la réunion (par semaine, par mois, par année) : Cliquez ici pour taper du texte.</td>
</tr>
<tr>
<td>Thème de la réunion : Cliquez ici pour taper du texte.</td>
</tr>
<tr>
<td>Durée de la réunion : Cliquez ici pour taper du texte.</td>
</tr>
<tr>
<td>Où cette réunion se déroule-t-elle ? Cliquez ici pour taper du texte.</td>
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<tr>
<td>Profil des participants à la réunion : Cliquez ici pour taper du texte.</td>
</tr>
<tr>
<td>Qui prend le leadership de la réunion ? Veuillez inscrire ici son profil et sa fonction au sein du projet (10 mots): Cliquez ici pour taper du texte. A quelle organisation appartient-elle (il)? Cliquez ici pour taper du texte.</td>
</tr>
<tr>
<td>Un compte-rendu de la réunion est-il réalisé ☐ Non ☐ Oui</td>
</tr>
<tr>
<td>Si oui, à qui est-il diffusé ? Cliquez ici pour taper du texte.</td>
</tr>
</tbody>
</table>
Un compte-rendu de la réunion est-il réalisé ☐ Non ☐ Oui

Si oui, à qui est-il diffusé ? Cliquez ici pour taper du texte.

Avez-vous des commentaires particuliers pour ces types de réunion ? Si oui, expliquez : Cliquez ici pour taper du texte.

9.2. Les réunions de coordination et d’échanges d’informations entre professionnels travaillant au sein du projet (Il s’agit, par exemple, de réunions d’organisation autour de la réalisation des horaires professionnels, de l’élaboration de plans de soins pour un groupe de personnes âgées, …)

Réunion 1 :

Intitulé de la réunion : Cliquez ici pour taper du texte.

Fréquence de la réunion (par semaine, par mois, par année) : Cliquez ici pour taper du texte.

Thème de la réunion : Cliquez ici pour taper du texte.

Durée de la réunion : Cliquez ici pour taper du texte.

Où cette réunion se déroule-t-elle ? Cliquez ici pour taper du texte.

Profil des participants à la réunion : Cliquez ici pour taper du texte.

Qui prend le leadership de la réunion ? Veuillez inscrire ici son profil et sa fonction au sein du projet (10 mots) : Cliquez ici pour taper du texte. A quelle organisation appartient-elle (il) ? Cliquez ici pour taper du texte.

Un compte-rendu de la réunion est-il réalisé ☐ Non ☐ Oui

Si oui, à qui est-il diffusé ? Cliquez ici pour taper du texte.
Réunion 2 :

Intitulé de la réunion : Cliquez ici pour taper du texte.

Fréquence de la réunion (par semaine, par mois, par année) : Cliquez ici pour taper du texte.

Thème de la réunion : Cliquez ici pour taper du texte.

Durée de la réunion : Cliquez ici pour taper du texte.

Où cette réunion se déroule-t-elle ? Cliquez ici pour taper du texte.

Profil des participants à la réunion : Cliquez ici pour taper du texte.

Qui prend le leadership de la réunion ? Veuillez inscrire ici son profil et sa fonction au sein du projet (10 mots) : Cliquez ici pour taper du texte. A quelle organisation appartient-elle (il) ? Cliquez ici pour taper du texte.

Un compte-rendu de la réunion est-il réalisé ☐ Non ☐ Oui

Si oui, à qui est-il diffusé ? Cliquez ici pour taper du texte.

Réunion 3 :

Intitulé de la réunion : Cliquez ici pour taper du texte.

Fréquence de la réunion (par semaine, par mois, par année) : Cliquez ici pour taper du texte.

Thème de la réunion : Cliquez ici pour taper du texte.

Durée de la réunion : Cliquez ici pour taper du texte.

Où cette réunion se déroule-t-elle ? Cliquez ici pour taper du texte.
Profil des participants à la réunion : Cliquez ici pour taper du texte.

Qui prend le leadership de la réunion ? Veuillez inscrire ici son profil et sa fonction au sein du projet (10 mots) : Cliquez ici pour taper du texte. A quelle organisation appartient-elle (il) ? Cliquez ici pour taper du texte.

Un compte-rendu de la réunion est-il réalisé ☐ Non ☐ Oui

Si oui, à qui est-il diffusé ? Cliquez ici pour taper du texte.

Avez-vous des commentaires particuliers pour ces types de réunion ? Si oui, expliquez : Cliquez ici pour taper du texte.
9.3. Les réunions « stratégiques », organisées pour le fonctionnement du projet (comité de pilotage, réunions de comité de direction, avec les partenaires, etc., ...)

Réunion 1 :

Intitulé de la réunion : Cliquez ici pour taper du texte.

Fréquence de la réunion (par semaine, par mois, par année) : Cliquez ici pour taper du texte.

Thème de la réunion : Cliquez ici pour taper du texte.

Durée de la réunion : Cliquez ici pour taper du texte.

Où cette réunion se déroule-t-elle ? Cliquez ici pour taper du texte.

Profil des participants à la réunion : Cliquez ici pour taper du texte.

Qui prend le leadership de la réunion ? Veuillez inscrire ici son profil et sa fonction au sein du projet (10 mots) : Cliquez ici pour taper du texte. A quelle organisation appartient-elle (il)? Cliquez ici pour taper du texte.

Un compte-rendu de la réunion est-il réalisé ☐ Non ☐ Oui

Si oui, à qui est-il diffusé ? Cliquez ici pour taper du texte.

Réunion 2 :

Intitulé de la réunion : Cliquez ici pour taper du texte.

Fréquence de la réunion (par semaine, par mois, par année) : Cliquez ici pour taper du texte.

Thème de la réunion : Cliquez ici pour taper du texte.

Durée de la réunion : Cliquez ici pour taper du texte.

275
Où cette réunion se déroule-t-elle ? Cliquez ici pour taper du texte.

Profil des participants à la réunion : Cliquez ici pour taper du texte.

Qui prend le leadership de la réunion ? Veuillez inscrire ici son profil et sa fonction au sein du projet (10 mots) : Cliquez ici pour taper du texte. A quelle organisation appartient-elle (il) ? Cliquez ici pour taper du texte.

Un compte-rendu de la réunion est-il réalisé ☐ Non ☐ Oui

Si oui, à qui est-il diffusé ? Cliquez ici pour taper du texte.

Réunion 3 :

Intitulé de la réunion : Cliquez ici pour taper du texte.

Fréquence de la réunion (par semaine, par mois, par année) : Cliquez ici pour taper du texte.

Thème de la réunion : Cliquez ici pour taper du texte.

Durée de la réunion : Cliquez ici pour taper du texte.

Où cette réunion se déroule-t-elle ? Cliquez ici pour taper du texte.

Profil des participants à la réunion : Cliquez ici pour taper du texte.

Qui prend le leadership de la réunion ? Veuillez inscrire ici son profil et sa fonction au sein du projet (10 mots) : Cliquez ici pour taper du texte. A quelle organisation appartient-elle (il) ? Cliquez ici pour taper du texte.

Un compte-rendu de la réunion est-il réalisé ☐ Non ☐ Oui

Si oui, à qui est-il diffusé ? Cliquez ici pour taper du texte.

Avez-vous des commentaires particuliers pour ces types de réunion ? Si oui, expliquez : Cliquez ici pour taper du texte.
Question 10. La formation des professionnels

Veuillez décrire les activités organisées par votre projet pour la formation des professionnels de votre projet

(max 100 mots) Cliquez ici pour taper du texte.

Nous vous remercions d’avoir rempli ce questionnaire.

Merci de le renvoyer par e-mail à l’adresse suivante avant le 23 décembre 2012

Therese.vandurme@uclouvain.be
Appendix 9 – Interview guide for the projects
Complete interview guide – version 2013

1. Before starting...

1) Project members participating in the interview: at least a project coordinator and a frontline worker, preferably knowing the project from the onset.
2) Formulate the main research question of the implementation analysis and the aims of interviews
   a. Main research question: Which factors hinder or facilitate the implementation process of each project in its specific context, how does the projects adapt all along this process?
   b. Aims of the interviews:
      i. How do projects succeed in the translation of the planned innovative services into “the real world” (realistic perspective)?
      ii. How do projects achieve their (patient and innovative) objectives?
      iii. How do projects succeed or not in catching beneficiaries?

3) Thank participants
4) We are not working for NIHDI...
5) Presentation of researchers + round table
   a. Descriptive list of the participants: name, function in the project, previous experience (with older persons care and with current function), actual experience in the project...

6) Conditions of the interview (confidentiality, approximate duration, etc.)
7) Ask to record the interview (but not obliged, and can be interrupted)

2. Main interview guide

This interview guide is designed to prepare the last round of interviews with projects being part of the case studies, i.e. lastly included (n = 5); as well as others. It includes all the questions to which we are supposed to answer for each projects. Therefore, it is necessary to collect all data we have until now from the projects, from different data sources, including updated from yearly questionnaires (Word and LimeSurvey
<table>
<thead>
<tr>
<th>Research question dimensions</th>
<th>Sub –dimensions</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Preparation of the project</td>
<td>The project is supposed to fill in a gap in the local system of health care services addressed to frail older people, but what we have to know is the missing service the project is supposed to provide, what is really innovative in this project by contrast of what existed already.</td>
<td></td>
</tr>
</tbody>
</table>
| Genesis of the project | Idea of project | - How was the project idea born?  
- Who took the initiative, who developed the idea? On the base of what?  
- From where (which organisation) / who the idea of the project is coming from?  
- Did you have a previous experience with another pilot-project providing the same type of intervention? |
| Partnership constitution | - Which partners were part of this preparation work?  
- Why and how were the partners chosen? |
| Facilitating / hindering factors | - Which partner has taken the lead?  
- What has facilitated/hindered this preparation process?  
- Which difficulties / problems (administration, staff, etc.) did you meet during this preparation phase? Which solutions did you find?  
- Which activities have been useful for the preparation of the project (meetings...)? |
<table>
<thead>
<tr>
<th>Objective of the project</th>
<th>Main objectives</th>
<th>- Has the SISD / GDT played a role in the preparation of the project? Which one? How?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation objectives</td>
<td></td>
<td>- Have the GPs played a role in the preparation of the project? Which one? How?</td>
</tr>
<tr>
<td>Expected outcomes / Mechanism</td>
<td></td>
<td>2. About the key components of the project</td>
</tr>
<tr>
<td></td>
<td></td>
<td>➔ By what mechanism the project aims reduce the risk of institutionalization of frail older people.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Could you explain the <strong>main objectives</strong> of the project, in term of patient objectives?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Do these objectives have changed?</td>
</tr>
<tr>
<td></td>
<td>Innovation objectives</td>
<td>- In term of innovation, what the project aims to offer as new service(s)?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- What is innovative in your project?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- What do you want to demonstrate?</td>
</tr>
<tr>
<td></td>
<td>Expected outcomes / Mechanism</td>
<td>- Which are the expected outcomes of the projects? (Immediate outcomes? Long-term outcomes?)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- How does the intervention, as provided by the project allow?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>o to delay the institutionalization of the frail older people? By which mechanism?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>o to improve QoL?</td>
</tr>
<tr>
<td>Intervetion design</td>
<td>Services provided</td>
<td></td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------------</td>
<td></td>
</tr>
</tbody>
</table>
| *o* to maintain/improve health and functional status?  
  *o* To alleviate the burden of the main ICG?  
  - Is this mechanism evidence-based? On which evidence?  
  - How do you evaluate the number of days the project decreases the institutionalization?  
  - Do you observe some initially not expected results?  
  - Do you observe unexpected outputs (tools/impact on system)?  
| - Could you explain **the typical intervention** the project provides?  
  - Which are **the main services** project delivers, and **how are they arranged / delivered**?  
  - (If you are delivering different services according to the beneficiary’s needs) which are the services that are **systematically delivered** and the others that are not?  
  - (If different options) What is the most frequent service asked?  
  - Are there any particular obstacles encountered to deliver the services planned: problem of accessibility at home, problem of specific material missing, ...?  
  - What the most frequent feedback from professionals?  
  - Some changes have been introduced **in the intervention** as proposed since the beginning of the project?  |
<table>
<thead>
<tr>
<th>Unit of activity</th>
<th>- What is the unit of intervention? Could you describe it?</th>
</tr>
</thead>
</table>
| Intensity of activity | - By which frequency / How much the intervention is delivered to the frail older people /a night / a day / a week / a year?  
- What is the duration of the activities? |
| **Coordination** of the intervention | - Who coordinates the care activities of the different professionals in the project?  
- What do you do for ensuring a good collaboration between professionals sharing same patients?  
- By which means? |
| Way of deliverance of intervention: continuity, follow-up and needs based aspects | - How are the preferences and needs of patients taken into account?  
- When a frail older person does not agree with his ICG, what happens?  
- What happens when a frail older person or ICG disagree with the care proposed?  
- How and by whom are the needs and preferences of the beneficiaries assessed during the time?  
- How is the **follow-up and the continuity** of care organised (i.e. between day and night care for night care projects, between service providers of the projects and outside the projects)? |
| Limits | -  What are the limits/difficulties of the intervention as proposed? In which situations is the project not as relevant as it should be? In which particular situations can the intervention not be provided? |
| Involvement of ICG (as a partner in care) | -  How do they involve the ICG in the care planning process? Is there a protocol for this? 
-  How is information being shared between ICG and staff? 
-  What facilitates / hinders the involvement of ICG? 
-  How do the staff perceive the involvement of ICG? |

| Accessibility | -  How do people enter into the project? 
-  By which way people included have been informed about the project? 
-  Do you have observed problems in the accessibility of your project? 
-  (if yes) How do you remediate? |
| Financial (see economic questionnaire.) | -  Is there any financial contribution asked to the frail older people by the project? 
-  (optional) Is this frail older people contribution asked for a particular service (meal, transport) or for particular moments in the project (entry, regularly.)? 
-  (optional) Is the financial contribution a hindering factor for benefitting from the project, for the target population? |
<table>
<thead>
<tr>
<th>Target population: the beneficiaries of the project’s intervention</th>
<th>Profile of beneficiaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>- (optional) The financial contribution is a hindering factor for the target population.</td>
<td></td>
</tr>
<tr>
<td>- (optional) How is the beneficiary’s contribution calculated? Is this contribution adapted according the frail older people wages?</td>
<td></td>
</tr>
<tr>
<td>- Can a frail older people without resource benefit from your project? How do you deal with frail older people with low income or if she/he has to refuse the care provided by the project because it was not affordable to him/her?</td>
<td></td>
</tr>
<tr>
<td>Transport</td>
<td>- (Optional) Does the project provide the transportation of the frail older people? How?</td>
</tr>
<tr>
<td>- Do the beneficiaries have to pay for it?</td>
<td></td>
</tr>
<tr>
<td>Promotion of the project</td>
<td>- What have you done in order to promote the project to potential beneficiaries?</td>
</tr>
<tr>
<td>- Which are your inclusion / exclusion criteria? Have they changed? Why?</td>
<td></td>
</tr>
<tr>
<td>- What is the main profile of people included into the project? (Katz A, B or C? people living alone / frail older people with ICG? dementia/Alzheimer?)</td>
<td></td>
</tr>
<tr>
<td>- (If project targets different profiles) What is the proportion of different profiles in the project?</td>
<td></td>
</tr>
</tbody>
</table>
- According to your experience, to which people is your project the most beneficial? is the most appropriate? (e.g. with or without ICG, after an acute episode...)
- Are the included persons those who were initially targeted?
- How project is useful for ICG?

| Area of activity          | Did the area of activity of the project change since its start? For which reasons (to reach its caseload)?
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Which area of activity should be the ideal?</td>
</tr>
</tbody>
</table>

| Beneficiaries referral   | From where (which main organizations) the beneficiaries are coming from?
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
|                           | Project is offered to any frail older people living in the area of activity and presenting the inclusion criteria, or is it only offered to some clients of some organizations, pillar, etc.? 
|                           | By which mechanism (professionals, organization.) are the beneficiaries referred to the project?
|                           | On which criteria the frail older people is referred to the project? By which professional?                                            |

- What is the rate between public targeted and public really touched?

