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Understanding community-based social innovations for healthy ageing

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Preface

Community-based social innovations (CBSIs) are initiatives that seek to empower older people to improve their self-efficacy in caring for themselves and their peers, maintain their well-being and promote social cohesion and inclusiveness. While they have the potential to improve care and autonomy of older people, and to transform healthcare systems, more evidence is needed on CBSIs to improve our understanding of best practices and service delivery models that engage communities and span a spectrum of health and social services.

RAND Europe has been commissioned by the World Health Organization Centre for Health Development Kobe (WHO-WKC) to conduct a study on CBSIs for healthy ageing in middle-income countries.

The study aims to identify how these innovations are functioning across a number of rapidly ageing countries and the policies, programmes and health system factors underpinning their success. In particular the study focuses on the following features of CBSIs:

- The core roles, services and functioning (including feasibility of scale-up) of CBSIs for healthy ageing that seek to support older people to self-care and maintain their well-being.
- Their linkages with local services and sustainable partnerships to deliver health services strengthen social systems.
- The nature of enabling policies, programmes, financing and interactions with health/social delivery systems.
- Synthesising evidence on the effectiveness and cost-effectiveness of CBSIs in upper middle- and high-income countries.

Our study has two major components. In order to examine the evidence base for the effectiveness and cost-effectiveness of CBSIs, we conducted a systematic review of relevant literature on CBSIs for healthy ageing in upper middle- and high-income countries. From this literature we developed a typology to advance understanding of CBSIs. This informed and was complemented by a series of ten case studies of CBSIs, in collaboration with in-country partners.

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Executive summary

Health systems across both developed and developing regions are struggling to meet the diverse and complex needs of increasingly ageing populations. In response to these challenges a number of recent reports (Ong et al. 2016; WHO 2013) have highlighted the need for research into the role of innovations in providing health and social care. Community-based social innovations (CBSIs) are one type of innovation that may help to address the needs of older people. In the context of ageing, CBSIs are underpinned by three main principles, namely: the empowerment of older people to care for themselves where possible; a focus on social inclusion; and the maintenance of well-being in contexts of disease, disability and declining health (Ong et al. 2016).

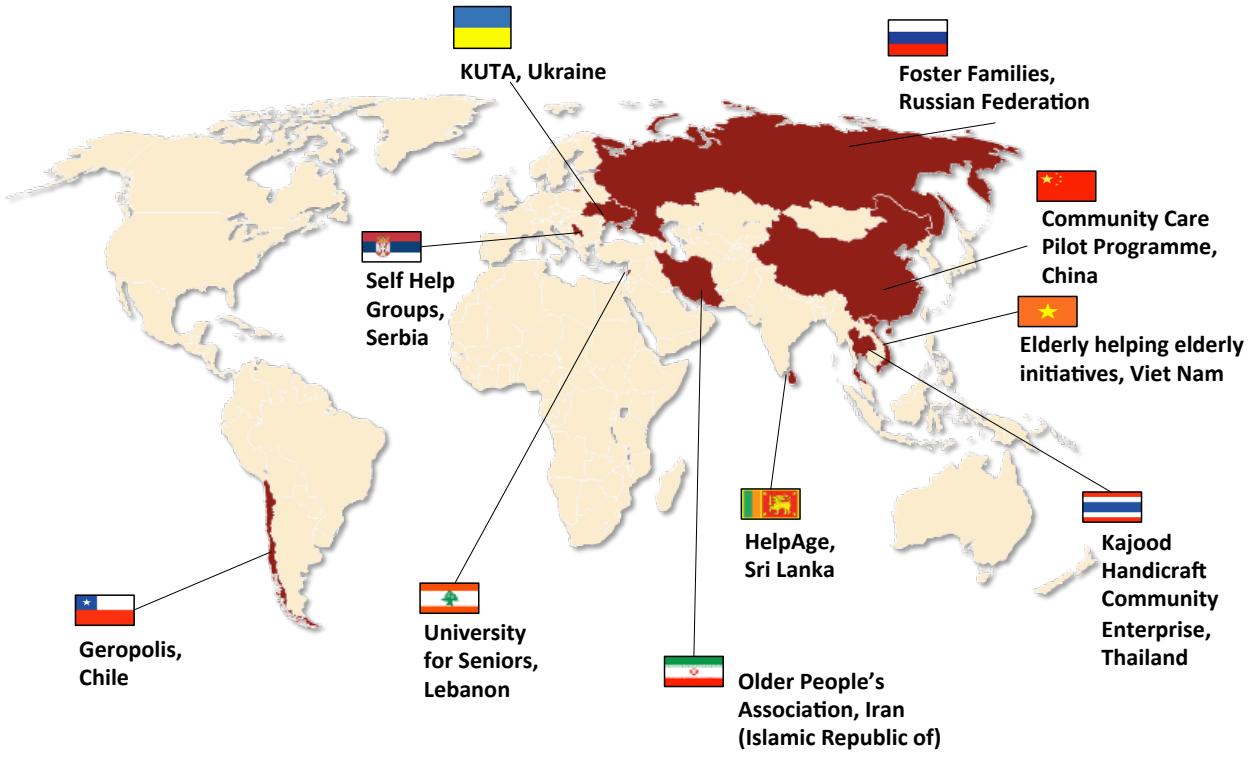
The study aims to identify how CBSIs are functioning across a number of rapidly ageing countries and the policies, programmes and health system factors underpinning their success, as well as to examine the evidence base for the effectiveness and cost-effectiveness of CBSIs.

The study draws on evidence from a systematic review and ten case studies, raising several considerations regarding the CBSIs' impact on healthy ageing, as well as their sustainability and scale-up.

CBSIs' impact on healthy ageing

Given the exploratory nature of the research, when considering the range of 'health' impacts from the CBSIs, we employed the term 'health' very broadly in anticipation that it could incorporate physical and mental health and

Map illustrating the geographical distribution of the ten CBSI case studies



broader well-being. While well-being and health are different concepts they are not necessarily mutually exclusive (UK Department of Health, 2014). Given their subjective and objective dimensions it is difficult to separate them in this study. We did not seek to further define or restrict this conceptualisation as we were interested in understanding how the CBSIs themselves conceptualised and measured these types of outcomes. Moreover, we were guided by the 2015 WHO World Report on Ageing and Health which sets out a framework for action to promote healthy ageing. The report formulates healthy ageing as 'the process of developing and maintaining the functional ability that enables well-being in older age' (WHO 2015, 28). Functional ability is viewed as a set of health-related features that support people in being able to engage in activities which they find valuable. It consists of the individual's intrinsic capacity (which is defined as the composite of all physical and mental capacities), environmental characteristics and the interaction between the individual and the environment (WHO 2015).