<table>
<thead>
<tr>
<th>Caseload</th>
<th>Does the project reach its expected caseload? Do you have adapted it?</th>
</tr>
</thead>
</table>
- *(If not) For which reasons, according to you?*
- *If the caseload is reached, do you work with **waiting lists**? If so, with which effect?*
- *What is the optimal size of the project?*

| Experience with the targeted population (the frail older people and his ICG) | - *Are some frail older people **leaving the project**? For which reasons? What is your attitude in this case?*
- *Which are the main **reluctances** of the target population towards the intervention as proposed by the project?*
- *Which experiences with frail older people with dementia, with people with premature aging?*
- *Do you fail to reach some people initially targeted? Why?*
- *Are the frail older people included in the BelRAI database different from those not included? In which aspect?* |

| The staff | Recruitment of the professionals | - *How did you proceed to recruit the professionals of the project? Was it easy or not? Why?*
- *Are they coming from one main organization? If so, how did it affect the other organization?* |
<table>
<thead>
<tr>
<th>Composition of the staff</th>
<th>Which factors have facilitated or hindered the recruitment of the adequate professionals?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>How much</strong> professionals are working in the project today (percentage FTE by profession)?</td>
</tr>
<tr>
<td></td>
<td>- Their profile is corresponding to what was expected?</td>
</tr>
<tr>
<td></td>
<td>- What is their training and previous experience (with frail older people)?</td>
</tr>
<tr>
<td></td>
<td>- What is their training and previous experience (with their current function in the project)?</td>
</tr>
<tr>
<td></td>
<td>- What is the ideal size of the staff for your project?</td>
</tr>
<tr>
<td></td>
<td>- Are there professionals not funded by Protocol 3 active in the project? If yes, how are they funded?</td>
</tr>
<tr>
<td></td>
<td>- (Only for case management projects) What is the optimal skill-mix for the team? Which skills are the most needed?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Role of each professional in the project</th>
<th>What does each professional really do in the project?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(optional) How is task delegation organized between nurses and nurse assistants?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Evolution of the staff</th>
<th>From the beginning to these days, how the staff has evolved? (if yes) Why?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(If turn over) How project faced staff <strong>turnover</strong>?</td>
</tr>
<tr>
<td></td>
<td>Did the profile of the staff change? (If yes, why?)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>How are these professionals</td>
<td>How are these professionals</td>
</tr>
<tr>
<td>hierarchically linked?</td>
<td>hierarchically linked? (organigram)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Formation of the staff</strong></td>
<td></td>
</tr>
<tr>
<td>- Which are the needs in training?</td>
<td>Which needs are in training?</td>
</tr>
<tr>
<td>- Which trainings are offered to</td>
<td>Which trainings are offered to the</td>
</tr>
<tr>
<td>the staff?</td>
<td>staff?</td>
</tr>
<tr>
<td>- To who professionals?</td>
<td>To which professionals?</td>
</tr>
<tr>
<td>- (if yes) What is the content,</td>
<td>(if yes) What is the content, subject</td>
</tr>
<tr>
<td>subject of training?</td>
<td>of training?</td>
</tr>
<tr>
<td>- Which trainer?</td>
<td>Which trainer?</td>
</tr>
<tr>
<td>- (optional) Is there training</td>
<td>(optional) Is there training for the</td>
</tr>
<tr>
<td>for the volunteers? For the</td>
<td>volunteers? For the ICG? Which</td>
</tr>
<tr>
<td>ICG? Which content?</td>
<td>content?</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>The participation of GP</strong></td>
<td></td>
</tr>
<tr>
<td>- Do the GP participate to the</td>
<td>Do the GP participate to the project</td>
</tr>
<tr>
<td>project?</td>
<td></td>
</tr>
<tr>
<td>- How do they participate?</td>
<td>How do they participate?</td>
</tr>
<tr>
<td>- Do they participate to</td>
<td>Do they participate to meetings (and</td>
</tr>
<tr>
<td>meetings (and if yes, which</td>
<td>if yes, which meetings)?</td>
</tr>
<tr>
<td>meetings)?</td>
<td></td>
</tr>
<tr>
<td>- Which are the facilitating or</td>
<td>Which are the facilitating or</td>
</tr>
<tr>
<td>hindering factors of its</td>
<td>hindering factors of its participation?</td>
</tr>
<tr>
<td>participation?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Tools used to coordinate the interventions (at patient level)</td>
<td>Coordination of intervention, sharing information...</td>
</tr>
<tr>
<td>-----------------------------------------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>- Which tools do you use to coordinate the interventions?</td>
</tr>
<tr>
<td></td>
<td>- Which tool(s) is/are used to ensure the follow-up and the continuity of care? (Care plan? BelRAI?)</td>
</tr>
<tr>
<td></td>
<td>- Other tools?</td>
</tr>
<tr>
<td></td>
<td>- How is the information shared between the professionals involved in the care of the patient?</td>
</tr>
<tr>
<td></td>
<td>- Which are the most useful tools (at the patient level) used by your project? Why? Who uses these tools?</td>
</tr>
<tr>
<td>Interprofessional collaboration</td>
<td>- Which are the tools used to ensure the collaboration between professionals about patient situations?</td>
</tr>
<tr>
<td></td>
<td>- What tool do you use to be informed about the local resources (healthcare or outside the healthcare sector, surrounding your project?</td>
</tr>
<tr>
<td>Inform consent</td>
<td>- Do you easily collect the inform consent document?</td>
</tr>
<tr>
<td></td>
<td>- Do you reach the 75 % of the population included?</td>
</tr>
<tr>
<td>BelRAI</td>
<td>- Do the project uses the results of the BelRAI in the provision of care? In the care planning?</td>
</tr>
<tr>
<td></td>
<td>- Who completes the BelRAI?</td>
</tr>
<tr>
<td>Logistic means</td>
<td>- Do you need other expensive materials you do not use now? E.g. specific software, some special equipment for the mobility support...</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Partnership</td>
<td>Description of the partnership</td>
</tr>
<tr>
<td>-</td>
<td>Has the partnership changed since the start of the project?</td>
</tr>
<tr>
<td>-</td>
<td>Is it the ideal partnership? What should be changed?</td>
</tr>
<tr>
<td>-</td>
<td>New partners have joined the project?</td>
</tr>
<tr>
<td>-</td>
<td>Some partners have left the project? Why? Are they to be replaced?</td>
</tr>
<tr>
<td>-</td>
<td>Are there tensions within the partnership?</td>
</tr>
<tr>
<td>Role of the partners</td>
<td>- Does the SISD / GDT play a role in the project? If yes, which role?</td>
</tr>
<tr>
<td>-</td>
<td>Which are the central partners without which project could not work?</td>
</tr>
<tr>
<td>-</td>
<td>Are the partners complementary?</td>
</tr>
<tr>
<td>Management of the project</td>
<td>How</td>
</tr>
<tr>
<td>-</td>
<td>How is the project managed – day to day / at the strategic level (by advisory committee, board, steering committee...)?</td>
</tr>
<tr>
<td>-</td>
<td>By which partners is the project managed (leadership)?</td>
</tr>
<tr>
<td>-</td>
<td>How do the partners communicate between them?</td>
</tr>
<tr>
<td>Context of the project / intervention: the integration of the project in the local system</td>
<td>Socio-demo character.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>- Which activities do you organize in order to coordinate the partnership activities? Meetings? Which meetings?</td>
<td>- Which are the main characteristics of your target population / region?</td>
</tr>
<tr>
<td>Tools</td>
<td>- Which are the tools of communication used to coordinate the partnership activities?</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Facilitating / hindering factors of integration of project</td>
<td>- Which are the factors that facilitate an ideal integration of the project in the local system? (From the point of view of mutuality’s, professional groups, MRS...)</td>
</tr>
<tr>
<td>- How is your project integrated? To which organisation is it linked? (Could you make a plan?)</td>
<td></td>
</tr>
<tr>
<td>- What is the ideal level of dependence / independence of project with the umbrella organisation?</td>
<td>- Is the project in competitive relation with other services in the local area?</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>- Which are your relations with other Protocol 3 projects?</td>
<td>- Regular contacts?</td>
</tr>
<tr>
<td>- Regular contacts?</td>
<td>- About which matter?</td>
</tr>
<tr>
<td>Main aspects</td>
<td>- Did the project encounter any difficulties, especially, financial issues? How did you face it?</td>
</tr>
<tr>
<td>-------------</td>
<td>------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>-</td>
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<td></td>
<td>-</td>
</tr>
</tbody>
</table>
Appendix 10. Criteria to evaluate the effectiveness and the implementation of the innovative case management projects

Table 12. 23 criteria used to evaluate the implementation of case management for community-dwelling frail older people

<table>
<thead>
<tr>
<th>a. Appropriate workforce</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Recruitment of adequate professionals by projects</td>
<td>0 = could not recruit professionals</td>
</tr>
<tr>
<td></td>
<td>1 = professionals with lower skills (training, expertise) were recruited</td>
</tr>
<tr>
<td></td>
<td>2 = professionals with lower expertise were recruited</td>
</tr>
<tr>
<td></td>
<td>3 = professionals with expected training and expertise were recruited</td>
</tr>
<tr>
<td>2. Skills of professionals</td>
<td>0 = no professional to provide this service</td>
</tr>
<tr>
<td></td>
<td>1 = diploma of professional is not related to the service delivered</td>
</tr>
<tr>
<td></td>
<td>2 = diploma of professional is related to the service delivered</td>
</tr>
<tr>
<td></td>
<td>3 = diploma is related to the service delivered and this professional is experienced in this field</td>
</tr>
<tr>
<td>3. Turnover of professionals</td>
<td>0 = turnover of frontline worker and coordinator &gt; once</td>
</tr>
<tr>
<td></td>
<td>1 = turnover of frontline worker and coordinator = once</td>
</tr>
<tr>
<td></td>
<td>2 = only frontline worker turnover</td>
</tr>
<tr>
<td>3 = no turnover of professionals since start</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>4. Training of professionals</strong></td>
<td></td>
</tr>
<tr>
<td>0 = no training planned</td>
<td></td>
</tr>
<tr>
<td>1 = training planned, but could not organize it</td>
<td></td>
</tr>
<tr>
<td>2 = internal training, not geriatric</td>
<td></td>
</tr>
<tr>
<td>3 = internal training, specific to geriatric care</td>
<td></td>
</tr>
<tr>
<td><strong>5. Number of frail older people per full-time equivalent case manager</strong></td>
<td></td>
</tr>
<tr>
<td>0 = &gt; 70/FTE case manager</td>
<td></td>
</tr>
<tr>
<td>1 = 51-70/ FTE case manager</td>
<td></td>
</tr>
<tr>
<td>2 = 41-50/FTE case manager</td>
<td></td>
</tr>
<tr>
<td>3 = ≤ 40/FTE case manager</td>
<td></td>
</tr>
<tr>
<td><strong>b. Tailored service design and organisation</strong></td>
<td></td>
</tr>
<tr>
<td><strong>6. Achievement of the caseload</strong></td>
<td></td>
</tr>
<tr>
<td>0 = achievement of &lt;30% of the caseload</td>
<td></td>
</tr>
<tr>
<td>1 = achievement of 31-50% of the caseload</td>
<td></td>
</tr>
<tr>
<td>2 = achievement of 51-75% of the caseload</td>
<td></td>
</tr>
<tr>
<td>3 = achievement of &gt;75% of the caseload</td>
<td></td>
</tr>
<tr>
<td><strong>7. Adequacy of the inclusion/exclusion criteria</strong></td>
<td></td>
</tr>
<tr>
<td>0 = inclusion/exclusion criteria are not adequate and the project did not change them</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td><strong>1 = inclusion/exclusion criteria were not adequate, the project changed them, but they are still inadequate</strong></td>
<td></td>
</tr>
<tr>
<td><strong>3 = inclusion/exclusion criteria are adequate or were inadequate, but were adapted and are now adequate</strong></td>
<td></td>
</tr>
<tr>
<td><strong>8. Shared decision process</strong></td>
<td><strong>0 = no meetings including all the professionals of the project</strong></td>
</tr>
<tr>
<td></td>
<td><strong>2 = professionals of the project attend meetings but do not share decision making/do not attend meetings of the steering group or do not receive minutes of those meetings</strong></td>
</tr>
<tr>
<td></td>
<td><strong>3 = professionals of the project attend meetings and share decision making</strong></td>
</tr>
<tr>
<td><strong>c. Self-management and support</strong></td>
<td></td>
</tr>
<tr>
<td><strong>9. Addressing concerns of beneficiaries and informal caregivers</strong></td>
<td><strong>0 = is not consistently done</strong></td>
</tr>
<tr>
<td></td>
<td><strong>1 = percentage of informal caregivers OR frail older people attending a multidisciplinary meeting during last three months is LESS than median than this subgroup</strong></td>
</tr>
<tr>
<td></td>
<td><strong>2 = percentage of informal caregivers OR frail older people attending a multidisciplinary meeting during last three months is MORE than median than this subgroup</strong></td>
</tr>
<tr>
<td></td>
<td>3 = percentage of informal caregivers AND frail older people attending a multidisciplinary meeting during last three months is MORE than median than this subgroup</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>d. Community linkages</td>
<td></td>
</tr>
<tr>
<td>10. Existence of a structural link with organizations that can refer beneficiaries</td>
<td>0 = no link</td>
</tr>
<tr>
<td></td>
<td>1 = convention signed, but no referral from beneficiaries</td>
</tr>
<tr>
<td></td>
<td>2 = convention signed, referral less than expected</td>
</tr>
<tr>
<td></td>
<td>3 = convention signed and referral as expected</td>
</tr>
<tr>
<td>11. Partnership with coordination agencies</td>
<td>0 = no link</td>
</tr>
<tr>
<td></td>
<td>1 = ad hoc meetings, on initiative of project</td>
</tr>
<tr>
<td></td>
<td>2 = ad hoc meetings, on initiative of coordination centre</td>
</tr>
<tr>
<td></td>
<td>3 = are reported through planned project meetings</td>
</tr>
<tr>
<td>12. Partnership with community organizations</td>
<td>0 = no link</td>
</tr>
<tr>
<td></td>
<td>1 = are being considered, but not implemented</td>
</tr>
<tr>
<td></td>
<td>2 = are part of the partnership</td>
</tr>
<tr>
<td></td>
<td>3 = take part at project meetings</td>
</tr>
<tr>
<td>13. (Beneficiary view) financial access</td>
<td>0 = the beneficiary had to renounce services because of cost</td>
</tr>
<tr>
<td></td>
<td>1 = the beneficiary has to pay more than 10€/day for the service</td>
</tr>
<tr>
<td></td>
<td>2 = the innovative intervention is free, but beneficiaries have to pay for the recommended services</td>
</tr>
<tr>
<td></td>
<td>3 = the intervention is completely free for the beneficiary</td>
</tr>
</tbody>
</table>

| 14. Adequacy of the financing of the project | 0 = the project intends to stop because it is not viable |
|                                             | 1 = the projects report some financial difficulties and did not ask for extra financing from the NIHDI, or the financing was refused |
|                                             | 2 = the projects report some financial difficulties and asked for extra financing from the NIHDI or frail older people, which was accepted |
|                                             | 3 = the project did not report any difficulties related to financing |

| 15. Incentives for GP participation | 0 = GPs are not involved and there are no indications that the project thought of it |
|                                   | 1 = GPs are not involved, the project suggested the GP to use of the nomenclature number related to multidisciplinary coordination, with no result |
|                                   | 2 = GPs are poorly involved, despite the financing provided by the project |
|                                   | 3 = GPs are well involved and financed by the project |

f. Processes in support of quality of care
| 16. Use of quality or performance indicators | 0 = quality indicators are not mentioned |
|                                          | 1 = quality indicators are mentioned in submission files |
|                                          | 2 = monitoring of quality indicators is part of the discussion in steering committee’s meetings |
|                                          | 3 = results of quality indicators are provided |
| 17. Monitoring of the care plan          | 0 = no individualized care plan |
|                                          | 1 = care plan only made once (e.g. at intake) |
|                                          | 3 = use and follow-up of care plan |
| 18. Provision of feedback of the frail older people to the GP | 0 = no feedback provided |
|                                          | 1 = information of the frail older people being in the project |
|                                          | 2 = feedback provided, non-structured |
|                                          | 3 = feedback provided about the results of the BelRAI |

**g. Knowledge management and decision support**

<p>| 19. Use of results of research | 0 = the rationale on how the intervention will impact the frail older people outcomes is not mentioned or unclear |
|                               | 1 = the rationale on how the intervention will impact the frail older people outcomes is based on projects’ conceivers’ perception |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| 20. **Use of evidence-based protocols or guidelines** | 0 = protocols or guidelines are not mentioned/not used  
1 = protocols or guidelines are mentioned in the submission files, but not later  
2 = protocols were made and/or used by the project and there is no information about their being linked to evidence-based literature  
3 = multidisciplinary protocols were made and used by the project and they rely on evidence-based literature |
| 21. **Presence of reflective discussions among peers/planned supervisions** | 0 = no such meetings are planned  
2 = meetings are planned and do not include a supervisor (physician or senior clinician)  
3 = meetings are planned and include a supervisor |
| h. **Clinical information tools** |   |
| 22. **Registry (list of beneficiaries of the projects)** | 0 = is not available  
1 = includes name, diagnosis, contact information and date of last contact either on paper or in a computer database |
<table>
<thead>
<tr>
<th></th>
<th>2 = allows queries to sort beneficiaries by priorities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3 = provides prompts and reminders about needed services</td>
</tr>
<tr>
<td>23. Reminders to providers</td>
<td>0 = are not available</td>
</tr>
<tr>
<td></td>
<td>1 = include general notification of presence in the project, but do not describe the needed service</td>
</tr>
<tr>
<td></td>
<td>3 = include specific information for the team about the results of the BelRAI</td>
</tr>
</tbody>
</table>
Appendix 11. Seven case studies

Case study 1

This case management project was selected as case from the start of the evaluation process and followed-up during four years (2010-2013).

1. Context of the intervention

The submission file was proposed by a coordination centre and the administrative coordinator was employed by a nursing home; however, the operational director is responsible of a coordination centre for home care. The project was the only Protocol 3 project in its region. It was preceded by a similar project that aimed to manage the waiting list for nursing homes. The only link between both projects was related to the staff: two members of the first projects were part of the second one. Aims of this coordination centre included information, counselling and coordination of health care, for every older person (60+) living in this area. The current project coordinator designed and submitted the project, after a preliminary presentation work towards the partners of the project.

2. Project as planned.

THE INTERVENTION

The objectives of the intervention were to delay unwanted nursing home and hospital admissions by the means of (1) informing the frail older persons about existing services in her/his respective local context and (2) to coordinate the services required by the frail older persons. The intervention was defined as «a multidisciplinary intervention with the function of case management».

A call centre would dispatch the requests among the case managers, based on geographic location. This call centre would function as an integrated coordination centre for home care services.

The intervention focussed on the frail older person and the services he/she needs, after a global assessment of the situation, by the means of the following steps:

1. Identification of a frail older person, based on the referral of a professional or an ICG;
2. The inclusion was assessed to ensure that the case management would benefit the frail older person and that the ICG could be involved adequately;
3. If included a notification of the inclusion was send to every health care provider involved
4. The frail older person was
5. entered into the electronic software package and one of the case managers was contacted;
6. After a first contact by phone, the case manager met the frail older person at home, where an Edmonton scale was used, and BelRAI;
7. A proposal of support plan was made to the frail older person;
8. If agreed, the case manager called the available services (i.e. without waiting lists), in order to respond quickly to the needs;
9. The case manager did the follow-up of the situation, by the means of home visits or, in some cases, by phone calls;
10. A frail older person remains in the project as long as he/she is not definitively institutionalised, deceased or when the project is not needed any more (when there are only two care providers and the situation is stable).

**TARGET POPULATION**

The target population was every 60+ living in the region wishing to be in a nursing home or demanding health care support.

**SKILL-MIX**

The project planned to use a team of five professionals (3,5 FTE) trained as case managers who supported frail older persons in their choices, the making and follow-up of a care plan, and the contact of the services they needed, based on her/his personal resources.

The project team was composed of a social worker, educators and nursing assistants, functioning as case managers. The coordination between case managers should be made possible by the means of the use of IT infrastructure and coordination meetings. The software would centralized every information about frail older people, his needs, the evaluation, the care plan, as well as the services available in his immediate local area.

**COST OF THE PROJECT**

The annual cost agreed for this project, as financed by NIHDI, was 441924 €.

**INTERACTION WITH THE ENVIRONMENT**

The project relied on a partnership, composed of all care and health care providers in this area. They were formally regrouped by the means of a non-profit organisation. Almost fifty organisations were thus regrouped into eleven categories of members, which were part of the board of directors or general meeting: eight nursing homes; three centres for home health care; five sickness funds; two groups of GPs; one organisation of independent nurses; one organisation of employed nurses; two hospitals; one honorific organisation; two coordination centres; nine Public Centres for Social Help.
The management of the project rested on the work of board of directors or general meeting. Formal collaboration agreements ensured the participation of every organisation.

3. Project as implemented

PROMOTION OF THE PROJECT

The project started in March 2010, with some financial difficulties at the onset because of some expenses not covered by the NIHDI budget, such as the renting of the offices.

The project coordinator and different collaborators put some efforts to promote the projects by the means of flyers, articles in the local media, meetings with GPs, partners, participants, etc., in order to be able to reach frail older people and different professional services involved. During this promotion phase, the coordinator faced some fears of concurrence of existing services in the region.

A facilitating factor during this phase was trust between partners and everyone’s agreement that organisational neutrality was crucial to ensure the success of the project and its intervention.

THE INTERVENTION

The intervention was rapidly carried out as planned. The project does not function with a waiting list and case managers are aware that, when there is a demand, they have to answer it immediately, even if the recommended service is not immediately available. Central to their approach is the patient-centeredness; this can be seen in (conflictual) situations between ICG and frail older people, where their role is to be the frail older people’s advocate. They allow themselves to take the necessary time to identify latent needs and to help in negotiations, if necessary. For this project, it is important to seek the best possible solution, given the situation and this might imply to recommend institutionalisation. Institutionalisation might be a successful outcome, if the frail older people agrees to it willingly, after a supportive intervention of the case manager. This is especially the case when “maintaining” the frail older person in her home is at her own (very high) expenses. The benefit of case management is essentially seen in complex situations; either when there is no ICG or if the ICG is overburdened or has not the time to intervene adequately. An essential mechanism in this aspect is the fact that there is a trustworthy person (the case manager) who was identified by the frail older person (and his/her ICG). For the ICG, emotional support is crucial.

ORGANISATIONAL FEATURES
The coordination of the interventions rested on the following: 1) home visits and meetings, 2) encoding of the frail older person in a specific software, 3) coordination meetings « around the frail older person » between the case manager, care providers and frail older person. All decisions relevant to the involved care provided were made as a team and included in the software. The coordination meetings took place every two months around a single frail older person and lasted two hours.

The software held a centralized place in this project. It enabled the following

a. At the frail older person’s level
   a. Collection of all information about a frail older person, under the form of an electronic patient record;
   b. Automatic generation of an individualized support plan (as opposed to “care plans”, since this project does not support the idea of case management being “care”);
   c. Support for the coordination of interventions at the frail older person’s level;
   d. Enabling continuity of care and support, even in absence of the case manager of the frail older person.

b. At the project’s level
   a. Timely information about the availability of services in a given area;
   b. Providing warnings about the planned home visits;
   c. Linking home visits with case managers’ schedule;
   d. Assessing very quickly the intensity of case management needed. For instance, they estimated the percentage of frail older person requiring intensive case management at 15/189.

TARGET POPULATION

After several months of functioning, the project reached easily its expected caseload of 189 frail older people and had to reduce the intensity of their interventions. The success of the project with the population forced the project to replace a home visit by phone calls, when a home visit was not found indispensable.

Overall, the frail older persons seem to be referred by structures (hospital, nursing homes…) or by professionals (family help, household support, social worker, nursing assistant, dietician, home attendant, etc.).

SKILL-MIX

The project recruited seven professionals (one social worker, one nurse, one occupational therapist, and two educators), working as case managers, plus one coordinator of the project and one secretary for the call centre.
Table 13. Evolution of the skill-mix of case 1

<table>
<thead>
<tr>
<th>Profile of the professional</th>
<th>Planned (FTE)</th>
<th>Time 0 (Dec 2011)</th>
<th>Time 1 (Dec 2012)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social worker</td>
<td>0,55</td>
<td>1</td>
<td>0,5 (1) + 0,75 (2)</td>
</tr>
<tr>
<td>Nurse</td>
<td>0,85</td>
<td>0,5</td>
<td>0,5</td>
</tr>
<tr>
<td>Occupational therapist</td>
<td>0,75</td>
<td>0,75</td>
<td>0,5</td>
</tr>
<tr>
<td>Educators</td>
<td>0,80 (1) + 0,55 (2)</td>
<td>0,75 (1) + 0,50 (2)</td>
<td>0,75 (1) + 0,50 (2)</td>
</tr>
<tr>
<td>Administrative worker</td>
<td>0,5</td>
<td>0,5</td>
<td>0,75</td>
</tr>
<tr>
<td>Coordinator</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5</strong></td>
<td><strong>4,25</strong></td>
<td><strong>5,25</strong></td>
</tr>
</tbody>
</table>

Because of the high pressure related to the workload, it was not possible to attend external trainings at the onset of the project. Later the collaborators attended external trainings in Germany, where specific case manager training exist (as opposed to what exists for the moment in Belgium). Collaborators having attended external trainings were requested to diffuse the information among their colleagues.

The project management was done by the means of director’s board meeting, twice a year. Work meetings were organized four times a year, and they related to themes linked to the current problems with partners of the project.

In comparison to the start of the project, the occupation of different professionals changed slightly: increasing of the working time by the social worker and decreasing of the working time of the nurse to meet the needs of the activities required by the case management activities. Indeed, the type of case management carried out is more of social nature.

The main coordinator and the case managers were all responsible for the introduction of data about every frail older person and were the only ones to be able to access it, by the means of a secured access portal. This software grew with the project and, three years after the start of the project, the coordinator was fully satisfied with its functioning. The improvement and management of this software represents a workload of +/- 2 days/month for an ICT technician.
The size and activity zone of the project being very large, it was divided among five case managers, each being responsible for her own zone. This allowed an in-depth knowledge of the local offer of services. The referrals are sent to the different case managers by the means of the call centre.

A hindering factor was the fact that some case managers did not have access to BelRAI application. To address this difficulty, they had to ask a colleague working in the same building, but outside the project, to help them to access the database with the help of his e-ID card.

COST OF THE PROJECT

The project asked for and obtained an increase of its financing in December 2012, from 441924€ to 467704€, due to the initial underestimation of the cost of the data encoding (BelRAI). Data about the repartition of the cost is provided in the cost analysis part but it is worth mentioning that this project used an important part of its resources for the making and updating of the ad hoc ICT tool (+/- 2 days/month of a computer technician).

4. Adaptations

Challenges faced and adaptation strategies adopted by the project are displayed in the table below.
Table 14. Challenges and adaptive strategies of case 1

<table>
<thead>
<tr>
<th>Challenges</th>
<th>Adaptive strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>The low level of GPs’ engagement</td>
<td>Improved communication strategies towards frail older persons’ PCP, by systematically provision of feedback about the frail older person being in the project</td>
</tr>
<tr>
<td>The fear of concurrence, expressed by the geriatric team of the local hospital</td>
<td>The social services of the hospital is engaged in the process, as an intermediate figure between the frail older person and the PCP</td>
</tr>
<tr>
<td>Frail older persons’ social, psychological and cultural barriers to ask for help</td>
<td>Formalisation of role definition between care providers, with the support of the software</td>
</tr>
<tr>
<td>Frail older persons’ social, psychological and cultural barriers to ask for help</td>
<td>Take time to study all the needs of the frail older persons, including latent needs, and seek acceptable solutions, taking into account the priority of frail older person’s autonomy in decision-making.</td>
</tr>
</tbody>
</table>

Project evaluation is done during project meetings every three months, with all partners and participants.

5. **mechanisms through which the project expects to achieve positive outcomes**

Eventually, Figure 19 summarizes the logic of the intervention in this case study, along with the activities used by the project and the description of the mechanism by which the project expects to achieve its expected outcomes in its given context, by the means of Ridde and Haddad’s description of the programme’s theory (Ridde and Haddad, 2013).
### Expected objectives of the intervention

#### Expected effects

<table>
<thead>
<tr>
<th>Expected objectives of the intervention resources &amp; activities</th>
<th>Expected effects (Mechanisms)</th>
<th>Expected outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allow the FOP to live at home autonomously/autodetermined</td>
<td>Support and reinforcement of existing capacities</td>
<td>Enhancing autonomy</td>
</tr>
<tr>
<td>Case management with 5 well-trained case managers</td>
<td>The FOPs and ICGs feel empowered to remain at home</td>
<td>Delay of institutionalisation</td>
</tr>
<tr>
<td>The case manager follows the FOP in all care settings: ambulatory, transmural and institutional by the means of home visits and phone calls</td>
<td>The FOP has the last word</td>
<td>Improving QoL</td>
</tr>
<tr>
<td>Coding and sharing of relevant care-related information in a newly developed software</td>
<td>Preferences are taken into account</td>
<td>Needed (health)care services</td>
</tr>
<tr>
<td>Inform and counsel about the most adequate services, in regard with the existing situation and resources</td>
<td>Early identification of needs and resources</td>
<td>Maintain/improve ADL/IADL</td>
</tr>
<tr>
<td>Countering social isolation of the FOP</td>
<td>Offering timely services</td>
<td>↓ ICG burden</td>
</tr>
<tr>
<td>Analysis of the social network by the case manager during home visits</td>
<td>The FOP does not have to waste energy in seeking information</td>
<td>(health)care providers access the relevant information about the FOPs timely and easily</td>
</tr>
<tr>
<td>Proposal of services (day care...) to allow FOPs to be in contact with others, if he/she wants to</td>
<td>Support and help is proposed where it is most needed and best accepted</td>
<td>Decreasing of social isolation</td>
</tr>
<tr>
<td></td>
<td>Threshold to seek help is lowered</td>
<td>Improving QoL</td>
</tr>
<tr>
<td></td>
<td>Removing fear-related barriers, which can be incentives to wish to go to a nursing home permanently</td>
<td>FOP senses he/she has a place in the community</td>
</tr>
<tr>
<td></td>
<td>Linking FOP with existing (health) care services</td>
<td>Maintaining social links with the community</td>
</tr>
<tr>
<td></td>
<td>Care continuity throughout settings is improved</td>
<td></td>
</tr>
</tbody>
</table>

### TARGET 1

- Allow the FOP to live at home autonomously/autodetermined
- Case management with 5 well-trained case managers
- The case manager follows the FOP in all care settings: ambulatory, transmural and institutional by the means of home visits and phone calls
- Coding and sharing of relevant care-related information in a newly developed software
- Inform and counsel about the most adequate services, in regard with the existing situation and resources
- Countering social isolation of the FOP
- Analysis of the social network by the case manager during home visits
- Proposal of services (day care...) to allow FOPs to be in contact with others, if he/she wants to.

### TARGET 2

- Countering social isolation of the FOP
- Analysis of the social network by the case manager during home visits
- Proposal of services (day care...) to allow FOPs to be in contact with others, if he/she wants to.
**TARGET 3**

**Restructuration of the local system**

- Creation of a legal entity (non-profit organisation), including all care providers in the region (including the hospital).
- Information of stakeholders about the existing supply and demand.

**The project acts as a coordination centre of the region and is organisation-neutral.**

**Avoid continuity gaps and healthcare overlaps.**

**Inventory and updating of existing supply of care and services in this region.**

---

**Contextual factors and barriers:**

- Low involvement of primary care physicians.

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*Figure 20. Programme theory of case 1*
Case study 2

Case Management project providing also occupational and physiotherapy (case 2)

The project is evaluated as case study since the onset of the evaluation and was followed for four years (2010-2013). It started the 1st October 2010 and is composed of two main strains: 1) Psychosocial support of FOP with dementia and their ICG + 2) Screening and follow-up of frailty (“vorm van trajectzorg”).

The project has two locations: (1) a medium-sized city and (2) a rural town. The main location is situated in the city.

1. Context of implementation

The project is born out of the intuition of the project coordinator, who happens to be the director of three nursing homes and claims to be very concerned with the problem of dementia in FOP. He participates in self-support groups for ICG of FOPs with dementia, instigator of many projects around respect for demented persons, etc. In short, an engaged person. From the PC’s point of view, there was a dearth of services for FOP with dementia: lack of information, access to relevant services, coordination, etc.). Therefore, he started a project six years ago, which lasted three years, around support for FOP with dementia living at home. This project stopped because of financing: it was completely self-supporting. This experience learned two important facts: (1) there is a need for this type of support (cf. furious phone calls when the previous project stopped and (2) this type of project needs time and energy before people known about it. The Protocol3 project may build upon the network that was created in the previous project.

From the project’s point of view, this implementation process is a really learning opportunity, in order to prepare a vision for the future woonzorgzone\textsuperscript{16}. (litt. Living and caring zone)

2. The project as planned

The intervention

The project is based on the assumption that proactive screening is needed for older persons, in order to be able to identify needs, preferences and resources of the FOPs and his informal

\textsuperscript{16} This living and caring zone can be a neighborhood, a municipality and aims at promoting the wellbeing of the residents in that area in such a way that everyone, even older persons and beneficiaries may remain at home. A specificity is the care node, where residents can address their care question and where they can get the care they need. This has to be accessible for everyone, with streets and squares without obstacles, enough residences and services designed for all.
caregiver and offer the possibility of access to adequate options and care in a timely manner. The project plans this to be done by the means of a nurse case manager, after first discussion by the case manager at home and planning of further home visits, in order to complete the information after a trusting relationship will be built. Based on this information, the BelRAI will be completed, which will allow checking CAPs and results of scales. Out of the activated CAPs, three will be chosen which are to be presented to the FOP. Priority will be given to CAPs where an improvement can be expected. A very important part of the intervention is aimed as to provide intensive support to the ICG, especially when the FOPs has a dementia problem. The case management function will be completed by two other functions, namely occupational therapy and physiotherapy, expected to have an important effect on the delay of institutionalisation, by the means of physical activity in group, which is supposed to be an important component to counter loneliness and social isolation. Two ways of referral will possible: either by a colleague (occupational therapist, working part-time) in a geriatric ward of the local hospital, or by means of a primary care worker. If the FOP is still at the hospital, a first screening will be performed there, by the colleagues in the hospital, to which the inclusion criteria will be transmitted. If positive, the FOP will be referred to the project and the informed consent signed.

TARGET POPULATION

The type of FOP is everyone coming from the catholic ‘pillar’: Christian Mutuality, family help, etc. They have much less collaboration with other sickness funds. Other FOP will be coming from the Social Centre for Public Support. The choice to include FOPs from two locations was motivated by the expected diversity of the population (urban and rural), in order to have more diverse observations of what type of case management would be more relevant for which populations.

SKILL-MIX

To start the project, the project coordinator wanted to hire at least one experienced nurse (geriatric nurse with an extensive experience with the use of BelRAI assessment), one less experienced nurse, but with a social background (community nurse), a physiotherapist and an occupational therapist.

COST

The expected yearly financing by NIHDI is 154935€

INTERACTIONS WITH THE CONTEXT

They expect a high level of interaction with the FOPs’ GPs, considered as crucial partners in the primary care. The other partners of the project are a centre of mental health, a circle of
general practitioners, a local general hospital and a coordination centre (SEL). The partners were chosen on the grounds of their potential for collaboration, more specifically on the grounds of their capacity to refer FOP towards the project.

3. The project as implemented

THE INTERVENTION

The intervention was carried out as expected, except for the psychosocial support of the ICG, which was one of the main objectives of the project. This could not be carried out easily, because they observed that the presence of the FOP hindered, in many cases, a free discussion with the ICG. This was the reason why the service tried, when possible, to come with two care providers to support the ICG, where, for instance, the occupational therapist worked with the FOP, while the nurse or case manager had a discussion with the ICG. This is of course time-intensive. Moreover, they noted a tension between the expectations of the informal caregivers (e.g. descendants), who ask for more household support and less activities with the FOP (e.g. memory training by a family help).

The project noted also that the requests for case management often come too late, when the ICG is already overburdened: after a hospital admission or a meeting with the coordination centre. Even the GP asks too late for them.

In most cases, the home visit occur after planning, excepted in the cases where unannounced visits are requested, such as in cases of suspected neglect, disturbed day-night rhythm.

Tools for case management include FOP records and notebooks, as well as informal means (phone calls). The FOP, his/her ICG (mostly descendants) are highly involved in the making of the care plan.

Tools for the intervention. Intake with a computer at home was difficult because, when questions were asked with the computer, the people were reluctant to speak: they think they are a generation too early. This was the reason why BelRAI was firstly done on a paper version and then quickly encoded in the application, in order to be able to extract the results of the CAPs and scales.

Multidisciplinary meetings occur mainly at home, but the project stressed the fact that it was often difficult to find a moment to meet all partners at home, because of conflicting agendas. The project adapted its time schedule by expanding working hours, in order to be able to meet ICGs (twice a week they worked later).

The notebooks at the FOP are indeed a minimum, but the projects stated that this was not enough. For instance, if they estimated that the FOP needed a physiotherapist from outside the project, there was no follow-up and other means had to be used (phone calls or emails). Information from geriatricians occurred verbally and this was also the case of information from social service of the hospital.
In the local area, there is a shared medical file, where the care provider is allowed to add a word document. This software is not compatible with the BelRAI software. Moreover, the GPs are reluctant to use BelRAI.

**TARGET POPULATION**

They claim that 75% of their FOP has a cognitive disorder but that not everyone of that group has a diagnosis. They observe that there are not so many FOPs in the rural area: in this case, they are often coming from farmers’ families, where the children are much more present. In the urban zone, there are also less ICGs.

They note also a difficulty to sign the informed consent because the content is mostly incomprehensible, especially for FOPs with cognitive problems. This is never done during a first meeting. Mostly descendants sign the form. When asked if the profile of the FOP signing the informed consent is different from the FOPs not signing it, the projects seems to consider that the FOPs coming from labour classes have a very hard time understanding the meaning of the informed consent.

**SKILL-MIX**

To be able to organize the case management interventions, it was planned to hire two case managers, (two bachelors in nursing), ¼ FTE physiotherapist, ¼ FTE occupational therapist and ¼ FTE speech therapist. The project did not have any recruitment problems but had to start later than expected, because of the fact that PC wanted absolutely to hire an experienced nurse. This case manager is considered as the central axis of the current project. She is trained as a geriatric nurse and was actively involved in the unfolding of the geriatric liaison function in a teaching hospital, using the BelRAI as comprehensive assessment and case management tool. According to the project coordinator, the profile needed to be able to carry out case management in this project is a nurse or nursing assistant, with experience with geriatric patients.

The two case managers are responsible for the organisation of the case management pathways, while the three others work within their domain of expertise. In order to reach the caseload of 140, the physiotherapist and occupational therapist had to function as a case manager in the starting phase. The idea to hire a speech therapist was not carried out, because it was found less needed than expected and, if required, it is always possible to hire an independent speech therapist.

Therefore, the project asked to switch the ¼ FTE speech therapist at a ¼FTE nurse. This was accepted by the NIHDI and the convention changed accordingly. The physiotherapist works ¼ FTE in the project, but also ¼ FTE in a nursing home. The nursing assistant had also already an experience with this population, as she worked formerly in a nursing home. Finally, the occupational therapist works ¼ FTE in a geriatric ward in the referring hospital. Since the expected caseload is not achieved for now, they remain with 2 FTE nurses, instead of the planned 2,25 FTE. In December 2011, PC considered a change of convention but in 2012 this was not done. Reasons for this are unknown.
Because of a long-term sick leave and maternity leave of one of the nurses, new nurses had to be recruited. The turnover of nurses puts a heavy burden on the caseload and is also an issue for continuity of care. The entry time of a new nurse is estimated to be at minimum three to four months, even more if she works part-time. Normally, recruitment should not have been problematic but it was for the project because of two reasons. Firstly, because of nurses’ shortage, secondly, the ‘new’ framework of the project provides a sense of insecurity. Working as a nurse in a hospital is perceived as more ‘safe’: in the current project, you have to work with new people, you have to start from scratch, which can be considered as threatening.