By positioning healthy ageing as a process, the question of well-being as an outcome becomes central.

Evidence from all the case studies showed that CBSIs have an impact on the well-being of older persons. The theme of older people feel they are still important members of the society came through in all case studies, with older persons finding that the CBSI activities provided a medium for them to interact with peers, be of help and live an active lifestyle. CBSIs that had an intergenerational dimension contributed to a greater perception of societal inclusiveness for older persons.

CBSIs can also help address several environmental factors. These initiatives contribute to creating receptive environments that ensure an 'ageing in place' process (such as in Russian Federation) or can help address the physical (geographical) challenges that older people can face, as shown by the activities run in Chile by Geropolis.

These CBSIs also contribute to ensuring the person–environment fit, which entails the dynamic and interactive relationship between older persons and their environments (WHO 2015). Involving older persons in managing or designing spaces brings an additional element of empowerment, which was highlighted as beneficial (e.g. involvement in the conceptual development of mural paintings in Chile).

The primary health benefit is psychosocial (e.g. well-being, social and mental health benefits from participating in activities with peers), which has implications at both an individual and a community level.

CBSIs have been shown to lead to improved perceived health status among older people, both self-reported and assessed. Involvement in CBSIs has often helped beneficiaries avoid social isolation and loneliness and offered them companionship and a sense of belonging, which in turn lead to mental health benefits.

Seen cumulatively these benefits can be considered at community level. Increased optimism and a more positive outlook on life in general, and forming a support network in which beneficiaries receive but also provide mental support, increase the capacities of communities to come together and increase social participation.

Some CBSIs also have physical health impacts, although there are limitations on what can be assessed, given the relative lack of medium- to long-term monitoring and evaluation (M&E) data.

As shown also from the results of the systematic review, currently the evidence for CBSIs leading to physical health impacts is limited and highly dependent on the particular CBSI activities. When these entail direct health service provisions it is more likely that health outcomes will be monitored and noticed (e.g. the case study from Sri Lanka). However, for many CBSIs, impacts on physical health are not the primary aim and therefore may not be expected; they are then also unlikely to be monitored.

There is also a significant group of CBSIs that focus on education, training and income generation. It can be argued that increased levels of knowledge and health literacy could lead to direct health gains, in particular in managing lifestyle factors relating to chronic diseases such as diabetes and hypertension.

CBSIs can help contribute to people-centred services.

One of the strategic policy directions of the Framework on integrated, people-centred services of the World Health Organization (WHO) is empowering and engaging people and communities (WHO, 2016). CBSIs are clearly demonstrating that they are empowering and engaging communities and helping build trust and social networks to support older persons. This can lead to empowering individuals to shape their environments, which contributes to the healthy ageing process as explained above. From the systematic review, evidence also points to CBSIs' potential to equip older people with new skills, offering a rewarding experience accompanied by a sense of empowerment and achievement, as well as leading to a greater independence and self-support.

Another way the CBSIs contribute to the attainment of people-centred services is through engaging and empowering informal carers. The case studies from China, Viet Nam and Russian Federation have shown how peers of older persons can take on functions that might otherwise fall within the remit of social or healthcare professionals and fill gaps in the continuum of care that exist especially in rural areas.

Sustainability and scale-up of CBSIs

Given that many of the CBSIs are low-cost and rely on either volunteers or older people as agents of change, most models appear to be relatively sustainable.

Evidence from the ten case studies suggests that most CBSIs are able to continue in their current form and can therefore be seen as a sustainable approach to providing care for older people. However, challenges exist in regard to increased demand on services or factors affecting the scale-up of the CBSIs. The reliance on volunteers was seen both as an advantage and a disadvantage for the sustainability of the programmes examined.

In order to scale up or expand activities, CBSIs may need to develop strategies for securing long-term funding.

While CBSIs may present a low-cost model for providing support to older people in middle- and high-income countries, many CBSIs face resource constraints in scaling up or expanding their services, either as a result of limited funding or increasing demand for services as a result of increases in ageing populations. Information gathered from our ten case studies suggests there is a need for CBSIs to develop strategies for long-term funding and/or fundraising activities.

While the mix of people, skills and governance structures varied considerably across the CBSIs examined, the role of leadership and key individuals as 'product champions' appears to be a significant factor in the success of CBSIs.

CBSIs rely on the supply of a number of key skills, including those of volunteers, health practitioners, trainers, M&E experts and administrators. A common feature of all the CBSIs we examined in the case studies was the crucial role played by key individuals in managing, delivering and advocating the activities of the CBSI.

M&E processes were limited across CBSIs, but were seen as crucial to learning and adapting, demonstrating success and potentially attracting the resources needed to scale up CBSIs.

While M&E was seen as a crucial component in learning in, adapting and scaling up CBSIs, the majority of cases identified had limited to no M&E

processes in place. Developing mechanisms for M&E may help CBSIs to demonstrate gains in relation to health and healthy ageing. Such M&E mechanisms would need to be cognisant of the individual beneficiaries as well as environment and the interaction between the two. This in turn can be used to demonstrate success to policymakers and leverage funding from donors.

While linkages to the immediate health and social care system appeared to be limited across the CBSIs, many considered strategic partnerships as an important factor in a CBSI's sustainability.

Despite limited linkages with health and social care actors, the CBSIs identified were establishing linkages with the wider ecosystem of actors involved in older people's day-to-day activities. Factors identified by interviewees affecting linkages with health and social care systems appear to be rooted in informal networks and relationships, leadership and skills of CBSI staff and the reputation and longevity of the CBSI.

The evidence gathered on CBSIs suggests that the external context in which a CBSI operates should be considered, especially with regard to the country or region's policy context towards older people.

Policy contexts conducive to CBSIs, for example providing national-level legislation and policies for older people's rights, were seen as an enabling factor in the case of some CBSIs. CBSIs also have the potential to facilitate policy changes for older people through advocacy and the promotion of rights.

A CBSI typology

The research also sought to develop, test and define a typology for CBSIs. This specific aim was rooted in the need to: (1) provide a definitional and organisational structure to enable researchers and research users to organise evidence and establish a vocabulary that would facilitate a quicker identification of evidence and discussions around CBSIs; and (2) start to populate the typology in order to inform decision makers and implementers as to the relative advantages and challenges of different models.

The first draft of the typology was developed from the literature identified through the systematic review. This was complemented by the evidence from the ten case studies of CBSIs. The typology is organised around three main dimensions: empowerment of older persons, linkages with the health and social care services and scope, and scale and complexity. For each category of the typology we reflect on features, strengths and challenges.