In the basic training, there is a chronic lack of training about care for older persons. In this context, they need even more training about the making of a meaningful, evidence-based care plan. Because of the high pressure because of the workload, it was not possible to attend external trainings. Additional training of the case managers is done by the means of weekly intervisions. Each collaborator, on turns, gathers the necessary literature to prepare those intervisions.

**Organisational features**

There was a very high pressure, from the project itself, to reach the caseload of 140. This caseload was proposed initially, but appeared quickly unrealistic. In October 2011 there were 114 in the BelRAI app, which was low, considering that this project used actively the BelRAI for care purposes. In order to maintain this number of FOPs, the interventions became less intensive and case management was done by phone calls in some cases. There were even FOPs in the project, which did not need any intervention. As says one of the members of the project: “It is sufficient to know that it is possible to count on the project…” The coordination of the project occurred by the means of a monthly meeting in the nursing home. It lasted two hours and the minutes of this meeting are introduced in a sharepoint that every collaborator has access to. Care providers were also present and the decisions made collegially.

**Auto-evaluation of the project**

The project did not proceed to self-evaluation, but the coordinator expects this to be done by the scientific team. Overall, the project finds that the case managers are very well received by the FOP.
INTERACTIONS WITH THE CONTEXT

Meetings with external partners around a single FOP occurred at the coordination centre or at the sickness fund’s location, when initiated by the latter. This happened often when the FOP was admitted in a hospital, in order to check whether the transition to home care is doable.

Once a month, the case manager was invited to attend the multidisciplinary meetings at the mental healthcare centre, in order to discuss individual problems of FOP.

One of the biggest barriers is that there is a risk of overlapping with the work field of other care providers, especially for care providers delivering care at home.

Another main difficulty was the existence of a waiting list for services the FOP needs immediately, especially services to support the burden of the ICG. Waiting lists are not confined to nursing homes, primary care services also have waiting lists and, when a place becomes free, it is more than often too late.

The added value of the project team is being recognized by other primary care providers (GPs, professionals of sickness funds, etc.), because they learn to know other aspects of the needs of the FOP, which are largely understated for now.

The project fills out the whole BelRAI and does not, as it is sometimes the case in other projects, entrust it to other nurses from employers’ organisations. GPs are very reluctant towards the use of BelRAI, which explains that this part is not filled out if one of the project members does not do it. The project provides feedback to GPs, when there is a problem. In this case, it is done by phone. It may happen that some FOP do not want the case manager to warn the GP. It is very difficult to find a balance between what the FOP desires and what is desirable for the FOP. This is the case when the FOP needs help (based on the needs assessment form), but refuses it. In that case, they provide the minimal care delivery, in order to maintain a meaningful relationship:

Case manager: « I am allowed to enter the house and if more intrusive activities are required, it happens during my absence, e.g. cleaning in the home of a FOP living in a ‘dirty’ environment. »

The case manager makes a schedule manually of the FOP needing a re-evaluation after six months, etc.

A year after the start, the collaboration with two of the partners is suboptimal: (1) collaboration with GPs is very poor, except for five of them (2) centre for mental health: despite requests for support in difficult situations, there are few answers. Two years after start, some partners refer FOPs as expected and they observe that the geriatricians and neurologists of the local hospital are the main referrers (90% of the FOPs of the project).

At the onset, there seemed to be fear for concurrence, from the physiotherapists in the coordination centres and sickness funds. The project coordinator had to justify the precise boundaries of the physiotherapy intervention in the project. In this case, the physiotherapists in the project only conducted the geriatric assessment, not the activities of the nomenclature. Moreover, they observed that the FOPs of their project were more dependent than the beneficiaries cared for by the other partners.
INNOVATION WITHIN INNOVATION?

« I think we cannot do as if this does not exist and only consider frailty, when isolation problems are so huge. » (PC, interview 2011)

This project tried out sessions of physical activities two afternoons per week, in patients with Parkinson disease, in order to counter isolation in this population groups. Moreover, they wanted to restore continuity of exercise programs, initiated in hospitals. During these sessions, the ICGs would have met the case manager, in order to monitor the follow-up of the care. This initiative was discontinued, because of parking problems, but restarted after several months, with a smaller group.

The coordinator considers the current Protocol3-project as a learning opportunity and tries different modalities within the project, such as fitness for older persons. They will try this another way later on.

4. Adaptation strategies

- The project started later than expected, because the main coordinator wished absolutely to recruit a geriatric nurse with experience. She had to give notice at her previous work. This might probably have an impact on the achievement of the caseload in the time required by NIHDI.
- At this time, there is still no change of the caseload. This is indeed a surprising decision, as the recommended FTE CM to patient ratio is 1:40. The project prefers not to lower the caseload, but to lower the intensity of the interventions or replace face to face contacts by phone calls. Here there is a risk on the quality of the case management process and overburdening/demotivation of the CM, but also on the intensity of the care provided.
- Lowering of the intensity of the care provided, because of the high caseload. The face-to-face contacts may be replaced by phone calls. This raises concern on the quality of the care and even on the impact of patient outcomes.
- Changes in the type of care provided by the physiotherapist, organising care for more dependent patients, as not to concurrence the work done by the physiotherapist of the Christian Mutuality.
- For the previous cited reason (fear of concurrence), multiplication of meetings with other care providers.
- Staff turnover in nurses because of long sick leave and maternity caused other care providers to playing the role of CM (occupational therapy and physio). As a result, the care plan could not be implemented as wished.
- 0.25 FTE intended speech therapists became 0.25 FTE nurse, because the project thought this profile more relevant. Speech therapist are used, but outside the project (independents).
Changes of working hours, as to offer the possibility to informal caregivers to be reached, outside office hours. This shows a level of flexibility of the project, as to adapt to the needs of the informal caregivers.

Less training than expected, because there was not time for this, because of the turnover of the nurse and the high case manager to frail older person ratio. As a result, the skills of this nurse did not meet the expected standards for eliciting and carrying out the care plan.

5. mechanisms through which the project expects to achieve positive outcomes

Mechanisms through which the project expects to achieve positive outcomes

Social isolation of the FOP and ICG, together with reactive care, is at the basis of the risk of institutionalisation. If this is adequately identified and supported, the likelihood of countering functional decline is important. The intervention of the case manager aims at starting early adequate care, via the BelRAI CAPs and results of scales. By these interventions, the social network can be (re)activated, but also provide physical activity and adaptation of the home environment.
### Expected Objectives of the Intervention
### Resources & Activities

<table>
<thead>
<tr>
<th>TARGET 1</th>
<th>Expected Effects (Mechanisms)</th>
<th>Expected Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Early detection of determinants of frailty</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. <strong>Proactive screening with the help of BelRAI</strong></td>
<td>Identification of needs, preferences and domains for potential improvement</td>
<td>Participation in decision-making, Functional status, QoL</td>
</tr>
<tr>
<td>2. <strong>Adequate identification and delivery of services, in function of CAPs</strong></td>
<td>FOP chooses the services according to wishes and needs</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Support of ICG at the onset of dementia</strong></td>
<td></td>
</tr>
<tr>
<td>1. <strong>Supportive home visits for the ICG</strong></td>
<td>Better emotional support of ICG</td>
<td></td>
</tr>
<tr>
<td>2. <strong>Information about the possible aids</strong></td>
<td>ICG uses “praatcafés” &amp; respite options</td>
<td>QoL of ICG, Capacity building of ICG</td>
</tr>
<tr>
<td>3. <strong>Conversational meetings at night with ICG</strong></td>
<td>Social interactions</td>
<td>Less social isolation</td>
</tr>
<tr>
<td></td>
<td><strong>Prevention of social isolation through physical activity</strong></td>
<td></td>
</tr>
<tr>
<td>1. <strong>Identification of the target population, based on BelRAI data and conversation</strong></td>
<td>Participation of FOP in these sessions</td>
<td>QoL of FOP, Functional status</td>
</tr>
<tr>
<td>2. <strong>Organisation of physical activity sessions in the nursing home</strong></td>
<td>Social interactions, Lowering of threshold towards nursing home</td>
<td>Less social isolation</td>
</tr>
</tbody>
</table>

### Contextual Factors and Barriers
- Problem of programme fidelity because of low availability of recommended services
- Difficult physical access to some of the physical activities organised in the nursing home (parking issues)

Figure 21. Programme theory of project of case 2

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6. Key results for this project are

- Previous knowledge of the precise needs of the target population, because of a similar project who stopped two years ago. This enabled to fit the project design exactly to the needs.
- Recruitment of the elderly by the occupational therapist, who works part-time in a geriatric ward (main referrer).
- Barriers diminished by the geographical (at home) and financial (free) accessibility for the elderly.
- Elderly assessment: comprehensive assessment by the elderly by a trained geriatric nurse, who has also a good knowledge of the potentialities of the BelRAI in its use for planning, carrying out and evaluation of the case management.
- Care is tailored to the individual needs of the older population, by the means of BelRAI.
- Improvement in care coordination. As the care is tailored to the needs to the older person and his informal caregiver and this is carried out by a single case manager, it may be expected that gaps and overlaps will occur less.
- Dynamism of the main coordinator, who considers this project as a learning opportunity.
- Benefits of participation of other care providers are unclear. Specifically, the GPs involvement is poor. Moreover, there is a fear of overlapping/concurrence because other professionals perceive the intervention of the CM as intrusive.
- The case managers are under a lot of pressure due, at the one hand to the central role of the case manager added to the high burden of the BelRAI and, at the other hand to the stress achievement of the caseload, makes that if the case manager is at risk of burn-out or if she quits the project or is absent, this project risks a severe drawback.
- The (too) dynamic director risks to take initiatives that put too much pressure on the professionals of the project: e.g. setting knowingly the ratio elderly to case manager too high (literature recommendations = 40 : 1 ; project = 63 :1). Another example is the testing of physical exercise for Parkinson patients in the frame of the current project, which is an extra activity in an already overburdened time schedule.
- The level of collaboration with the GP is lower than expected and the project does not seem to undertake extra steps to face this concern.
- The other services, to which the CM should want to refer the elderly, are very often full and the elderly cannot benefit from the services he needs.
- The tool used by the circle of GPs is not compatible with the BelRAI.
- High administrative burden because of the BelRAI.
- For the future, the case managers expect to be able to work more in-depth with the care plan, especially when all collaborators will be fully operational, and to work more proactively in this topic.
Case study 3

The project proposes a care pathway support to older persons with visual impairment. The project was used for a case study till 2012, at which date we discontinued the in-depth data collection because of (1) the long delays to obtain data and (2) the difficulties to obtain clear answers from the project as to their functioning and use of resources (see comment on the remaining “grey zones” after the interviews).


The project coordinators observed that eight out of ten people with visual impairment became visually impaired after 60. This population gets too fast in residential facilities, where they do not belong and which they do not need. At the one hand, visual impairment is an important frailty factor and, at the other hand, institutionalization is, especially in this context, a very negative experience, because of the withdrawal of any spatial recognition point. The conceiveer of the project had a long expertise in the field of visual impairment and observed an important gap in the health care system for this population. This observation was further confirmed by research and action research in Belgium and the Netherlands.

2. The project as planned

The aim of the project is not to be necessary in long term anymore, when every partner in the health care system will have the necessary expertise to include those older persons in the mainstream health care but, in the meanwhile, the overall aim of the project is to support FOPs with visual impairment, in order to allow them to stay at home, through intense collaboration with diverse care providers. They state that the specific aim is to enhance FOP’s autonomy, even if, as will be described further, they aim to enhance independency. This project is dispersed in the whole Flanders’ region (seven locations). The support of the pathway is delivered with the help of involved actors coming from different disciplines and expertise groups, usually coming from outside the health care sector (social workers). Those care providers usually work in dyads and provide a tailored pathway support in collaboration with partners with and without this disability sector.

THE INTERVENTION

It was expected that, after screening for meeting the inclusion criteria, a set of older people the professionals of the charity fund already care for, would receive a more intensive intervention than the one they already received by the means of their existing network. Concretely, the interventions of the project are bundled in a tailored package, based on the needs of the FOPs, in domains where improvement might be expected, in discussion with the frail older person and his informal caregiver. This package is carried out by the means of a plan and may be composed of the following interventions:
- Social support: facilitation to access to social network, social status, countering of social deprivation, which is very common to this population;
- Psychological support: sessions with psychologists;
- Home adaptation;
- Presentation and education about equipment for supporting ADL and IADL;
- Occupational therapy at home;
- Learning of transfer techniques, including to leave or to go into their homes;
- Training of other primary care (health) care providers about caring for people with visual impairment.

On an operational level, they planned to work in two distinct phases.

During phase one, they would provide care path support with a small MD team. This team should consist of the coordinator of the project and the dyad social worker/occupational therapist. If this small team should observe, with the help of the assessment tools that more support is needed, the intervention would be enhanced by the input of a psychologist.

During the second phase, this team would propose a care plan to the FOP, which should be designed with the FOP and contact the other primary care providers, such as nurses, family aid and other household support. Continuity and tight coordination are aimed.

**Target population and caseload**

The expected target population was home-dwelling people of 60 years and older with visual impairment, living in the whole Flanders region. They aimed at a caseload of 120 persons.

**Skill-mix**

The submission file mentions the hiring of 6.5 FTE occupational therapists, 6.5 FTE social workers and 1 FTE psychologist.

**Interaction with the context**

The organisation to which the conceive belonged could not submit a proposal, because it was a charity fund. For this reason, they looked for a nursing home as partner. They chose a partnership with the nursing home with which they already had other projects.

The other partners are (a) another charity fund; (b) a users’ association; (c) a social care organisation at home; (d) a low-vision centre; (e) supported living for visual impaired people (f) a coordination centre. The main role of these partners is referral and provision of expertise. They will participate in the steering committee.
The participants of the project are (a) a hearing library; (b) a network of expertise for low-vision; (c) three visual revalidation centres of teaching hospitals; (d) an advisory centre for low-vision; (e) a social profit organization for individual and collective transition management; (f) a university in the Netherlands (participate in parallel scientific study).

Comments of the jury

“The underlying concept of the project is useful and relevant for the society but may be too specific and bounded to be considered as innovative. The role of the main partner (nursing home) is unclear. The target population is very specific and bounded, the decision tree of the conceptual nota is not mentioned. The jury has questions about the calculation of the client hours, are these not estimated too low? They wish to have the figures about the financing coming from other structures than NIHDI.

The part ‘programmability’ is not filled out. However, the operational feasibility of the care provision and the accessibility for the patient are sufficiently mentioned in other parts of the document.”

3. The project as implemented

The objectives of the project did not change since the start.

THE INTERVENTION

The project started 1st April 2010 and experienced very quickly difficulties with the access to the BeRAI web application, because among the profile of the care providers (occupational therapists and social workers), social workers were not part of the list of professionals having access to the application (art 78 of RD 1967). The interventions were mostly provided as planned, except for the support of primary care providers. Firstly, the screening was very selective, because the demand was high and they could only provide tailored care packages for 120 people. They could only accept one in six demands (Int12). The decision to include the FOP in the project was made between the FOP, the project coordinator, and the dyad that made the first screening.

The duration of a care pathway in this project went, on average, from three months for non-successful projects, to five years. The majority of the duration is around two years (Int12) but the FOP could stay in the project as long as they were not institutionalised. Reasons for discharge of the project were nursing home admission (20%) and death (10%).

In the beginning of the inclusion, the social worker provided information about possible refunding etc. and explained the pathway. Afterwards, she assessed the needs and resources of the FOP regarding the possibility to stay at home, made the care plan with the FOP and contacted the network. This plan was monitored and adapted, if needed. She
organised also coordination meetings with other care providers at least once per six months. This plan was carried out by dyads of social workers and occupational therapists, if necessary supported by nurses and psychologists.

For handicap-specific interventions, e.g. provide new equipment, the occupational therapists come at home and taught them how to use the equipment and supervise the use of it. This required at least two or three visits, more if the equipment was complex. Besides, compensation techniques were learned, to adapt to the low-vision situation, such as echolocation, walking with a stick, ... . It appeared very important that this learning was done at home, in real-life situations (YQ13). Moreover, FOP learned ITC for visual impaired, such as audio books, magnifying software, adapted mobile phone and GPS. These tools are very useful to counter social deprivation (YQ13) and are handed out in collaboration with an orthoptist.

Psychological and psychosocial support was provided by psychologists. This is important for this population of which the diagnoses of visual loss was recent, in order to help them to live with this impairment. This was done by the means of sessions, which could be held either at home or in the partner nursing home. The frequency varied between every other week and monthly.

They estimated that there were around 15 face-to-face contacts with FOP per year (Int12) and 29.25 hours/FOP/year (NIHDI doc1212). They planned to train and sensitise the ICG and the primary care providers but this was not carried out as planned, because they underestimated the budget needed for this (Int12).

THE TARGET POPULATION

The people included in the project are persons of 60+, living with a severe visual impairment or with a prognosis of irreversible vision loss in the short-term. In any case, a medical diagnosis (or prognosis) was asked. They mainly contact the project themselves, or their ICG does, upon suggestion of a primary care provider.

In many cases, the network of these persons was very frail or non-existent, what lead to social isolation. They were dispersed through the whole region and are already part of the handicap-specific network and are already benefiting of some kind of intervention (once or twice per year). The pre-inclusion of FOP (see below “intervention as implemented”) was very slow, because of the very high demand of this population. All demands have to be treated, even if the FOPs were not included in the end. Some of the included FOPs were also part of other P3 projects, which the NIHDI only rarely accepted. This non-acceptation was not very well understood by the project collaborators.

It happened that, although the dyad observed that the FOP could have benefited from their intervention; the latter refused the tailored package. They only wish help to be still able to
read the newspaper or to go to and from the bakery (Int12). Overall, the frequency of the intervention is more or less once per month, duration of the intervention depends on the type of intervention and moment of intervention.

THE SKILL-MIX

According to the interviews, 30-35 professionals were working in the project, but only some of them were mentioned in the questionnaires and in NIHDI data (see Table 15 below). These inconsistent data could not be answered by the project, what might be explained by the fact that the boundaries of this project were fuzzy.

Table 15. Professionals paid by Protocol 3 since start

<table>
<thead>
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<th></th>
<th>SF</th>
<th>Dec 2010</th>
<th>Dec 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>OT</td>
<td>3</td>
<td>2.4</td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5</td>
<td>(of which 0.3 for project coord)</td>
</tr>
<tr>
<td>SW</td>
<td>4</td>
<td>3.0</td>
<td>3.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5</td>
<td>(of which 0.7 for project coord)</td>
</tr>
<tr>
<td>A1</td>
<td>0.9</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>A2</td>
<td>0.3</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Orthoptist</td>
<td>0.2</td>
<td>0.6 (or 1?)</td>
<td>inconsistent data between YQ12 and NIHDI change of convention (also 12/12)</td>
</tr>
<tr>
<td>Psy</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>(or 0?) inconsistent data between YQ12 and NIHDI change of convention (also 12/12)</td>
<td></td>
</tr>
<tr>
<td>Accountant</td>
<td>0.2</td>
<td>0.1 (or 0?)</td>
<td>inconsistent data between YQ12 and NIHDI change of convention (also 12/12)</td>
</tr>
<tr>
<td>Dir home care</td>
<td>0.2</td>
<td>0.1 (or 0?)</td>
<td>inconsistent data between YQ12 and NIHDI change of convention (also 12/12) Is this professional paid twice?</td>
</tr>
</tbody>
</table>

The profile of the professionals of the project explained why they had no access to the BelRAI web application in the early stages of the project. Coming mainly from outside the health care sector, they had to wait till NIHDI provided the files with authorized professionals (authentication files), before being able to fill out BelRAI data. Moreover, those professionals could not be client managers (In10).

The profile of the case manager was someone possessing a good knowledge in low-vision issues and the social network of a given region. He or she had also to know the core business of the professionals of the other organizations, be able to exert a leadership, out of his
specific expertise, able to work autonomously, tenacious and able to build bridges between people and organizations (Int 12).

Recruitment: in a first stage, six professionals having an expertise in vision-related problems were recruited. This resulted in shifts inside the manpower amongst partner organizations. Only one freshly promoted professional was recruited in the pool, but this person already had an experience in elderly care in residential settings. In each team, one of the professionals had to act as liaison.

Turnover. The project observed a high level of turnover of their professionals because of the workload and the administrative workload related to BelRAI. Newly recruits were sometimes of an inadequate profile, e.g. when they hired a professional who had a diploma of family sciences and who appeared not to possess the knowledge needed for the care coordination function. At the other hand, in other places, new recruits could rapidly become very positive workforces. Replacement was also hindered because of the shortage of nurses in some regions.

One of the project coordinators was on long sick leave in 2011, which impaired the launching of the project and caused delays (e.g. for the filling out of the yearly project questionnaires). The delay of the return of yearly project questionnaires was also caused by the will of the main coordinator to collect all data himself, while the latter were not always immediately available (e.g. human resources costs).

Training

Professionals of the project had to be trained further in the vision-related area and for the specific purposes of case management. For the specific training in vision problems, all project professionals were trained in orientation and mobility-related techniques. Two times per year, they received an update of the information about visual aids and are trained about aspects of acceptation of loss. The project included a psychologist, who was able to support the teams about the management of clients experiencing vision loss. Competencies about a care plan were also enhanced by the means of specific trainings. Knowledge transfer towards other primary care professionals was done informally, around practicalities such as the importance of order and regularity, oral communication (“When you leave the room, you express this vocally to the FOP.”), the importance of marking some of the appliances, because this allowed the FOP to perform IADL and maintain or recover their autonomy.

Training about the use of the BelRAI was way too early, because they could not access the web application at that time.
Coordination of the care around an individual FOP was done, as described earlier, by dyads of social workers/occupational therapists, with the help of nurses and psychologists. Decisions were made as a team. In the first phase of the project, they searched how to best coordinate the care, without using the BelRAI data (Int10). A lot of time was needed to be able to use the BelRAI (learning and difficult access because of eHealth issues). The BelRAI was filled out by the social worker and the occupational therapist, with the help of nurses of partner organizations. They found it difficult to use the CAPs in the care plan. However, they decided to use them after two years of the project, because of its usefulness. They observed that the BelRAI was not a relevant tool for their target population, for whom the frailty is merely influence by the vision impairment. If the FOP has a light mental disability, or light level of cognitive impairment or a falls problem, the visual impairment adds to those other problems and cannot be assessed separately. In the BelRAI, those problems are assessed as if they existed separately, while they reinforce the frailty.

They try to delegate, whenever possible, the filling out of the BelRAI, to partner organizations. This was the case with the newly included sickness fund partner (see “partners of the project”).

The care plan was evaluated once a year, sometimes more frequently if another primary care provider asked for it. Coordination of the care with the GP of the FOP was difficult and is only done by phone if the FOP agreed to it. For the project, the problems of the FOPs were not of such nature that the GPs had to be involved. The project only mentioned to the GP that the FOP was included. In very complex situations, it may happen that there was a MD meeting, but the project members were not always invited. No feedback about the intervention of the project was provided to other care providers.

The project had its own paper and electronic patient record with intervention minutes. Those minutes were accessible to the FOP and other care providers. In case the FOP had a notebook at home, they used it. Purposefully, they did not use new tools and prefer to rely on tools of other organizations for sharing the information about an individual FOP (Int12). Additionally, they used MD care plans, to be able to coordinate the care efficiently with handicap-specific experts. They missed a centralized patient file, to be able to share the information about a FOP efficiently.

**Coordination of the project**

The coordination of the project was done by the means of a member of the umbrella organization, who supervised the work of the regional coordinators. The planning between those different coordinators and other professionals of the project was done by the means of a shared calendar.

The main communication flow occurred by the means of meetings, minutes of meetings, results of BelRAI, phone and email. They relied on specific “protocols” (“a set of agreements about the process of screening, support and discharge”). The coordination of
the care was done with the help of a software, who allowed to have a view on the interventions.

The coordination between dyads in a given region was done by the means of a bimonthly meeting where the referral of clients, etc, was discussed.

The coordination of the project was sustained by a monthly management meeting, where any aspect of the operational management was discussed, in presence of the regional coordinators and the main coordinator of the project. These meetings were very time and money consuming but, however, necessary because they allowed an openness towards the other partners and a vision on the working of the whole project. Additionally, they organized meetings with the care coordinators four times per year, to discuss operational and structural aspects of the project. All professionals involved attended these meetings. A steering committee was held four times per year, with all partners. They observed that the fact of working only with three levels internally had a positive effect on the quality of the information flow within the project (int 12).

The project mentioned internal differences among the working of the different locations of their project. Some locations were very dynamic, others were not. This dynamism expresses itself in the instream of new FOP and the intensity of the network.

Other locations were more difficult, because project collaborators relied too much on their own forces.

**Partners of the project**

The partners present from the start continued their collaboration. The main partner, which was the mandatory nursing home, was responsible for the central coordination and contacts with the NIHDI. He was a main partner in the network around older persons and provided expertise in this domain. The project mentioned also a non-for-profit organization in low-vision care, who was main partner. This organization provided low-vision care coordinators and was spread out over the whole region. Their professionals were embedded in the local teams and were in most cases, responsible of the BelRAI assessment. Besides, there were other partners (a) from non-profit organizations, with expertise in low-vision care, (b) user’s organizations which organized events for this population and facilitated sharing of experiences, (c) organization for social care at home that referred clients.

Two new partners joined the project (a) a home care organization, for the coaching in the quality of the care and referral of FOP and (2) a mutuality, who provide social workers for the project, helped to fill out the BelRAI and, occasionally, lead the MD coordination. Additionally, one of the participants, a nursing home in Brussels, left the project in a very early stage, because it was not interested any more.
The project did not use quality indicators. They were involved in a parallel scientific research, around depression, affordability and community based care. This should provide NIHDI extra information about their population, without additional costs (Int11). They wished that the evaluation of the project should not be based on qualitative ('arbitrary') indicators, but that process indicators should be used, i.e. quality and quantity of collaborative links (Int12).

Interaction with the context

**INFLUENCE OF THE PROJECT ON THE HEALTH CARE CONTEXT/SYSTEM**

The project coordinator observed that the impact and the range of this project is much more than what can be read in the submission file and yearly questionnaires, because of the networking of the partners. The latter required more training about caring for the visually impaired (i.e. transfer techniques and adaptation of the home). The service centres (dienstencentra), linked to the mutualities asked for specific training for their elderly clients.

**THE VISION OF THE FUTURE ABOUT THIS PROJECT AND ITS IMPACT ON THE HEALTH CARE SYSTEM.**

The project expected that in a near future (i.e. 3-4 years) they would not be needed any more, as there would be a knowledge shift within the professional sector outside the handicap, especially knowledge about the transfer of visually impaired (Int 11).

4. Adaptation strategies of the project

Profile of the case manager: had to know the core business of other services, along with the social networking in his region very well

1) Working in couples, in order to be able to access the BelRAI
2) One of the main coordinators was on long sick leave, this was a drawback for the coordination of this geographically very spreaded project. The result was a delay of implementation.
3) BelRAI is not a relevant instrument for this target population. In reaction to this, they asked after 18 months if there was a specific addendum to the BelRAI-HC
4) They wish, in the future, to continue the delegation of the filling out of the BelRAI to other partners.
5. Key results for this project are:

**Key Success Factors**

1) Very formal structuration of the entities (important geographical spread over whole Flanders) and sub-entities

2) Number of partners, with which there is a lot of collaboration, with the exception of the GP

3) Flexible intensity of interventions, in order to be able to follow the demands of the population. There is a lot of time needed for the elderly to accept and to learn how to use the specific tools and strategies.

4) Provide a lot of time and support for disability-specific training of their members

**Concerns for this Project**

1) Implementation and use of the CGA was more difficult than expected
   a. Technical difficulties of the BelRAI at the start;
   b. Time needed to learn how to fill out the BelRAI and to use the CAPs in the care plan;
   c. Difficult to fill out some domains in the BelRAI because of legitimacy; if social workers or occupational therapists come to the FOP because the latter expects some help in space orientation, the FOP does not expect him to be questioned about incontinence or mood;
   d. Partners are not able/willing to fill out the BelRAI because of privacy issues

2) High level of centralization of the internal organization. Everything has to be approved by the main coordinator, which causes delay in the flow of information.

3) Some of the elderly are part of different P3; this raises incomprehension with the collaborators

4) Some of their patients do not need the care provided. They feel the “object” of a MD team. In some cases, they refused the project.

5) Unclear whether this is a project for disabled persons, who happen to be old, or a project for older persons who become visually impaired.

6) Not so much collaboration with the GP. They do not seem to take interest in the comprehensive care of the patient. The service delivery is focused on domains for which the professionals in the project are expert in: occupational therapy, psychologist and social worker. Only in the situations they call ‘complex’, the GP knows that the patient is in the project and in this case, they ask to organize the care coordination.

7) The boundaries of the project are unclear (30-35 professionals in the project, which pays 6 FTE);

8) High turnover of case managers because of the workload and the load of the filling out of the BelRAI
9) Systematic underrating of the time needed for the administrative tasks and the
difficulties in delegating these tasks.
Grey zones still remaining after the interviews and questionnaires

The boundaries of the project remained unclear, e.g. they were training 55 professionals (YQ11), who were not mentioned elsewhere. Responses to questions related to this point were unclear or contradictory. Moreover, we were not able to know the profile of the professionals at a given time in the project. For instance, a psychologist was mentioned in the service delivery in the project and in the yearly questionnaires (LimeSurvey 2012), but not in the convention with NIHDI (collected simultaneously). Financing of a director of a nursing home was done by the means of the financing of P3, which would not be possible in the current Belgian health care system. Because of the recurrent lack of clarity in the responses, we decided, after discussion with civil servants of NIHDI, to drop this project of the case study selection in January 2012.

6. mechanisms through which the project expects to achieve positive outcomes

Older persons with visual impairment or experiencing a vision loss can become highly dependent if they are not correctly supported by an experienced team, willing to target the specific needs of this population. Adequate support will enhance or restore independence for the ADL and IADL and counter social deprivation, mediator of depression and frailty.

Secondly, training of the professionals outside the handicap sector will enhance their capacity to provide adequate care to this population, so as to make this project useless in a near future.
<table>
<thead>
<tr>
<th>Expected objectives of the intervention resources &amp; activities</th>
<th>Expected effects (Mechanisms)</th>
<th>Expected outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TARGET 1</strong> Early provision of adequate care</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Provide adequate screening</td>
<td>Identification of needs, preferences and domains for potential improvement</td>
<td>Participation in decision-making</td>
</tr>
<tr>
<td>2. Adequate identification and delivery of services, in function of CAPs</td>
<td>FOP chooses the services according to wishes and needs</td>
<td>Functional status QoL</td>
</tr>
<tr>
<td>3. Organisation of meetings with other care providers about the FOP, in presence of FOP/ICG</td>
<td>Coordination of care delivery around the FOP allows efficient care and care continuity</td>
<td>Functional status</td>
</tr>
<tr>
<td><strong>TARGET 2</strong> Socio-economic support</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Provision of information about possible refunding</td>
<td>FOP can have access to support to help them to restore or gain autonomy</td>
<td>QoL Functional status</td>
</tr>
<tr>
<td>2. Patient education about the vision loss and consequences</td>
<td>Enhance knowledge of FOP about the feasibility of remaining at home and anticipate crisis situations</td>
<td>Functional status</td>
</tr>
<tr>
<td>3. Making of a social support plan by the means of identification of the social network</td>
<td>Input of the social network in the support of the FOP</td>
<td>Social health Functional status QoL</td>
</tr>
<tr>
<td><strong>TARGET 3</strong> Prevention of social isolation through physical activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Provision of education about the use of tools for transfer and location</td>
<td>Enhancing knowledge and capacities of FOP</td>
<td>QoL of FOP Functional status</td>
</tr>
<tr>
<td>2. Provision of visual aids and education</td>
<td>More social interactions if the FOP can leave her home</td>
<td>Less social isolation</td>
</tr>
<tr>
<td>3. Adaptation of the home</td>
<td>Improving autonomy of FOP</td>
<td></td>
</tr>
<tr>
<td><strong>TARGET 4</strong> Psychological support</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Therapeutic sessions at home</td>
<td>Provision of psychological help</td>
<td>QoL</td>
</tr>
<tr>
<td></td>
<td>Understanding of the psychological problems</td>
<td>Depression</td>
</tr>
</tbody>
</table>
Provide techniques to address these problems.

**TARGET 5**

**Improving the capacities of care providers outside the handicap-specific sector**

- Provision of education about the importance of tools for transfer and location
- Enhancing knowledge and capacities of primary care providers
- 2. Organisation of meetings with other care providers about the FOP, in presence of FOP/ICG
- Coordination of care delivery around FOP
- Quality of care for FOP
- Tailored and patient-centered care

**TARGET 4**

**Enhance/restore autonomy**

- Provide tools and methods and learn to use them
- The FOP accepts the use of tools/ICT, which enables her/him to be more autonomous
- ADL, IADL

**Contextual factors and barriers**

- Important geographical spreading
- Fuzzy boundaries of the project

Figure 22. Programme theory of project of case 3
Case study 4

This project was included in the set of case studies in 2013 because during the analysis of the questionnaires and data provided by NIHDI, it appeared that they succeeded in implementing their innovative services by cooperating intensively with similar projects in their region, which we wanted to investigate more in-depth. This is the reason why, for this case study, we only have data of one interview.

1. Context of the implementation

In the nursing home, to which the main coordinator belongs, they were used to work in an interdisciplinary, patient-centered way, for which they developed a TRABB-model (transdisciplinaire bewonersgerichte basishouding). Moreover, the main coordinator was willing, from the start, to work with similar projects in the same province (of the home care sector – social and healthcare – and of the residential sector – nursing homes), which was not an easy task. (Int2013)

2. The project as planned

The intervention

The project offers integrated supportive care services to older people on a nursing home waiting list and other older people for who the limits of qualitative home care are reached. With this ‘tailor-made care program’ the project wants to stimulate self-care so that a nursing home admission can be postponed or avoided. The integrated care is realized through structural cooperation between the inpatient (intramural) and outpatient (extramural) sector. The freedom of choice and the care management of the elderly are important values for all partners in the project. Therefore, the FOPs and his environment are involved in the interdisciplinary team meeting and the composition of the ‘tailor-made care program’. The principle of ‘Negotiated care’ provides the best guarantee for success of the realization of the projects’ goals. With this ‘tailor-made care program’ the project wanted to stimulate self-care so that a nursing home admission could be postponed or avoided. Also, they wanted to optimize the quality of life of the older people by social activation. Additionally, they wanted to strengthen the coping capacity of the informal caregiver.

At meso-level, the project aimed at creating a seamless continuous care trajectory for the older people.
TARGET POPULATION

The expected target population consisted of 1) older people on a nursing home waiting list, 2) older people for who the limits of qualitative home care are reached and 3) older people in an acute but temporary crisis situation to avoid a ‘social’ hospital admission.

Recruitment of users should be done by six of the projects’ partners. It is not clear which partners exactly. Following partners have ‘intake’ in their task description (submission file).

The project expected to include 144 users on a yearly basis. On average 12 users every month. The 6 partners mentioned above will each provide on average 2 users per month. One care trajectory will take 203 hours.

The area of activity is limited to a certain perimeter around the main nursing home in the project. By doing so, the project wants to guarantee the efficiency of displacements en time investment of the staff. In this area are 8 municipalities, which already form a linked and coherent area of activity in the region.

INTERACTION WITH THE ENVIRONMENT

The mandatory partner of the project is a home care nurses organisation (Wit-Gele Kruis Oost-Vlaanderen vzw). Their tasks are: Intake of users; Filling out the BeIRAI; Participation in interdisciplinary meetings and follow-up; case management; Nurse performances not included in existing nomenclature.

Besides the mandatory partner, the project has 8 other types of partners:

1) nursing homes; their roles are Intake of users; Occupational therapy and physiotherapy screening, interventions and follow-up at the FOP’s home; Other paramedic interventions at the FOP’s home; Participation in interdisciplinary meetings and follow-up; case management; Crisis accommodation in acute situations; Night hostel.

2) day care centers involved. Their tasks are: Regular home care support service; Crisis accommodation in acute situations; Explore the possibility of night care in the infrastructure of the day care center; Explore the possibility of transportation service.

3) center for general welfare. Their tasks are: referral of users; Participation in interdisciplinary meetings and follow-up.

4) Regional service centers. Their tasks are: The home care coordinator whose task is to prepare, lead and follow-up the interdisciplinary meetings; The basic home care services in the tailor-made care trajectory.

5) Services for family care and additional home care. Their tasks are: The basic home care services in the tailor-made care trajectory; Provide polyvalent carers for night care services at home; Intake of users; Participation in interdisciplinary meetings and
follow-up; Role of (trajectory) counselor; Signal function, report psychosocial observations made

6) Volunteer organisations. Their tasks are: Promotion of the project; Activities in the tailor-made care plan; Provide volunteers to support home care; Expansion of the telephone center

7) Informal caregiver organisations. Their tasks are: Provide information, advice, education and peer contact to informal caregivers; Organize a threshold lowering education initiative in the nursing home

8) Sitting services. Their tasks are: Sitting services by volunteers; Night care by volunteers

The participants of the project are a geriatrician and 6 GP/coordinating and counselling physicians (CRA). The geriatrician has the role of expert, advisor. The GP’s are key persons in the interdisciplinary meetings because they know the users best.