In the table below we present the main types of CBSIs in our typology and their strengths and potential challenges.

Overview of characteristics of types of CBSIs

Typology category	Characteristics			Strengths	Potential challenges	Examples
	Empowerment	*Linkages with health and social care sectors*	Scale			
Foundational	• Low level of empowerment, with activities primarily focused on peer support	• Low level of linkage and coordination with local health and social care systems	• Small scale both in terms of the number of activities engaged in and the geographical area of operation	• Good opportunity to test or pilot a new intervention within a particular context • Requires a low level of funding, resources and skills	• Difficulties in scaling up interventions • Reliance on pre-existing networks or infrastructures (for example the Older People's Associations in the Chinese Community Care Pilot Programme) • Challenges in reaching a larger segment of the older population in a region • Health outcomes associated with these CBSIs are primarily related to reductions in social isolation and loneliness, with foundational CBSIs having limited ability to affect long-term health in older populations or change ageing-related policies	China and Serbia
User-driven	• Medium level of empowerment, with beneficiaries actively engaged in committees and meetings to help shape activities and courses offered	• Low level of linkage and coordination with local health and social care systems, beyond involvement in training courses, as they are often not explicitly designed as health interventions	• Small scale in terms of the geographical area of operation, often linked to a particular university • Primarily offers training and educational activities, including cultural and recreational activities, and relies on shared resources and membership fees to fund activities	• Well-being, social and psychological health appear to be the primary outcomes of the intervention, as well as increases in the health literacy of participants • Can be relatively low-cost, able to sustain activities with relatively little funding and able to generate funds through membership fees	• Tends to serve a particular type of beneficiaries, predominantly older women from relatively affluent socio-economic backgrounds • May not be appropriate for older people who have limited mobility or autonomy (e.g. bedridden or severely disabled) • Difficult to link to the health and social care system, as not primarily focused on health	Ukraine, Lebanon, Thailand
State-supported, networked	• Low level of empowerment as interventions tend to be more top-down, aimed at beneficiaries with limited agency	• Low level of linkage and coordination with local health and social care systems, beyond involvement in training courses, as often not explicitly designed as health interventions	• Several different activities on a small scale geographically, or operates a small number of activities on a medium-scale geographically	• Ability to reach those most in need • Ability to coordinate with the health system • Ability to operate across a larger area/scale up • Sustained and dependable funding/political support to run the programme • Can attract greater attention/ visibility from other actors, such as universities, due to state support	• Reliant on state funding, difficult to adapt • Low level of empowerment for beneficiaries; however, this may mean interventions are more appropriate for older people with limited mobility or autonomy (e.g. bed-ridden or severely disabled)	Russian Federation and Viet Nam
Adaptive	• Medium to high level of empowerment, with beneficiaries actively engaged in all aspects of the CBSI, including designing and managing the CBSI activities and policy/advocacy activities	• High level of linkage and coordination with local health and social care systems, through referral systems and coordination on direct service provision as well as representation in national-level policymaking	• Large, complex interventions often spanning a large geographical region or operating at national level • Tends to require high levels of funding and able to reach a large proportion of the older population in a given region/country	• Able to reach a large number of beneficiaries • Able to adopt a more holistic approach • Potential for attaining health outcomes beyond social benefit	• Substantial human resources/skills needed	Chile, Sri Lanka, Iran (Islamic Republic of)

Considering the evidence gathered through all research strains, the following reflections for policy, research and practice of CBSIs are presented.

Policy implications	CBSI implications
Map and engage CBSIs at local level in view of understanding their potential in furthering efforts to ensure people-centred health services A greater understanding of CBSIs at national level could be ensured by undertaking a mapping exercise that could employ the typology created throughout this research. This could facilitate both public- and private-sector actors better understanding the opportunities for engagement with CBSIs. **Ensure a better understanding of the value for money that CBSIs bring** There may be an inherent assumption that CBSIs are cost-saving to health and social care systems, but this may not be the case and this will be important to ascertain. Capturing the societal costs of CBSIs, such as the time and resources given by volunteers, older people and family members, will be important to consider in addition to the range of societal benefits offered by CBSIs. **Create a policy environment conducive to moving CBSIs away from a continuous pilot stage through dedicated funding streams** A policy environment conducive to CBSIs' functioning should consider not only creating opportunities for accessing seed funding but also potential funding streams that could be accessed towards diversification of activities and scaling up. These could be in the form of national funds or credit schemes for CBSIs. **Foster spaces to ensure knowledge translation and networking between various actors** Policymakers could foster interactions through various initiatives (e.g. as part of already established events dedicated to ageing) between CBSI representatives and other local actors (e.g. health professionals). These spaces would need to consider incentive mechanisms for the latter category.	**Look for opportunities to collaborate with community groups operating in the same geographical area** Coordination with existing initiatives supporting older people may help ensure that duplication of effort is reduced and may support wider, national-level advocacy for older people's rights. **Build strategic partnerships with local policymakers or academia beyond the health and social care system, depending on the objectives of the CBSI** CBSIs should consider where there are opportunities to coordinate or collaborate with existing services. Adopting an ecosystem approach to partnerships, whereby the variety of stakeholders working on ageing-related issues are included in both formal and informal partnerships, can be seen as an important factor. **Promoting intergenerational activities, where applicable, may be an important feature in the sustainability of CBSIs and may help to reduce the stigma of ageing in middle-income countries** CBSIs should consider where there may be opportunities to promote intergenerational activities and what the incentives are for their involvement. **Embed M&E processes in CBSIs which are low-cost, effective and not burdensome** Specific M&E indicators for evaluating the impact of activities on older people's health (physical, mental and well-being) as well as potential broader healthy ageing benefits, may help CBSIs to demonstrate progress to donors. Coupled with this, M&E indicators can be used by CBSIs to set milestones and measure progress against their own objectives. **Create opportunities to disseminate learning and evidence of impact** CBSIs should consider advocacy and dissemination strategies to share learning among CBISs and the wider policy community working on ageing-related issues.