"Elke partner heeft zijn eigen kennis en ervaring. Daar hebben ze op ingespeeld om de verschillen tussen de residentiële zorg en de thuiszorg te ontdekken en die te proberen overbruggen. Het samenvangen van die verschillende know-how was verrijkend." (Int2013)

The coordination of the partnership (strategic coordination).

The project coordinator is responsible for submitting the project plan, RIZIV contacts, administration, follow-up of the project, financial redistribution between partners, organisation of the steering committee.

The project plans to have 6-weekly meetings of 2 hours with the steering committee. All 8 partner organisations have a representative in this committee. The goal of this steering committee is to monitor the project’s aims and progress reports and to adjust the project plan.

The project asks a budget for 0.08FTE for these steering committee meetings (0.01FTE/member).

THE PLANNED SKILL-MIX

Nursing staff, consisting of 2.57FTE nursing bachelors + 3.40 FTE licensed nurses and 2.13 FTE nursing aids; Physiotherapist: 1.28 FTE; Social worker: 4.76 FTE; Occupational therapist: 2.90 FTE and GP: 0.26 FTE

Training of the staff. The project plans to have 3 education modules; BelRAI education: 2 nurses attending 8hours (1 day) and ‘train the trainer’ about the use of BelRAI: 8hours (1 day)

Information session for all key persons in the involved organisations: 4 hours
COST OF THE PROJECT

The budget asked from RIZIV is high according to the jury’s comments.

The project will not ask the user for a contribution for interdisciplinary meetings, follow-up and screening. However, for the regular home care services that will be included in the tailor-made care plan, the project will follow the legal regulations (user contribution is determined based on the financial strength and the degree of care needs of the FOP).

For the innovative services in the tailor-made care plan, the project plans to ask a fair remuneration, determined based on the financial strength and the degree of care needs of the FOP. The will use already existing scales and instruments to determine what is fair.

Comment of the jury: the project is an added value in cases where the existing care coordination is insufficient. However, the financing asked for is too expensive.
3. The project as implemented

The project held information sessions and published articles in magazines to recruit potential partners. (FB2011)

THE INTERVENTION

When there is a demand from a FOP, an ICG or a professional, the case manager checks if selection criteria are met; if the person is eligible, she meets the FOP at home and explains the intervention to the FOP. If he or she consents to be included, the nurse case manager fills in the BelRAI questionnaire. If needed, an outpatient occupational therapy and/or physiotherapy screening by the occupation therapist and/or physiotherapist of the nursing home is performed.

An interdisciplinary team meeting is then organized by the home care coordinator: results from initial screenings (BelRAI, occupational and or physiotherapy) are discussed. The following people are invited and involved: Frail older person; Informal caregiver; General practitioner; Social worker of the nursing home; Home care nurse; Occupational therapist (and other care providers if already present in FOP’s home care or needed). During this team meeting it is decided who will be the FOP’s care trajectory counselor (case manager). A tailor-made care trajectory is composed based on what care is already provided and what is needed. The care trajectory counselor makes a report of the tailor-made care plan and sends it to all people involved. The care trajectory counselor is responsible for further follow-up.

Every 6 weeks the home care coordinator and all care trajectory counselors have a meeting to discuss and adjust if needed all care trajectories. Every quarter of a year the nurse assesses the users (BelRAI + other instruments) to evaluate progress. For every user they plan a yearly follow-up interdisciplinary team meeting as described in point 6.

THE COORDINATION OF THE INTERVENTION (MEETINGS & TOOLS)

The project made clear agreements between all partners about how to introduce the project to the potential users. Interdisciplinary meetings take place with partners, which allow the expertise of the various sectors be put together. The home care coordinator is facilitator of the interdisciplinary meetings. He monitors the goals of the meetings and writes the minutes of the meeting including working agreements. The care trajectory counselor monitors the agreements made within a care trajectory.

The BelRAI and the occupational therapy screening (COPM) form the base for the tailor-made care trajectories. As the sharing of information is important to the project, for an efficient and high quality care and services, the project wants to investigate how they can develop e-health record that can be used by all partners.
The project changed some aspects of the intervention since the start, because the time between the first contact and the first multidisciplinary meeting, needed before the care planning, was too long (three to four weeks). Now, they start the planning at once. The intensity of the intervention varies between 10-20 hours. Their self-evaluation showed that the planned 10 hours on average of trajectory counseling was not enough. They actually provide 15 hours on average, with 10 hours as a minimum. For the future they plan to work with a ‘basic’ trajectory of 10 hours and an ‘intensive’ trajectory of 20 hours. The case managers work proactively, in order to avoid crisis situations (int 2013).

Follow-up team meetings: The first team meeting at inclusion stays unchanged. For the follow-up team they make a distinction according to the users situation: (a) For 50% of the users a ‘big’ follow-up team meeting is enough where the trajectory counselor discusses the client during the transdisciplinary meeting; (b) For 15% of the users they have a separate formal team meeting with the care providers and (c) For 35% of the users they provide a full follow-up team meeting.

BelRAI screening is carried out every 6 months: the first assessment is done by a nurse or already multidisciplinary if partner organisations are already part of the clients home care. Every following screening is multidisciplinary coordinated.

BelRAI screening + occupational therapy screening: The goal is to make a care plan proposal in preparation of the multidisciplinary team meeting or client consultation by comparing the 2 assessments. One of the observed results of the project is an intensive cooperation between nurse assistants and paramedics.

Not every client needs the organisation of a complete team meeting (i.e. 10 professionals). This is needed at the start of the process, but not during follow-up. When the situation is stable, a smaller team meeting might be enough, or even a phone contact between healthcare providers (int 2013).

The primary care physician of the client is asked to participate in the meetings; to fill out his part in the BelRAI and is, of course contacted in case of problems. But the medical part is not central to this project, the medical part is part of the regular care.

DAY-TO-DAY ORGANISATION OF THE PROJECT

The planning of the interventions is time-consuming, as it is difficult to gather the teams: the primary care physician, the case manager, the client and his caregiver.

The project organizes intervision meetings for the staff by the means of (a) quarterly intervisions for trajectory counselors and consultation coordinators; 6 monthly intervisions for occupational therapists and ad hoc provincial intervision for trajectory counselors and occupational therapists. During the project process, the occupational therapist and the
family aid had to learn to respect each others’ role, which was not an easy task, because for the same intervention, an occupational therapist would say that he was trained to do this and the family aid said the same because she knew the client better. This asks for coordination.

One nurse coordinates the BelRAI completion for the four East-Flemish projects, which is considered an important added value.

**IMPACT ON THE LOCAL HEALTHCARE SYSTEM**

After three years of functioning, the project observes that the waiting list of nursing home decrease. (Int2013)

Evaluation and follow-up of the care plan is done continuously through trajectory counseling, 6-weekly through client consultation, through transdisciplinary follow-up team meeting if necessary. The trajectory counselor is responsible for the follow-up and evaluation. They use a tool for follow-up. The care plan is available for every care provider involved in sharepoint.

They use new multidisciplinary protocols, specially made for P3. The start-up budget was used to make the protocol.

There was initially a huge resistance against the use of the BelRAI-tool but the main coordinator did not stop promoting the use of this tool. After two years, the use of BelRAI was integrated into the daily routine.

“One of the people who were very much against the use of BelRAI at the start of the project claimed now (after two years of use), that it was very important that all professionals filled out the tool in real multidisciplinarity” (main coordinator, interview 2013).

The use of the BelRAI and COPM tool is considered as an added value. The use of it was extended to the residents of the nursing homes. They use the CAPs of the BelRAI and out of the COPM, they determine with the client which are his or her priorities. They started to see the added value of the BelRAI when they saw what they could do with the results. Out of this, they made a manual around the CAPs, in order to coordinate the way care is provided by which professional.
THE TARGET POPULATION

Recruitment: the FOPS are referred by home care services (49.5%*) and by nursing homes (50.5%).

* home care services of mutuality (12%), family care services (12.5%) and home care nurse organisations (25%). (WQ2012)

“De inclusies kwamen niet vanzelf, in het begin hebben ze daar inspanningen voor moeten doen. In het begin werden er ook mensen geïncludeerd waar enkel afstemming van de bestaande zorg genoeg was en die geen zorgvernieuwing nodig hadden. Die moesten ze terug kunnen excluderen. Maar zolang ze nog niet aan de vooropgestelde caseload zaten aarzelden ze om terug te excluderen om hun cijfers te kunnen halen. Nu zijn ze veel selectiever bij de inclusies. Er wordt eerst gezien of er effectief iets kan aangeboden worden dat buiten het reguliere valt.” (Int2013)

The caseload was reduced from 144 to 130 clients. At the start of the project, due to pressure to achieve the ‘expected caseload’, clients were included for whom it appeared that the ‘innovative care services’ were not useful. The extensive assessments (questionnaires) scared off clients so that they dropped out. Clients and informal caregivers expect some ready-made solutions which the project cannot meet. (WQ2012)

The skill-mix

The project had to decrease the number of FTE, especially in the case of the nursing staff, as it overestimated the number needed of nurses and underestimated the number for family care. That is the reason why they asked in 2012 for a change in the convention, based on their own monitoring of the project.

The case managers are mainly social workers, and one nurse (of a home nursing organisation). All professionals hired by the projects are people with a solid professional experience. This means that, at the onset of the project, they experienced some resistance to change because of the fact that they had to change their working environment. Nevertheless, no one quit the project for this reason. The turnover rate within the project is very low. Only one social nurse quit, to be able to work nearer her home. All staff members have a contract of indefinite duration.

Training of the staff is done by the means of (a) intervision moments; (b) newly hired staff members receive a basic training in their employing partner organisation; (c) education package for trajectory counselors; (d) education for nurse assistants of the home care services given by paramedics of the nursing home (about the role of the nurse assistant in the paramedic care trajectory); (e) use of the output of the BelRAI.
Interaction with the environment

They had no changes in the composition of the partnership. The essential partners and their tasks are: (a) Home care nurse organisation: Wit-Gele Kruis Oost-Vlaanderen (Intake; Nurses for filling in BelRAI + coordination BelRAI; Participation at meetings; Implementation of innovative nursing services; Acquire expertise in trajectory counselling) (b) Sickness fund (Intake; Coordination of consultations; Social workers for care trajectories; Trajectory counselling; Participation in meetings; Project coordination; Multidisciplinary filling in of BelRAI); (c) Family care services (Intake; Implementation of innovative nurse assistant services; Nurse assistant support in paramedic care trajectories; Multidisciplinary filling in of BelRAI; Participation in meetings); Nursing homes (Intake; Implementation of innovative paramedic services at home and in the nursing home; Participation in meetings; Trajectory counselling; Project coordination; Project administration) (WQ2012).

It was very important to them, during the implementation process, to build upon the existing structures and processes, in order not to double the number of meetings unnecessarily. For instance, the (social) home care sector had already a specific type of multidisciplinary coordination, which model they used for the project.

Coordination of the partnership. It was not easy to get all 9 partner organisations aligned. This requires a thorough project structure (provincial core group, provincial strategic steering committee, project core group, operational project steering committee, strategic project steering committee, several peer intervision groups, training, provision of tools, monitoring, customized software).

The bottom-up and top-down implementation is not easy.

Organisation of the strategic coordination of the project

There are three main types of meetings to discuss on the strategic organisation of the project: (a) Strategic steering committee (8-weekly, with the project coordinator, representatives of all partner organisations); (b) Operational steering committee (6-weekly: Project coordinator, members of the core group, representatives of all partner organisations); (c) Core group meeting (if needed, to prepare steering committee; Delegates of the operational steering committee). Additionally, they organize ad hoc working groups (for example to prepare an education afternoon). There are also provincial steering committees and core groups (East Flanders). The most important tool for strategic coordination of the project are: a report module, intervision moments with staff, evaluations of staff. (WQ2012). The project coordinator observes a high turnover rate of the directors of the partner organisation (three out of the five nursing home directors). Fortunately, the level of engagement in the project of the new directors is very high.
In the beginning of the project, the strategic steering committee was very important; afterwards, it was the case of the operational steering committee. Because of the high workload linked to the steering committee of the project, a core committee was constituted, with mandates from partner organisations. In this group, two partners were champions and this allowed them to develop tools, such as a communication platform; to organise trainings, intervisions and supervisions.

Actually the strategic steering committee is more concerned with questions around the future of the het project, whereas the operational steering committee is committed to search solutions for every day issues, such as communication problems.

4. Mechanisms through which the project expects to achieve positive outcomes
<table>
<thead>
<tr>
<th>Expected objectives of the intervention</th>
<th>Expected effects (Mechanisms)</th>
<th>Expected outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support of self care</td>
<td>Tailor-made care programs</td>
<td>Remain at home</td>
</tr>
<tr>
<td>- check eligibility</td>
<td>allow the specific needs of</td>
<td>social hospital</td>
</tr>
<tr>
<td>- BelRAI+COPM assessment</td>
<td>the FOP to be met</td>
<td>admissions</td>
</tr>
<tr>
<td>- Multidisciplinary care planning</td>
<td>Education improves</td>
<td>hospital</td>
</tr>
<tr>
<td>- Education</td>
<td>medication adherence</td>
<td>admissions</td>
</tr>
<tr>
<td>- Home visits</td>
<td>Identification of risks can</td>
<td>because of</td>
</tr>
<tr>
<td></td>
<td>allow the anticipation of</td>
<td>exacerbations</td>
</tr>
<tr>
<td></td>
<td>crisis situation</td>
<td>QoL</td>
</tr>
<tr>
<td></td>
<td>higher sense of safety leads</td>
<td></td>
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<tr>
<td></td>
<td>the FOPs and the ICGs to</td>
<td></td>
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<tr>
<td></td>
<td>envisage the possibility to</td>
<td></td>
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<tr>
<td></td>
<td>remain at home</td>
<td></td>
</tr>
<tr>
<td><strong>Target 2</strong></td>
<td>Contact with other people</td>
<td></td>
</tr>
<tr>
<td>Social activation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- FOP in daycare</td>
<td>Anticipate moments of risk</td>
<td>loneliness</td>
</tr>
<tr>
<td>- provision of sources</td>
<td>of loneliness</td>
<td></td>
</tr>
<tr>
<td>- based on social needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- home visits</td>
<td></td>
<td></td>
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<tr>
<td><strong>Target 3</strong></td>
<td>Increase of coping abilities</td>
<td></td>
</tr>
<tr>
<td>Empower ICG</td>
<td>of ICGs</td>
<td>burden ICG</td>
</tr>
<tr>
<td>- information to ICG</td>
<td>Respite of ICGs</td>
<td>adequate care</td>
</tr>
<tr>
<td>- help to access resources</td>
<td>Substitution of care usually</td>
<td>ADL, IADL</td>
</tr>
<tr>
<td>- FOP in daycare, respite</td>
<td>provided by ICG</td>
<td></td>
</tr>
<tr>
<td>- Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Home visits</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Target 4</strong></td>
<td>Better collaboration</td>
<td></td>
</tr>
<tr>
<td>Seamless care</td>
<td>between different sectors</td>
<td>QoL</td>
</tr>
<tr>
<td>- single entry point</td>
<td>and professionals</td>
<td>ADL, IADL</td>
</tr>
<tr>
<td>- sharepoint</td>
<td>Preventive actions (e.g.</td>
<td>pressure ulcers,</td>
</tr>
<tr>
<td>- check eligibility</td>
<td>pressure ulcer prevention</td>
<td>falls, ...</td>
</tr>
<tr>
<td>- BelRAI+COPM assessment</td>
<td>Better information flow</td>
<td></td>
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<tr>
<td>- provide nursing acts that are not</td>
<td>and better medication</td>
<td></td>
</tr>
<tr>
<td>- care plan</td>
<td>reimbursed</td>
<td>adherence</td>
</tr>
</tbody>
</table>
Impact on the HC system
- provincial coordination of BelRAI
- MD completion of BelRAI
- MD meetings
- transorganisational meetings
- coaching of other care providers

Shared values
Better tailored
Promotion of BelRAI for HC care
Better info flow about FOP, resources
Better knowledge about each roles
Better knowledge on best practices
Better tailored care

Contextual factors and barriers
+: the engagement of the main coordinator, who is part of partner organisations (healthcare and social organisations)

Figure 23. Programme theory of project of case 4
5. Key points learned from this project

a. The project relies heavily on the self-made interprofessional protocol, which took the totality of the starting sum (15% of yearly budget of the first year). This tool made each role in the project very clear, especially the role of the case manager. This protocol was made together with the other Protocol 3 projects in the same region.

b. The engagement of the administrative coordinator at different levels of government was an important added value for the project.

c. The project was very well prepared, especially to collaborate with professionals from the home care sector.

d. Flexibility of the intensity of the intervention is key because the situation of the FOPs is fluctuating. Interventions and meetings have to be organised accordingly.

e. The hiring of experienced professionals is a must, as they have to know the care needs of this population very well, along with the local social and healthcare organisations.

f. The implementation of the BeIRAI was difficult at the onset and needed time. When the added value of the tool is observed, it is accepted.

g. The project used existing structures and processes to build their own processes upon.
Case study 5

This project was part of the case study since the start of the evaluation and was included from 2010-2013 in the multiple case-study design.

1. Context of implementation

This project was located in one of the main cities in the Flemish region. The project was created because of the existing lack of coherence between the support services and health care services, especially during the evening, nights and weekends. This gap in continuity may lead to unnecessary institutionalization, as the FOPs need care and support 24/7. This was especially a problem during the nights and during meals, because it was the experience of the project conceivers that this could lead to unwanted institutionalizations.

2. Project as planned

This is not the first experience of the project’s conceivers to write out a project.

THE INTERVENTION

CASE MANAGEMENT

According to the project, the epicentre of the project is the case manager « zorgcoach » (care coach). The most important service is, subsequently, case management. In this project, the case manager is a dedicated professional, which functions as a reference for the FOP, her/his informal caregiver (ICG) and all (health) care providers. This case manager is responsible for following tasks:

- Determination of care needs of FOP and ICG;
- Translation of care needs of the FOP and mobilisation of ICG;
- Assessing home care resources during transitions (e.g. hospital discharge);
- Home visits at FOP and ICG;
- Management of FOP record;
- Coordination of filling out of CGA (BelRAI), as a preparation for multidisciplinary meeting (multidisciplinary meetings);
- Organisation and making of minutes of multidisciplinary meetings;
- Support of FOP & ICG during the whole process;
- Facilitation of the collaboration between formal and informal care provision, with a special focus on the coping capacities of the ICG.
Monitoring and regular evaluation and adjustment of care process.

Delivery of case management is performed by (a) a central patient record and (b) centralized shared file. This software enables the sharing of minutes of multidisciplinary meetings. (c) for night surveillance; there is an extra paper file, containing and extra patient file and notebook. Every day, the case manager has access to these records and, if needed, the patient record. (d) Additionally, 90% of the FOP have an extra record at home, where care providers can exchange information. The information flow is easier between the professionals belonging to the same umbrella organisation that with professionals across organisations. The project believes this is because of the sharing of the professional culture within the umbrella organisation, which is used to work in multidisciplinary. Additionally, multidisciplinary meetings with health care providers are initiated by the case manager, who invites them. They all receive the minutes of the meetings afterwards. As a result of the needs assessments of the FOP, an individualized set of services is proposed to the FOP. The unit of activity is a set of individualized services, expressed in number of hours and based on the needs and preference assessment.

Following services can be offered:

**NIGHT SURVEILLANCE**

This service is delivered for FOP needing surveillance or night care between 10:00 p.m. and 06:00 a.m. This allows continuity of care during hours presently not covered by nurses or nursing assistants.

**PROFESSIONAL ALARM**

If needed, FOP can use the professional alarm system. When it is activated, a nurse or nursing assistant can go and check for the FOP. In every case, the case manager is informed about the alarm situation and the intervention needed.

**FAMILY SUPPORT OUTSIDE OFFICE HOURS AND DURING WEEKENDS**

If the case manager notes that familial support is required outside office hours or during weekends, nursing assistants and volunteers can be supplied (e.g. during two or three hours, or before 08:00 a.m. or after 05:30 p.m.).

**DAY CARE DURING ADAPTED HOURS**
The current time schedule of the centre for day care (08:00 a.m. to 05:00 p.m.). FOP can attend the centre for day care from 07:00 a.m. till 08:00 p.m. For FOP coming at 07:00 a.m., breakfast can be provided and an evening meal is served to FOP staying after 05:00 p.m.

SCREENING BY AN OCCUPATIONAL THERAPIST

Based on the assessment made by the case manager, it is possible to plan a visit at home by an occupational therapist, in order to enhance the comfort and training for the FOP. This professional will then, after careful assessment of the home environment, make some suggestions about possible or desirable interventions: equipment, training and coaching of the FOP, (some) adaptations of the home. The occupational therapist contacts the case management and the report of his intervention is part of the FOP record.

CRISIS ACCOMMODATION

One bed is provided in a nursing home, in order to accommodate a FOP in a crisis situation. This might be the case when the ICG is suddenly ill. The case manager seeks a rapid alternative solution, in order that the FOP does not stay more than one week in the crisis accommodation.

TARGET POPULATION

The inclusion criteria relate to frail older persons (60+) and their informal caregivers in a complex care situation. Exclusion criteria relate to FOP with severe dementia or psychiatric problems. Two third of the FOP in their project do not have an informal caregiver. The expected caseload is hundred FOP/year and they think that they can handle up to 70 clients simultaneously for two case managers. Theoretically, it should be possible to care managers to care for 50 FOP each but, because of the flexibility needed in other services, they currently handle only 30. Not every FOP needs intensive case management at any time.

SKILL-MIX

Case manager

The case manager is an important person in the project. Her role consists of coordination and adjusting, if needed. She knows the situation well and can react quickly. The project planned two case managers at the onset, but the project started effectively with only one (an experienced social nurse). The second case manager was hired when the caseload was achieved (March 2011). The new case manager is also an experienced social nurse. In order to introduce the second case manager with ancient FOP, first visits were made together. After this introduction, two geographical zones were separated. This second case manager was asked to have a specific focus on blind spots in the area. This second case manager has to leave and the project is looking for a replacement.
Nursing assistant

The project had no problem to recruit nursing assistants, even for night work. There are currently two younger nursing assistants, and a more experienced one. If needed, it should be possible to expand this staff. There has already been a turnover with nursing assistants. Currently, there are five people working half-time for the night surveillance at home.

Training

The nursing assistants conducting night surveillance attend vocational training on a yearly basis. Themes include collaboration in primary care, prevention of low back pain, etc., as well as information sessions in collaboration with a ICG organisation.

INTERACTION WITH THE ENVIRONMENT

There are not many partners and they were known beforehand. Their main role goes further than only promotion and FOP referral. They highlight the fact that close collaboration between partners and input of their expertise from primary, second- and third line care is really an added value for the FOP at home. The main partner is a Coordination centre; other partners are shown in table below, along with their expected task.
<table>
<thead>
<tr>
<th>Type of partner</th>
<th>Expected task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing home and day care centre</td>
<td>Day care during extended hours</td>
</tr>
<tr>
<td></td>
<td>Crisis accommodation</td>
</tr>
<tr>
<td></td>
<td>Information about possible care offer</td>
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<tr>
<td></td>
<td>Referral of FOP who are on a waiting list of a nursing home and need help in between</td>
</tr>
<tr>
<td></td>
<td>Personal alarm device proposal and maintaining</td>
</tr>
<tr>
<td></td>
<td>Member of steering committee</td>
</tr>
<tr>
<td>Hospital ward/social service in teaching</td>
<td>First screening of FOP</td>
</tr>
<tr>
<td>hospital</td>
<td>Information about and referral to the project</td>
</tr>
<tr>
<td></td>
<td>Attend multidisciplinary meetings, if needed</td>
</tr>
<tr>
<td></td>
<td>Collaboration with case manager (social service) by discharge</td>
</tr>
<tr>
<td></td>
<td>Expertise about discharge and dementia</td>
</tr>
<tr>
<td></td>
<td>Member of steering committee</td>
</tr>
<tr>
<td>Public Centre for Social Action-1</td>
<td>Information about occupational therapy</td>
</tr>
<tr>
<td></td>
<td>Occupational therapy delivery</td>
</tr>
<tr>
<td></td>
<td>Attend multidisciplinary meetings by occupational therapist, if needed</td>
</tr>
<tr>
<td></td>
<td>Referral of FOP to project</td>
</tr>
<tr>
<td></td>
<td>Member of steering committee</td>
</tr>
<tr>
<td>Public Centre for Social Action-2</td>
<td>Input of night care, in collaboration with nursing care centre</td>
</tr>
<tr>
<td></td>
<td>Member of steering committee</td>
</tr>
<tr>
<td>Centre for home care</td>
<td>Input of nursing assistants: family support outside office hours and with irregular duration of service, when needed</td>
</tr>
<tr>
<td></td>
<td>Input of volunteers, if desirable</td>
</tr>
<tr>
<td></td>
<td>Member of steering committee</td>
</tr>
<tr>
<td>Circle of GP</td>
<td>Dissemination of information towards GPs</td>
</tr>
<tr>
<td></td>
<td>Feedback of results towards GPs</td>
</tr>
<tr>
<td></td>
<td>Member of steering committee</td>
</tr>
<tr>
<td>Coordination centre (SEL)</td>
<td>Provision of overview of existing projects (i.e. besides P3), in order to make collaboration possible, if desirable services for the FOP can be offered</td>
</tr>
<tr>
<td></td>
<td>Member of steering committee</td>
</tr>
</tbody>
</table>
The inclusion of new FOP is not continuous, e.g. there is a trough in summer time, because of personal shortage.

COST OF THE PROJECT

The project seeks to work independently of NIHDI, with own financing or via other means. Cost for the FOP:
- Alarm system: the FOP pays 20€ monthly (+ intervention costs) for the alarm system
- In the project, the FOP pays when the set of services is not free (transport, meals on wheels, household support...).

3. Project as implemented

At the start of the project, advertising was done through hospitals, GP circles. Now, it is merely done by mouth-to-mouth and via flyers distributed by the case manager during multidisciplinary meetings.
Initially, people were not eager to collaborate but with the satisfaction of the FOP, the professionals who were expected to do the referrals are more enthusiastic. For instance, GP who already have a FOP in the project will refer more easily the next time.
It seems difficult to find a balance between promoting and not-promoting. When there is active promotion, people are referred. If, for any reason, the project has to say that inclusion is impossible, this leaves a bad impression.

THE INTERVENTION

After almost two years of project activity, the most popular services are family care, night surveillance and occupational therapy. If they should start the project over again, the project should consider the delivery of the same services, except for day care centre. Currently, there is only transport provided for the day centre during office hours. They should consider offering transport possibilities during the extensive opening hours also.
In the early stage of the project, when a FOP was admitted in a hospital, the case manager had to call the ward. Now she gets a call from the hospital, in order to know which care the FOP already received.

Coordination of the project

The decisions about the strategic organisation of the project are made by the coordinators of the different partners, based on the information provided by the frontline workers: case managers, nurses, family support, FOP and ICG). The steering committee meets every six months, with partners. The aim is to discuss the state of the art of the project, regarding inclusion and discharge of FOP and service delivery.
At an operational level, every case manager organizes her own care delivery. Because the transport needs to be more flexible (all day long), they would organize the day care in a different way if they had to submit a new project design all over again.

Evaluation of the project

The project planned to evaluate the clinical path and indicators, but they seem not to do this formally. They believe their project to be successful.

The target population

Starting of the project took some time as, in the beginning, the referrers: GPs, hospitals, etc. were not convinced that the project would be helpful. When first FOP were included, it became clear that the project really brought an added value in the care system and referrers addressed FOP to the project.

The skill mix

Because of the starting phase, they hired a second case manager only when the number of FOP was sufficient for two.

Number of FOP/case manager. They expected each case manager could handle 50 clients, but because of the flexibility needed in the other services, 50 is not possible. Actually, they handle: 30/case manager.
4. Mechanisms through which the project expects to achieve positive outcomes

<table>
<thead>
<tr>
<th>Expected objectives of the intervention</th>
<th>Expected effects (Mechanisms)</th>
<th>Expected outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources &amp; activities</td>
<td></td>
<td></td>
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</tbody>
</table>

**TARGET 1**
- Improve continuity of care
  - Extension of existing daycare hours
  - Provision of night care
  - Coordination of services
  - Case management by a case manager

- Improve sense of security
- Improved sense of continuity of care
- Improved adequacy of the care

- Longer time at home
  - QoL
  - Burden ICG

**TARGET 2**
- Improve interdisciplinary collaboration
  - Meetings
  - Manual for the professional

- Avoiding gaps and overlaps in services provision.

- Adequate care

**TARGET 3**
- Intensive support of FOP
  - Home visits by case manager
  - Providing info about possible resources
  - Management of patient record & BelRAI

- Identification of needs, preferences, demands and offer services and healthcare accordingly

- In机构
  - ADL, IADL
  - QoL, 满意度

**TARGET 4**
- Improve comfort and wellbeing at home
  - Advice by OT
  - Adaptation of the home
  - Provision of adapted equipment

- FOP can live in a well-adapted home
  - ADL, IADL
  - QoL

**TARGET 5**
- Improve collaboration between professionals
  - Regular MD meetings
  - Sharing of info about FOP, resources

- Improving communication and information flow about patient

- Adequate care
management of patient record feedback about BelRAI to GP supervision of night tour

Confront values Better knowledge about each other’s roles allows more adequate care

Impact on the HC system interorganisational meetings, agreements transmural communication (discharge planning)

Improve knowledge of professionals about local resources Satisfaction of both FOPs and care providers

Contextual factors and barriers + : support of umbrella organisation

Figure 24. Programme theory of project of case 5
5. Key success factors

- The project finds that a major key success factor is related to the fact that they are heavily supported by the umbrella organisation.
- Due to the different services they provide, they can offer support and care in many need situations.
- A third point is the central role of the case manager in this project. This point should be developed in the next wave of interviews.

Key points of case management projects with night and/or residential care

- The specificity of this group is that case management is organized out from a residential setting, even if the visits are done at home. This allows the offering of an impressive set of extra services (up to five additional services).
- Case management can be done by nurses, a group of nurses, or a MD group of professionals. It was very hard, to isolate this function amongst other functions, in other words to determine who does what in the project; case managers also provided direct care.
- All projects, except one, were well-embedded in the local network. The only one who was not, was linked to a revalidation centre. The others were housed by a nursing home as umbrella organisations.
- Four projects are supervised by a provincial core group, which allowed simultaneous training, joint making of tools (interdisciplinary protocols) and intervisions.
Case study 6

This project proposes to support the existing network (either professional or informal) around the community-dwelling FOP. The aim is to (re)mobilise the resources and skills of this network which, in turn, allows the (re)mobilisation of the FOPs’ resources. The most important tools for this project are consultation meetings, based on listening to the voice of the different professionals and the FOP and the creation of a "qualitative meeting and caring space", thanks to the specific consultation work. This is done by the means of a mobile multidisciplinary team, which intervenes where needed, facilitates the accesses to adequate services and monitors each situation following a specific process. Even if it shows some features of a case management process, the project does not define itself as a case management process because it situates itself in second, even in third line of the care process. However, they define themselves as reference person for the FOP or as case managers in second line (cf. amendment of the convention, February 2011) but do more than case management, because of the consultation part, which coordinates the network around a single FOP. In this sense, they declare having a similar counterpart in Brussels (Dutch project).

1. Context of implementation

Firstly, this project took part in the previous “therapeutic projects” of mental health, of which it retained its partners, some tools, such as the consultation meetings and support of the network.

The administrative coordinator of the project is also part of the coordination centre (SISD) in Brussels, to which all French-speaking selected Protocol3- projects belong. This centre played a central role in the preparation of the projects and saw to their complementarity. Despite this, the different projects do not interact together closely, as only six FOPs share more than one project.

The project is located in a main city, characterised by a highly heterogeneous population in terms of economic and cultural status, which allows the project to use the setting as an urban laboratory.

2. The project as planned

The preparation and writing of the submission file, including the analysis of the current situation, took almost two years. This allowed the project coordinator to seek how to articulate the future project with the existing ones. The proposal was written by a mental health centre, but was submitted by a coordination centre. This was possible because the same person is CEO of both.
THE INTERVENTION

Objectives of the project

(a) Patient objectives
   a. Empowerment of the professional and informal care provider and of the FOPs and improve the well-being and quality of life of them;
   b. Support the older people at home while improving his quality of life;
   c. Reduce the number of nursing home and hospital admissions for social reasons, when the FOPs is not willing to do this;
   d. Support social insertion, if needed.

(b) Clinical objectives
   a. Support the accessibility to adequate care by the means of the mobile team and create trans sectorial practices;
   b. Improve familial and social integration, taking into account the different social statuses;
   c. Listening to needs; identify and respond to expressed worries about somatic and cognitive decline;
   d. Value the resources of each FOP;
   e. Respond to mental health needs (30% of the 60+) via an adapted care supply.

(c) Innovative objectives
   a. Promotion of the project via a mental health service, which enables the development of gerontopsychiatry; willingness to contribute to mental healthcare for older persons; taking into account the preoccupation of the FOPs around the nearness of death;
   b. Creation of a meeting point, enabling FOPs to stay at the center of the care provided; creation of intersectorial clinical practices by the means of the co-construction of a care plan (which takes into account the needs and resources of all involved stakeholders) and which is political, community and philosophically neutral…;
   c. Creation of a institutional memory space, enabling a qualitative listening of caregivers (formal or informal), to prevent burnout; a proposal of tailored care for the FOP and, in the continuity, reinforce primary care by financing their participation to consultation meetings.

Through these explicit objectives, the project wishes also to have a systemic impact, by changing the clinical practices.

The operational steps of the intervention

First step: identification of the demand and, if relevant, intake during a first interview by the means of the mobile team (two or three members), in presence of the professional demander or, in some cases, in the FOP’s home. During this first meeting, a first plan can be
proposed, as well as two key reference persons for the FOP, the first being responsible for the CRM or BelRAI, the second being responsible for the consultation and care plan.

Second step: organisation of a consultation meeting (« type A »), where all stakeholders are present, excepted for the FOP and his ICG. This consultation meeting allows the building of a trustful and secure space between all professionals and aims to clarify each one’s role (who does what and when?) and to plan the future consultation meetings.

Third step: organisation of other meetings, according to the care plan and evaluation of the care.

End of the case management process: admission in nursing home or hospital; the project transmits the needed information to the setting where the FOP is admitted.

An important tool for these meetings is an ad hoc ICT, allowing to share FOP’s information among care providers, including the minutes of consultation and case manager’s meetings.

TARGET POPULATION AND RECRUITMENT

(1) FOPs 60+
(2) His/her formal and informal network
FOPs had to be recruited by the partners of the SISD, which are all potential catchers of targeted FOPs. The expected caseload was 99 persons, which should represent a total workload of 89h/year/FOPs

SKILL-MIX

The project planned to recruit 9.5 FTE to man the mobile team and take care of the administrative coordination. The composition of the team will be detailed below, when comparing the skill-mix as planned, with the skill-mix as implemented.

Interaction with the environment

Organisational partnership

The partnership is impressive, as it comprehends partners of the previous mental health project and new ones: one SISD, two mental health centres, the scientific society of general practice, two nursing homes, two organisations providing nursing care at home, a non-profit organisation for social integration, two coordination centres for home care and services, independent nurses, etc.
3. The project as implemented

PROJECT PROMOTION

Project promotion was done by the means of flyers send to a hundred institutions and their website, along with the promotion of the other Protocol3 projects the coordination centre supported. Partners took part in the promotion process by sending the flyers to their own network. During this advertising period, they received a lot of demands, including for children.

INTERVENTION

The intervention was carried out as planned.

TARGET POPULATION

Achievement of the caseload
The project could start, as expected, in April 2010. 96% of their caseload was achieved after eight months of functioning.

Change of inclusion and exclusion criteria
With time, they experienced that their intervention did not seem effective for FOPs with premature aging and psychotic disorders, so FOPs with this profile were not included, along with FOPs with a physical impairment or a chronic disease. At the same time, the project extended its zone of catchment area and, as a consequence, had to include new partners and plan longer travel times.

SKILL-MIX

The staff was different than planned because the partners could not delegate a social nurse as expected, because of nursing shortages. This resulted in the recruitment of external professionals with different profiles, a social worker and a psychologist. A computer specialist was also hired. One professional left the project because he disagreed with the way informed consent was obtained.17

17 At the start of the project, only 30% of the informed consents were signed by the FOPs. This is the reason why the project changed its strategies and presented the informed consent as “a way to allow the project to be evaluated”. As a result, the percentage of informed consents rose to 90%, but one of the professionals left because of this, in his view, unethical strategy.
Table 16 below shows the shift in professionals since the start of the project. Currently, 14 professionals work for the project. Case management is carried out by the social workers, psychologists and occupational therapists. If occupational therapy is recommended for a FOP, the project hires an occupational therapist of a partner organisation.