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Abbreviations

CBSIs	Community-Based Social Innovations
EHCVs	Elderly Home Care Volunteers
EOI	Expression of Interest
HASL	HelpAge Sri Lanka
HCE	(Kajood) Handicraft Community Enterprise, Thailand
KUTA	Kolping University of the Third Age, Ukraine
M&E	Monitoring and Evaluation
NGO	Non-Governmental Organisation
PICOS	Population, Intervention, Comparison, Outcomes and Study design
SHG	Self-Help Groups
UfS	University for Seniors, Lebanon
UHC	Universal Health Coverage
WHO	World Health Organization
WHO-WKC	World Health Organization Centre for Health Development in Kobe, Japan

1. Introduction

1.1. Background

Health systems across both developed and developing regions are struggling to meet the diverse and complex needs of increasingly ageing populations. In response to these challenges a number of recent reports (Ong et al. 2016; WHO 2013) have highlighted the need for research into the role of innovations in providing health and social care. Community-based social innovations (CBSIs) are one type of innovation that may help to address the needs of older people that are not currently met through formal systems of health and social care. In the context of ageing, CBSIs can be understood as initiatives that seek to empower older people to improve their self-efficacy in caring for themselves and their peers, with the aim of maintaining their well-being through promoting social cohesion and inclusiveness (Ong et al. 2016).

In 2013, the World Health Organization (WHO) convened the Global Forum on Innovation for Ageing Populations. This event was highlighted as the first opportunity to link and discuss emergent evidence on ageing together with social and technological innovations that could lead to cost-effective, scalable solutions. Off the back of this event, and supported by its ten-year research strategy on universal health coverage (UHC), innovation and ageing, the World Health Organization Centre for Health Development in Kobe, Japan (WHO-WKC) convened the first expert consultation on CBSIs for healthy ageing in 2015 (Ong et al. 2016). The consultation participants comprised WKC and academic experts on ageing. In addition, lead authors of seven case studies were present. These case studies examined community initiatives involving older persons in low and middle-income countries. The findings from the consultation helped define CBSIs and outlined three main principles underpinning these innovations, namely: the empowerment of older people to care for themselves where possible; a focus on social inclusion; and the maintenance of well-being in contexts of disease, disability and declining health.

The report resulting from the consultation concluded that CBSIs have the potential not only to reduce costs and improve care, but also to improve autonomy and give older people the power to make their own decisions over their health and daily living. Additionally, the report highlighted three main issues concerning the potential of CBSIs:

- There are large gaps in vertically based health and care systems, which particularly affect communities with rapidly ageing populations. The healthcare gaps are between the older person and various components of health systems including: health information, local clinics and hospital care. In addition, while social care has principally been provided in the past by the immediate or extended family in many countries, changing demographics and modes of employment mean that there are insufficient family members to provide this care, particularly for very frail elderly people. **CBSIs could help fill crucial gaps in these systems by improving older people's self-efficacy in caring for themselves and their peers (peer-based networks)**. Such programmes may consist of innovations exclusively aimed at older people (for example the Chinese case study showed older adult volunteers engaged in communication with other older people in need) or may be intergenerational in

approach (for example the Polish case study showed older adults supporting children). In general, empowering older people was a common theme across the case studies, particularly by encouraging well older people to help frail older people.

- **Peer-based networks do not appear to succeed on their own**, but perform far better if they interact with local service providers, particularly if the peer-based networks result in innovation, reform or renewal of policy or service provision. Such interaction may start with policies or provisions at the local level but go on to inform policies regionally and/or nationally.
- **Community-based approaches must have some level of local services with which to engage**, otherwise the CBSIs will not be effective in providing access to treatment and the management of declining health and serious disabilities in older populations. The role of central and local government is to provide coordinated health and social care service provision that the CBSIs can interact with.

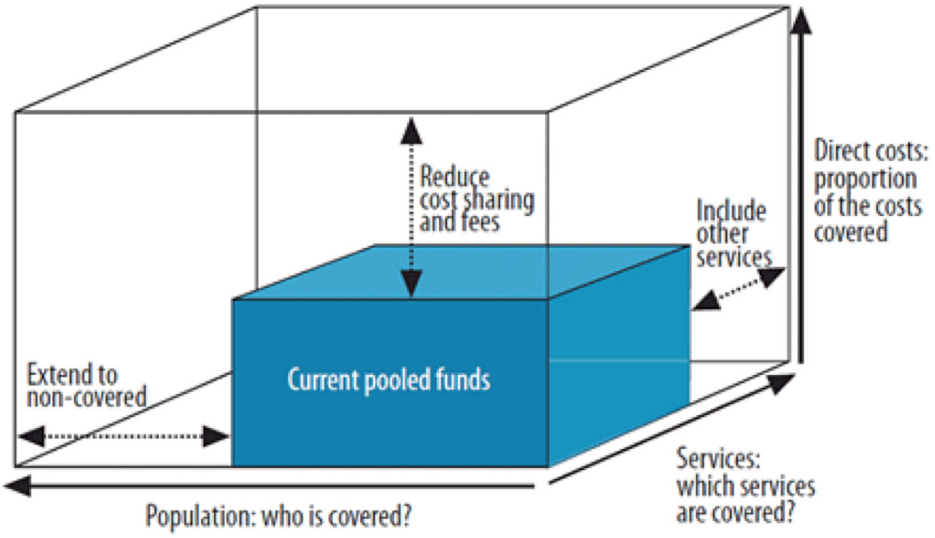
The consultation's findings provide valuable insight into the potential role of CBSIs, but there is a need for further research to understand to what extent the findings are applicable in higher-income country settings. As middle- and high-income countries grapple with the challenges and opportunities of increasingly ageing populations, in some cases with people aged 65 and over accounting for more than one quarter of the population, there is a need to strengthen the evidence base around CBSIs (World Atlas N.d.).

To our knowledge there is no existing published systematic review that attempts to synthesise evidence around CBSIs in these settings. While systematic reviews of evidence are available for community-based interventions in relation to health and ageing (Kang-Yi and Gellis 2010; Peel et al. 2004; Warner et al. 2012), these do not focus specifically on CBSIs with the underpinning ethos of empowerment, social inclusion and maintenance of well-being. It is particularly timely to assess the evidence base for CBSIs as the policy agenda in many countries is beginning to highlight factors such as social isolation in relation to health (Age UK 2010; Valtorta and Hanratty 2012) and new models of care are seeking new and innovative ways of working with third-sector and community organisations (NHS England 2016). It is also important to ascertain to what extent there is common experience in the types of CBSIs and therefore potential for lessons to be drawn across low-, middle- and high-income country settings. It is not clear for example whether experience in higher-income countries can provide further insight into successful models of linkage with formal health and social care systems, as these systems will be more established in those countries.

Lastly, there is also a need to understand the ecosystem in which CBSIs operate. The establishment of the Sustainable Development Goals in 2015 reinforced the importance of health as an essential pillar of sustainable development. Within this framework, the concept of UHC is seen as key to ensure that populations have access to the quality services they need without experiencing financial hardship. The WHO defines UHC as 'access to key promotive, preventive, curative and rehabilitative health interventions for all at an affordable cost, thereby achieving equity in access' (WHO 2005). The dimensions of UHC are further summarised in Figure 1 below.

Given the increased need for health services and decrease in income experienced by many older people, the link between UHC and ageing is particularly relevant. Understanding of possible synergies between CBSIs and UHC efforts is also important as it could help target efforts aimed at improving quality of life for older people. As highlighted above, the need for innovation can stem from gaps in existing services but CBSIs should not be seen in isolation and as alternatives to state provision of health and social care services.

Figure 1 Dimensions of universal health coverage (WHO 2017)



This research explores the relationship between CBSIs and other services to understand to what extent they can be complimentary, enhance services and therefore contribute as one element within the UHC agenda for countries with rapidly ageing populations. Continuing to advance the evidence base around CBSIs is particularly important as broader agendas are providing an impetus for countries to seek to engage and empower individuals and communities in efforts to reorient integrated, people-centred care systems (WHO, 2016). Furthermore CBSIs may be important to understand in wider ongoing commitments to healthy ageing (WHO, 2015). The 2015 WHO World Report on Ageing and Health sets out a framework for action to promote healthy ageing. The report formulates healthy ageing as 'the process of developing and maintaining the functional ability[1] that enables well-being in older age' (WHO 2015, 28). Moreover, the role of social innovation for health is receiving global attention beyond ageing (WHO TDR, 2015). As such this research of CBSIs has the potential to contribute to a broader, growing research agenda.

1.2. Aims and objectives of the study

The study aims to identify how CBSIs are functioning across a number of rapidly ageing countries, and the policies, programmes and health system factors underpinning their success. In particular the study focuses on the following features of CBSIs:

- The core roles, services and functioning (including feasibility of scale-up) of CBSIs for healthy ageing that seek to support older people to self-care and maintain their well-being.
- Their linkages with local services and sustainable partnerships to deliver health services, strengthen social systems.
- The nature of enabling policies, programmes, financing and interactions with the health/ social delivery system.
- Synthesising evidence on effectiveness and cost-effectiveness around CBSIs in middle- and high-income countries.

1 Functional ability is viewed as a set of health-related features that support people in being able to engage in activities which they find valuable. It consists of the individual's intrinsic capacity, environmental characteristics and the interaction between the individual and the environment (WHO 2015)

In order to explore these features, the research study had two main objectives:

1. To conduct a systematic review on CBSIs for healthy ageing in upper middle- and high-income countries and in doing so to provide an overview of included studies, an assessment of the quality of research, an account of outcomes reported and a synthesis of evidence around the effectiveness and cost-effectiveness of CBSIs.

2. To develop criteria by which to describe and differentiate types of CBSIs for healthy ageing and offer a typology to inform future research and policy discussions.

These two objectives address the need to establish the evidence base for CBSIs for healthy ageing in middle- and high-income countries but recognise from the outset the diversity of programmes that are likely to be encompassed under the term ‘CBSIs’ and the need not only to conclude on the evidence (or lack of) around effectiveness but to draw value from the review to inform research and debate going forward.

1.3. Structure of the report

This report is divided into three further chapters. Chapter 2 sets out the methodological approach for the whole project, i.e. the methods that were used to conduct the systematic review, the case studies, the expert consultation and the overall limitations to our approach. The focus of the subsequent chapters of this report is on the synthesis of these components to advance understanding of CBSIs in middle- and high-income country settings. The detailed methods and findings of each component are provided in the appendices. Appendix A presents in full the systematic review and Appendix B the typology development; both are published elsewhere. Appendix C presents a report from each of the ten case studies.

Chapter 3 considers the evidence base and understanding of CBSIs in practice to present a potential typology of CBSIs for healthy ageing. Key considerations around impact on healthy ageing and the sustainability and scale-up of CBSIs are then presented. Chapter 4 presents further considerations on the typology, widens the lens to consider CBSIs in relation to UHC and proposes key implications for future policy and existing practice and research in relation to CBSIs.

2. Methodological approach

In this chapter we describe the methodological steps followed in conducting the overall research. Our study has three major components:

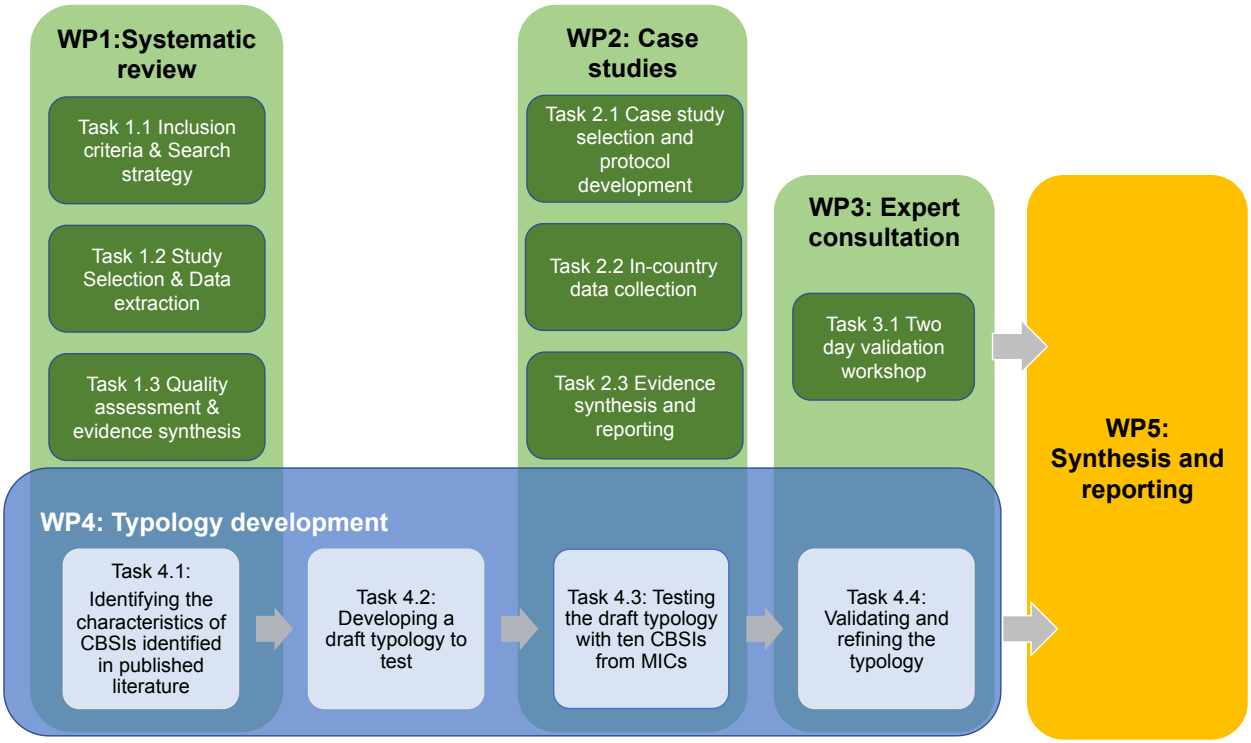
1. **Work Package 1: Systematic review** – To conduct a systematic review on CBSIs for healthy ageing in upper middle- and high-income countries and in doing so to provide an overview of included studies, an assessment of the quality of research, an account of outcomes reported and a synthesis of evidence around the effectiveness and cost-effectiveness of CBSIs.