Table 16. Change in skill-mix since the start of the project

<table>
<thead>
<tr>
<th>Profile of professionals</th>
<th>Submission file (FTE)</th>
<th>December 2012 (FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative worker</td>
<td>1,5</td>
<td>1,5</td>
</tr>
<tr>
<td>Social worker</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Psychologist</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Nurse</td>
<td>0,75</td>
<td></td>
</tr>
<tr>
<td>Master physical education</td>
<td>0,75</td>
<td></td>
</tr>
<tr>
<td>Primary care physician</td>
<td>0,5</td>
<td>0,5</td>
</tr>
<tr>
<td>Computer specialist</td>
<td>0,17</td>
<td></td>
</tr>
<tr>
<td>CEO mental health centre</td>
<td>0,25</td>
<td></td>
</tr>
<tr>
<td>Occupational therapist</td>
<td>0,5</td>
<td></td>
</tr>
<tr>
<td>Psychiatrist</td>
<td>0,25</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>9,5</strong></td>
<td><strong>9,22</strong></td>
</tr>
</tbody>
</table>
Coordination of the interventions

The project uses two ad hoc tools for the coordination of the interventions:

1. For partners and participants: to plan and organise the consultation meetings (registry of presences, agenda, proof for payment of travel expenses etc.)

2. Electronic record with FOP meeting data: exchanges between the two reference persons of the FOP, results of FOP scales, etc.

To engage the primary care physician to fill out his part of the BelRAI, they finance his input (23€, the price of a consultation meeting). This way of working causes, of course, delays in the computation of CAPs and scales, which explains why the project is not able to use them for the care planning. At the other hand and maybe because of this, they never had problems to engage primary care physicians in consultation meetings. Overall, their perception of collaboration with this professional group is considered satisfactory. The project developed also standardized letters, to be sent to the different healthcare providers, who perceive a financing for the time spent in consultation meetings.
### Mechanisms through which the project expects to achieve positive outcomes

<table>
<thead>
<tr>
<th>Expected objectives of the intervention</th>
<th>Expected effects (Mechanisms)</th>
<th>Expected outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TARGET 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support of care providers (professionals and informal)</td>
<td></td>
<td>Support FOPs at home</td>
</tr>
<tr>
<td>1. Organisation of multidisciplinary mobile teams</td>
<td>Consultation produces a 'magic effect', probably due to</td>
<td>Maintain QoL</td>
</tr>
<tr>
<td>2. Organisation of consultation meetings</td>
<td>1. The change of the attitude of professionals towards FOPs</td>
<td>↘ number of institutionalisations for social reasons</td>
</tr>
<tr>
<td>3. Financing of participant participation to consultation meetings</td>
<td>2. Building of trusting relationships between participants attending consultation meetings</td>
<td>Improve socialisation of FOP</td>
</tr>
<tr>
<td></td>
<td>3. Providing a secure framework for negative feelings towards death and nursing home placement</td>
<td>↗ adequate healthcare use</td>
</tr>
<tr>
<td></td>
<td>4. Improvement of communication between stakeholders involved in the care process (FOPs, ICGs and PCGs), allowing each one to express his difficulties and sharing experiences.</td>
<td>↗ satisfaction of PCGs</td>
</tr>
<tr>
<td><strong>TARGET 2</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reinforce the accessibility to adequate care</td>
<td>Adapt the care provided to the changing needs and preferences of the FOPs</td>
<td>Help FOPs to stay at home</td>
</tr>
<tr>
<td>1. Create inter and transsectoral clinical practices by making a shared care plan</td>
<td></td>
<td>Maintain or ↗ QoL</td>
</tr>
<tr>
<td>2. Follow-up and monitor the FOPs' needs and</td>
<td>Anticipation of crisis situations</td>
<td>↘ number of institutionalisations for social reasons</td>
</tr>
</tbody>
</table>
readjust the care accordingly.

Supervision of medication intake
improve information flow between professionals and FOPs/ICGs

↗ adequate healthcare use

<table>
<thead>
<tr>
<th>Change the current care delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improvement of communication</td>
</tr>
<tr>
<td>between stakeholders involved in the care process (FOPs, ICGs and PCGs), allowing each one to define his role in the specific care situation, but also in the healthcare system</td>
</tr>
</tbody>
</table>

↗ adequate healthcare use
↗ continuity of care
↗ care providers satisfaction

Contextual factors and barriers
High involvement of the main coordinator at the political healthcare level (= facilitator)

Figure 25. Programme theory of project of case 6

4. Key factors for this project

Among the elements explaining the ease of the project to achieve its caseload, the fact that it was carefully planned is certainly a major point, along with the main coordinator’s professional engagement in the political horizon of the city. However, the project is the most expensive of its category, mainly due to the high number of professionals participating in each consultation meeting. Indeed, it is not one professional who manages each but a multidisciplinary mobile team, supervised by a team of highly qualified professionals.
Case study 7

This case management project is about supporting FOPs and their ICGs at home, as well as their professional care providers. Like the previous case study, it aims at reinforcing the existing network around the FOPs. It was included in the case study approach from 2013 on.

1. Context of implementation

The project was proposed by an organisation of home nursing care. In this region, there are three coordination centres of home care, which the main coordinator of the project is part of. Before this project, they already had an experience with a psychiatric outreaching project, which is still ongoing and with which they share the same roof and values (Int2013).

The conceivers were willing to extend the existing healthcare in the region, by the means of hospitalisation at home. The preparation took 4 to 5 months, representing about 50 hours meetings with the potential partners and writing.

2. The project as planned

THE INTERVENTION AND SKILL-MIX

The objectives of the project were

- FOPs’ objectives
  - Multidisciplinary assessment of the skills of the FOP and the ICG in supporting the FOP to stay at home in optimal conditions (security and quality);
  - Maintain and stimulate the capacities of the FOP to be as autonomous as possible. Professionals have to be aware « to do with », instead of « in the place of »;
  - Reinforcement of QoL at home, by taking into account all the risk factors (falls, medication intake, home adaptation, nutrition, etc.);
  - Support the FOPs by the means of supporting his ICGs, for instance by proposing him diverse respite forms (short stay in nursing home, hospitalisation for complete assessment, home attendants, ...), which in turn may prevent difficult situations which can lead to elderly abuse.

- Objectives related to innovation
  - Innovative : implementation of a new concept of geriatric care at home, to support the work of GPs and their patients, specifically aimed at frail older persons. This concept is based on the making of a care plan and consultation meetings;
  - Alternative : previously, those multidisciplinary assessments are carried out in hospitals (geriatric wards or geriatric one-day clinics). Complementary : Extension of existing services (intra-extra muros).
**Organisational objectives**

- The project aims to guarantee continuity of care by the means of optimal communication amongst the involved care providers in care for an individual FOP;
- Consultation meetings with the FOP’s GP, the other healthcare providers, formal and informal caregivers and the FOP are organised on a regular basis (at the launching of the care plan, after four months, after eight months and after termination of the care pathway, i.e. twelve months);
- A support for communication, a communication notebook is left at home to centralise the messages of the different care providers;
- The BelRAI evaluation tool is used for optimal communication amongst primary care providers and institutional care providers (short stay, rehabilitation) and hospital;
- Trainings are proposed to care providers to increase the adequate use of these communication tools. (Convention)

The means by which they plan to achieve these objectives consisted of the implementation of a 12-month care pathway for every FOP, by the means of the following interventions:

- Evaluation of needs at home via the use of the BelRAI;
- Making of a care plan;
- Psychological support of the FOP and/or his ICG every month;
- Support by occupational therapist or dietician;
- Monitoring, evaluation and readjustment if needed, in collaboration with coordination centres and all involved stakeholders.

The care plan is validated during a consultation meeting in presence of the FOP, his ICG, his GP and professionals involved. During this meeting, a reference person is chosen (either an ICG or a PCG), who is the “warden of the good implementation of the care plan”.

Planned consultation meetings are held at home to evaluate this care plan.

The intensity of the intervention is supposed to vary according to each FOP’s situation.

Typically, a care pathway will be carried out as follows:

1. Nurse of the project and partners identify a FOP for which the project could be beneficial (0,5h/FOP) – information and formalisation with the candidates (0,5h/FOP).
2. Nurse of the project (with the collaboration of the FOP’s GP) : coordination of a multidisciplinary assessment (2h/FOP) – making of a care plan (1h/FOP).
4. Dietician : (2h/FOP).
5. All care providers involved in a FOP’s care : formalisation of a care plan and identification of a reference person (3h/FOP) – consultation meetings (9h/FOP → 3 care providers x 1h x 3 meetings).
7. Psychologist of the project and of the mental health centre: psychological support of the FOP and his ICG (12 visits of one hour/FOP/year).
8. Nurse of the project: possible organisation of short stay, respite, (3h/FOP).

The project does not plan to ask any financial contribution to the FOP for the case management or psychological support. However, some recommended healthcare services are to be paid, which could be a barrier for some of their target population (e.g. for respite care).

THE TARGET POPULATION

The planned target population have the following characteristics, besides the NIHDI criteria

- Attend a day care centre, without perspective of a nursing home admission ; OR
- Be on a waiting list for nursing home admission; OR
- Benefit from reimbursed nursing care; OR
- Be recently discharged from an institution.

The planned caseload was 65 FOPs.

INTERACTION WITH THE CONTEXT

Two coordination centres were included as partners (SISD and CCSSD), along with a mental health centre, a hospital, a nursing home, a rehabilitation centre and an association of GPs.

3. The project as implemented

PROMOTION OF THE PROJECT

The senior council, one of the project’s participants, was charged with the diffusion of the information about the project.
THE INTERVENTION

The intervention of the project consists of a care package of 12 interventions that are systematically proposed to the FOP but not systematically carried out, with the exception of the psychological support, which means that, if the psychological support is not needed, the FOP is not included in the project. However, if the FOP needs psychological support, but does want to be included, they refer the FOP to a mental health centre.

If the content of the services provided did not change since the start, the rhythm of the pathway was adapted. For instance, the psychological support was offered once per month and currently, it is offered 12 times per year, but the rhythm is adapted to the individual situation.

TARGET POPULATION

Recruitment

To achieve its caseload, the project changed its inclusion criteria by the means of an amendment of the convention: The FOPs can be included based

1. on the Edmonton score alone (and not, as previously, by the means of the Edmonton plus the Katz scores A, B or C;
2. on a diagnosis of dementia, even if they are younger than 60 years.

The caseload fluctuates between 55 and 62-63 patients. The project uses waiting lists.

The « typical » beneficiary is:

- A lonely person, expressing a need to talk, especially to counter this loneliness. These FOP are especially in demand for a psychologist;
  « Among the 30 beneficiaries I have currently in my caseload, when I think of those who have no one as informal caregiver […] I have seven or eight out of 30 who have no one […] We have a lot of isolated people. » (Psychologist during interview)
- A patient with a specific therapeutic support demand (depression, bereavement, acceptance of loss of autonomy, etc.)
- Patient living difficult experiences (illness, relational difficulties, worsening of the general health status, etc.)
- People with dementia, for whom the support is especially needed for their ICGs.
The intervention ends with the definitive admission in an institution or when the FOP deceases or when, during the evaluation it appears that the project does not add any plus to the FOP. They made a decision tree to assess, during an evaluation, if the project is still needed or not. If the project is stopped, the psychologist mentions that they still can call them in case of need.

Patients are mainly referred by coordination centres, hospitals and, occasionally, by primary care physicians. One of the important referrers is the geriatric ward of the hospitals, who sees the added value of the project in making the FOPs accept family aids at home when they are discharged, because these aids add to the FOP’s and ICG’s sense of security.

**SKILL-MIX AND DURATION OF THE INTERVENTION**

Table 17. Professionals of the projects and their average intensity of intervention

<table>
<thead>
<tr>
<th>professional</th>
<th>Content of the intervention</th>
<th>Duration</th>
<th>Frequency</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurses (bachelors and licensed nurses)</td>
<td>Evaluation of FOP’s needs Making of a care plan If needed, transmission to coordination centre</td>
<td>1h to 1h30</td>
<td>At intake, at 6 months, 12 months</td>
<td>At home</td>
</tr>
<tr>
<td>Psychologists</td>
<td>Psychological support of FOP and/or ICG</td>
<td>1 hour (strictly)</td>
<td>On average, once monthly</td>
<td>At home</td>
</tr>
<tr>
<td>Occupational therapist</td>
<td>Assessment of autonomy and home environment</td>
<td>If needed, on average two times</td>
<td>At home</td>
<td></td>
</tr>
<tr>
<td>Dietician</td>
<td>Nutritional assessment and counseling</td>
<td>If needed, on average, two times</td>
<td>At home</td>
<td></td>
</tr>
</tbody>
</table>
The most important mechanism through which the project expects to delay institutionalisation is by the means of the sense of security provided by the fact of being included in the project and having a reference person.

« A lot of FOPs feel lonely and insecure. If we arrive at home, to offer a framework providing a sense of security ... to know that there are care providers around, who interact with the GP, having regular visits of the psychologist to have an update about what goes on and what doesn’t work out so well, this can provide a sense of security to the person, because she is able to say; “Yes, I am still able to remain in my home”. 

The coordination of the intervention

This was difficult to organise, because of the confusion between the role of the existing coordination provided by the coordination centre. Clarification of the different roles was an important step to make the project accepted by the other nurses. For the moment, a weekly coordination meeting with the coordination nurses allow to discuss the cases of the FOP and allow the case allocation between professionals.

Another difficulty arose because of the part-time working in the project, making agenda planning difficult. For instance, the nurses provided direct care in the mornings and working as case managers in the afternoon, which was difficult because working with different logics. Now, they chose to work some days as case managers and the other days, provide direct care, which seems easier.

Four consultation meetings are also organised by the SISD, if the required professionals can be gathered (i.e. the GP, the home care nurse and a member of the SISD).

Evaluation of the intervention

They planned to make a satisfaction survey but, with the experience of the project, the psychologists found it too delicate to carry out because of their role as patient’s support, not compatible, in their view, with evaluation of the project.

Coordination of the project

The day-to-day coordination of the project is carried out by a nurse. In the steering committee of the project are members of the coordination centre of the home nursing organisation. They meet every two months. Beside this (small) steering committee, there is also an extended version, three times per year. All representatives of the partner organisations participate in these meetings.

INTERACTION WITH THE CONTEXT
The project has seven partners, of which three are considered essential (1) the coordination centre of the home nursing association, which is an important referrer; (2) the geriatric liaison of a local hospital; (3) the local association of GPs.

The collaboration with the hospital improved significantly in 2013, when a new head nurse was recruited in the geriatric ward, because the identification of the FOPs needing the intervention most was much better and her participation in the steering group meetings.

The four other partners are (1) a rehabilitation centre, who refers FOPs and (2) a nursing home. Those two partners can refer FOPs to the project. (3) The coordination centre (SISD, which provides administrative and logistical support for consultation meetings and payment of attendance fees for these meetings. (4) A mental health centre, with which they collaborate intensively.
4. Mechanisms through which the project expects to achieve positive outcomes

<table>
<thead>
<tr>
<th>Expected objectives of the intervention</th>
<th>Expected effects (Mechanisms)</th>
<th>Expected outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coordination of the interventions of the project with the interventions of the existing coordination centre</td>
<td>The adequate services are provided to the FOP</td>
<td>➤ adequate healthcare</td>
</tr>
<tr>
<td>➤ functional status</td>
<td>➤ Anticipation of crisis situation</td>
<td>➤ satisfaction with care</td>
</tr>
<tr>
<td>➤ QoL and well-being</td>
<td>➤ Better communication flow between care providers and FOPs</td>
<td>➤ crisis situations</td>
</tr>
<tr>
<td>➤ Monitoring of medication adherence</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TARGET 1**

1. Presentation of the project to the FOP by nurse CM
2. Assessment by the means of BelRAI by nurse CM
3. Care pathway of 12 months
4. Designation of a reference person (CM)
5. Relay between the project and the coordinators of the home nursing organisation by nurse CM
6. Coordination of the interventions of the OT and the dietician by nurse CM

Improve psychological support of FOPs and ICGs

**TARGET 2**

1. Home visits by psychologists
2. The focus of the session is on communication between FOPs, ICGs and PCGs

➤ satisfaction with care
➤ QoL and well-being
➤ crisis situations and social admissions
3. 24/7 availability, if needed (mobile phone)

Enhance sense of security and empowerment

Increase coping abilities and sense of control

**TARGET 3**

**Dietary support**

1. Nutritional screening
2. If needed, nutritional education and support
3. Evaluation of the intervention and adjustment, if needed

Support of occupational therapist

Adequate nutritional support and advice is provided

The home is better adapted to the needs and preferences of the FOPs

**TARGET 4**

1. Assessment of the home environment
2. Assessment of the functional status
3. Education and proposal of home adaptation, if needed

**Contextual factors and barriers**

Resistance of the FOPs to the psychological support (= barrier)

Figure 26. Programme theory of project of case 7
5. Key points for this project

(a) Changing recognition of the occupational therapists
When the project started in 2010, these professionals came rarely at home. Today, OT interventions are paid by the region, which makes the project reconsider the supply of OT by the project.

(b) Acceptance of the psychologist
Overall, the acceptance of the psychologist is not easy for the target population. The project adapted their functioning by presenting the psychologist in an indirect way.

« Mais alors, je dis maintenant : “ J'ai ma formation de psychologue ” ce qui fait que le côté psychologue passe un peu plus loin ». (Interview)
They observe that the patient accept more easily familial aids, for instance, when the psychological support is in place.

(c) Lack of training
Nothing was planned for the training of the professionals for their new roles and, with the project progressing, they feel they need extra training.

(d) Importance to collaborate closely with the FOP’s GP
They see the role of the case manager as a relay of the GP and the specialist, especially in coordinating and monitoring the care plan.

« Comment est-ce que vous voyez le rôle de l'infirmière ? » « Comme le relais à domicile des spécialistes et des MG. C'est vraiment la coordination du suivi. Le plan de soins, c'est les dossiers et le package qu'on propose... la coordination de l'information médicale et paramédicale... la rencontre d'un médecin généraliste en début (...) et ce doublon infirmière et médecin généraliste, c'est quelque chose de spécifique ». (Interview)

(e) Supporting the FOP to remain at home is not always the desired outcome; the added value of the project can also be to provide support, so that the transition to nursing home can be done in good conditions.
« Ce que M. G. n’appréciait peut-être pas parce que, l’objectif c’est le maintien à domicile... mais dans certains cas, on se rend compte que le maintien à domicile ce n’est pas la meilleure chose pour la personne et c’est peut-être travailler, finalement, l’idée d’un placement en maison de repos et c’est aussi notre boulot. » (Interview)

(f) Importance of defining clearly the role of the nurse case manager, as opposed to the coordinator of the home nursing organisation. For instance, at the start of the project, the role of the nurse manager was unclear towards the role of the
Facilitating factors

A GP association was already part of the partners but, to increase his input, case managers visit now patient’s GP systematically and to present a care plan. Beforehand, a letter was sent to the GP to ask him to fill out the medical part of the BelRAI but they were never returned. This was because, after one year of functioning, the project was still unknown to local GPs.

Adaptations of the project

The project hired an extra psychologist, in order to be able to perform monthly visits to the patient, when they reached their caseload and observed that the travel time was very long in this region.
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