2. **Work Package 2: Case studies of CBSIs** – In order to examine the effectiveness of ongoing CBSI interventions in middle-income countries, we developed a series of country case studies in collaboration with in-country partners. Selected case studies become the focus of primary data collection towards an understanding of each CBSI in depth, including how it operates, how it links to other health and social care services and what benefits it brings for participants.

3. **Work Package 3: Expert consultation** – In order to refine and validate the findings from the first two work packages, an expert consultation was also held at the WHO-WKC in Kobe, Japan.

Cutting across each of these three work packages was a fourth work package which aimed to develop a typology of CBSIs (**Work Package 4: Typology development**). This drew on data gathered initially in the systematic review

Figure 2 Methodological approach to the study



to identify the main characteristics of CBSIs and develop a draft typology. This draft typology was then tested with the evidence gathered from the case studies and further refined and validated at the expert consultation. Finally, data gathered from each work package was synthesised and presented in this report (**Work Package 5: Synthesis and reporting**). Each of these work packages is summarised in Figure 2 and described in further detail below.

Table 1 Summary of inclusion/exclusion criteria

PICOS	Inclusion criteria	Exclusion criteria
Participants and setting	People aged 50 and over. Based in community settings. Any high- or middle-income countries (as defined by the World Bank[2]).	Mean age or age range is not given, mean age is under 50 or mid-point of the range is under 50 years old. Setting is a health-related establishment, such as nursing homes, hospitals or clinics, etc. Only benefits for the caregivers are considered. Carried out in low-income countries.
Intervention	Any CBSIs or innovations to services, self-help initiatives, which aimed to empower the target group by motivating them to take the initiative for their own health and well-being. Ideally innovations run by one or more people from the community themselves, who could be paid or volunteers. Had been running for at least 12 months at study end.	Interventions or innovations implemented solely by health service staff. Innovations without any community responsibility or community engagement. Interventions that lasted less than 12 months at study end.
Comparison	Any type of comparison.	No comparison.
Outcome	Any clinical or person-centred measure of healthy ageing: Citizen – healthy ageing, morbidity, mortality, quality of life, well-being, experience of the innovation or initiative, acceptability or any other relevant outcomes relating to individual or groups of citizens. Organisational – sustainability, costs, cost effectiveness/ utility/benefit/consequences or any other relevant outcomes relating to organisational aspects of the CBSI. Social care, hospital care or other health services – numbers of people referred, numbers admitted to care homes and hospitals, or any other relevant outcomes.	Biochemical or genetic outcome measures alone.
Study designs	Any quantitative or qualitative comparative study, including randomized control trials, cohort, case-control, case series with historical control, etc.	Editorials, opinion pieces.

Full details on the methodological approach to the systematic review can be found in Appendix A.

2 Income group is defined as in World Bank (N.d.).

The systematic protocol was registered with Prospero (CRD 42016051622). A comprehensive search was conducted using 15 academic databases and Google (advanced search). We included studies published in any language from the year 2000 onwards. Exploratory meta-analysis was conducted for quantitative studies reporting similar outcomes, and qualitative studies were analysed using thematic analysis. Narrative synthesis was conducted.

The participant(s), intervention(s), comparison(s), outcome(s) and study design(s) (PICOS) that we specified and the corresponding exclusion and inclusion criteria are defined below and summarised in Table 1.

2.1. Work Package 2: Case studies

2.1.1. Case study selection

Given the relative lack of evidence on CBSIs in middle-income countries in published literature, the case studies were identified through an open call for Expressions of Interest (EOIs). In addition to disseminating the call through emailing, websites and social media, the WHO's Country and Regional offices were involved in identifying potential case study sites and local research partners. This inclusive approach allowed us to announce the project to a wide audience and to identify an appropriate range of CBSIs to provide findings that would allow lessons to be drawn from the overall research. We acknowledge that the adopted procedure may have introduced some selection bias, but have built in a number of steps to minimise this and feel that such bias is to some extent inevitable with a small number of cases.

Initially, a pre-call was launched on 14 October 2016, which outlined the aims of the study and a timetable for the selection of case studies. This was followed by the call for EOIs, launched on 7 November 2016.[3] Applicants were required to complete an online application form by 31 December 2016, to provide a general description of: the CBSI and its activities, its relationship with or positioning in relation to existing health and social care systems and any evidence of impact of the CBSI on the health and well-being of older people.

- Based on the results from this open call, we selected case studies through the following steps:
- **Verifying eligibility of the CBSI:** As a first step, CBSIs submitted were subject to two eligibility criteria: (1) the CBSI must be conducted in one of the target countries,[4] and (2) the proposed innovation must be in line with the WHO definition of a CBSI. Any submission failing to meet either of these criteria was not considered for review.
- **Assessing the CBSI against the selection criteria:** The selection criteria for identifying the case studies to be included in the study were guided by the study goals and objectives outlined above and built on previous efforts in the first expert consultation (Ong et al. 2016).
- **Shortlisting the most suitable CBSIs:** The submissions were then vetted by an expert group of academics, the appointed research team and the technical staff at the WKC and WHO regional offices. The goal was to identify the ten most representative case studies (meeting the definition of CBSIs and having been in existence for at least one year) covering all of the regions for research and reporting.

3 RAND Europe/WHO-WKC (2016).

4 The target countries were: Albania, Armenia, Belarus, Bosnia and Herzegovina, Bulgaria, Georgia, Latvia; The Former Yugoslav Republic of Macedonia, Republic of Moldova, Montenegro, Romania, Russian Federation; Argentina, China, Iran (Islamic Republic of), Lebanon, Mauritius, Serbia, Sri Lanka, Thailand, Tunisia, Turkey, Ukraine, Viet Nam; Brazil, Chile; Colombia, Costa Rica, Cuba, Panama, Uruguay; Dominica, Grenada, Jamaica, Saint Lucia, Saint Vincent and the Grenadines.

2.1.2. Case study methodology

The case studies aimed to explore:

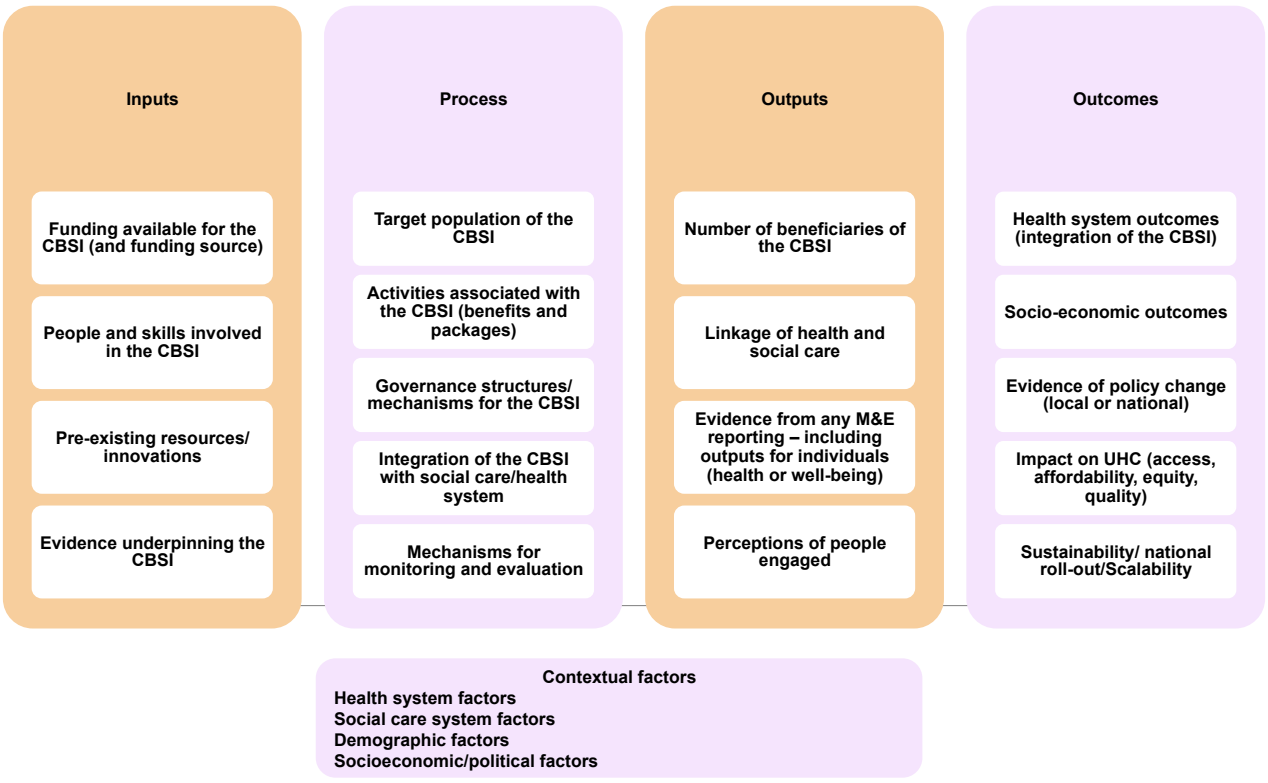
- The role and function of older people as resources for themselves and for others (peers, family, community).
- Health and social services delivered by those initiatives and referral processes when they exist.
- Links made within these communities of support between health interventions and social health protection interventions (e.g. help with transportation, livelihoods, pensions, cash or in-kind transfers).
- Coordination mechanisms with formal health and social sectors, including any formal connections with the health and social care system.
- Coordination and engagement with a variety of health/social service workers and community-based services.
- Type of metrics (indicators, monitoring tools) implemented to assess impact on health[5] and the concept of health that is being measured.
- Measures to understand and respond to health inequities in the population served.

We have used a logic model approach to examine the effectiveness of selected CBSIs. This helped us assess the intervention logic for CBSIs and to track the progress, impacts and evolutionary dynamics of CBSIs at core levels of analysis. As illustrated in Figure 3 below:

- **Inputs** helped us understand the resource environment of each CBSI and provide a foundation for exploring the linkages between resources, outputs and impacts. This resource input environment is likely to capture aspects such as resources for implementation (funding, infrastructure and skills/capabilities). We also aim to capture the reasoning and evidence base leading to the establishment of the CBSI.
- The **process** dimension helped us examine both the diversity of CBSIs, in terms of activities/services offered, population groups targeted and geographies covered, and mechanisms for designing, managing and evaluating the CBSI if present. We also examined the integration of the CBSI within the wider health and social care services offered to older people.
- The **output** dimension helped us assess the relative progress of CBSIs since they were established and capture the diversity of outputs and associated achievements. This involved capturing outputs such as the number of beneficiaries involved in the CBSI and any initial health and well-being outputs for beneficiaries reported.
- The **outcomes** dimension helped us capture a wider range of benefits, including those relating to impact on resources for achieving UHC, policy-level impacts and other (including unintended) consequences which may affect the health and well-being of older people in a particular country. In particular, we not only considered impacts at an individual level (e.g. beneficiaries engaged in the CBSI) but also looked to examine any potential impacts on the wider community and the overall health/social care system.
- The **contextual factors** guided us to consider the influence of both health and social care system factors and demographic, socioeconomic and political factors which may help or hinder progress of the CBSI. A greater understanding of the contextual factors underpinning a CBSI will also help to inform reflections on its transferability/ scalability by offering a richer understanding of the setting.

5 We used the term ‘health’ very broadly at this stage in anticipation that it could incorporate physical and mental health and broader wellbeing. As the case studies were exploratory, we did not seek to further define or restrict at this stage as we were interested in understanding how the CBSIs themselves conceptualised and measured these types of outcomes, if at all.

Figure 3 Framework for gathering data on CBSIs and their contexts



Descriptive data on CBSIs was collected through a mix of methods including semi-structured interviews and a review of administrative data and documentation. Each case study follows the same design in order to provide in-depth understanding of each CBSI and allow comparisons to be made between different actors within a single case, between cases and between groups across cases, taking into account relevant contextual factors. Key-informant interviews were conducted with key stakeholder groups involved in the CBSI, as well as with wider health and social care system actors. All case studies relied on the involvement of a local partner which supported the development of case studies and provided a fuller understanding of the local context.

Desk-based document review

Building on any documentation identified in consultation with the CBSIs identified in each of the countries, the literature review draws on academic and grey literature to provide an overview of the health and social services delivered by the CBSI in each country and the wider context in which these interventions are taking place. In addition, any available evaluative documentation was reviewed to collect evidence on the metrics, indicators and monitoring tools used to assess the effectiveness of the CBSIs identified. Key documents included journal articles and policy documents, such as commissioned discussion documents and government strategies. Academic literature was identified through PubMed, focusing on the years 2000 to the present. The literature search was conducted between July and October 2017.

Stakeholder interviews

In addition to the document review described above, key-informant interviews were also used as a key means of gaining an insight into the ongoing activities of the CBSIs, as well as into the wider contextual factors affecting their functioning in each country. The interviews followed a common topic guide, with the main

topics discussed including: resources that support the CBSI; engagement with older people and functioning of the CBSI; outputs and linkages with the health and social care systems and impact of the CBSI. Emphasis, however, was placed on allowing participants to talk from their own perspective.

In order to explore different perceptions of impact associated with the CBSI, and to identify any linkages and interactions between stakeholders, the project team in coordination with the CBSI staff identified suitable interviewees from three major stakeholder groups: (i) CBSI staff; (ii) beneficiaries of the programme; (iii) wider stakeholders from policy, academia and civil society. In each country a total of 12–15 interviews were conducted between July and November 2017. The interviews were performed in the main local language. In those cases where the research team did not have appropriate skills in the local language, a professional translator was used and transcripts were translated into English for the analysis.

Prior to the interviews, written consent was sought from all participants and they were each asked to sign an informed consent form. Interviews were conducted face-to-face in each country. The interviews typically lasted between 30 and 60 minutes and were semi-structured in style, to enable participants to raise concerns that may not have been anticipated by the research team or were specific to the practice; this provided a flexible approach which allowed respondents to offer their own perspective and raise issues most salient to them, while covering the same topic areas in each interview.

The interview data was then analysed and coded by the project team, and then grouped into the categories and sub-categories outlined in the logic model. In analysing the categories, the team also identified emerging themes.

All ten case studies are presented in Appendix C of this report.

2.2. Work Package 3: Expert consultation

The WHO-WKC convened a two-day workshop in Kobe, Japan in October 2017. Participants included WHO technical officers with specific expertise on ageing and health systems, three members of an independent international expert advisory group and representatives (local researchers and CBSI stakeholders) of nine of the ten case studies involved. The systematic review draft typology and preliminary findings from the case studies were presented and discussed through a series of interactive sessions, and feedback sought.

2.3. Work Package 4: Typology development

Cutting across each of these three work packages was a fourth work package which aimed to develop a typology of CBSIs. Results from the systematic review formed the basis for the first phase of the typology development, identifying the characteristics of CBSIs identified in the published literature. Drawing on qualitative thematic analysis (Miles and Huberman 1994), the identifying of the characteristics of CBSIs involved two stages. Firstly, a long-list of potential categories and sub-categories was identified on the basis of the emerging findings from the systematic review and discussions with WHO experts. These categories were tested by mapping studies against them and iteratively refined against all the studies included. This involved removing some categories that were not sufficiently populated or did not seem to work. In the second stage we developed a narrative around each of the categories and compared and contrasted against each to identify the emerging main categories that appeared to be most important in the conceptualisation of CBSIs.

The typology was further tested and refined through the ten case studies of CBSIs and the expert consultation (described above). Full

details on the methodological approach to the typology development can be found in Appendix B.

2.4. Work Package 5: Synthesis and reporting

Findings from the systematic review, case studies and expert consultation were triangulated, along with the refined typology. Data gathered was synthesised according to the potential impacts CBSIs can have on the health of older people and the factors affecting the sustainability and scale-up of CBSIs. Finally, reflections on the possible implications of the evidence gathered for policy, practice and research are summarised.

Results from the systematic review and the typology development are presented in two separate working papers (Appendix A and Appendix B). The results from all four work packages are synthesised in the present report.

2.5. Methodological limitations

In this section we present the limitations of the systematic review and the case studies, and the overall limitations of developing the typology.

To our knowledge this is the first systematic review or attempted typology of CBSIs for older people. The main strength of the review lies in its comprehensiveness. The search strategy has been designed to be inclusive rather than exclusive and as such incorporates a large number of studies from both academic and grey literature. There were a small number of studies (4), mainly dissertations that we were not able to access in full text, and it is not clear how these would have differed from the studies included. The term 'community-based social innovation' is rarely used in the literature. Instead we used key underpinning criteria to identify potentially eligible studies. However, an element of judgement was required in deciding whether programmes constituted CBSIs. In developing the typology, we considered all studies included in the review, including those of poor quality. As the purpose of the typology was to focus on types of CBSIs we do not believe this is problematic, but it would be useful to further test the typology. The poor reporting of CBSIs in papers may have limited our understanding and in turn the sophistication of our typology. A final limitation in developing our typology from the systematic review results was the diverse range of activities, structures, linkages and stakeholders involved in community-based approaches to social innovations for older people. As with any typology of this kind there is a tension between over-aggregating interventions into groups, which may fail to capture crucial differences, and being overly granular with groupings, thus limiting the ability to synthesise evidence (South et al. 2016). Our typology will require further testing around this balance.

There are a number of limitations to our case studies. Firstly, the studies were identified through an open call. Researchers took all possible measures to ensure wide dissemination of the call and produced the EOI documents in two languages (English and Spanish). WHO offices were also involved in disseminating the call information. However, despite these efforts, selection bias may have occurred due to the factors of language and computer literacy skills. While the methodological approach also included conducting observations, in most cases these were limited due to the amount of time that was available for data collection. We take confidence from the recurring nature of themes across the ten case studies that the research has provided valuable understanding of top level concepts relating to empowerment, various outcomes of interventions on older people, linkages with formal service delivery systems and the size, scope and scale of CBSIs. Future research, that includes more observations, could offer greater insights on how these concepts are operationalised within their context, covering low, middle and high income settings.

Another constraint arose from language barriers. While in some cases interviews were conducted

in the local language, in others the research team used a translator. The research team had anticipated this limitation. Prior to the interview, a briefing took place to explain to the translator the purpose of the research and the need to flag any cultural and contextual specificities arising during the interview, in order to facilitate the interviewer's understanding of what was being communicated. Throughout the interviews researchers asked clarifying questions of the translators to ensure a correct understanding. A constraint also arose from the fact that most CBSIs had limited monitoring and evaluation (M&E) data; therefore, while initially the research team relied on triangulating data from various sources, in effect the primary data collected informed most of the studies' findings. To mitigate this, the case studies were subjected to peer scrutiny to ensure credibility and reported where the evidence was stronger, weaker or non-existent. We also ensured member checks through the in-country partners. The last limitation relates to the project team's reliance on in-country partners to select interviewees, which required interviewees to agree to being interviewed and have availability to take part. This may have biased the sample of informants, for example selecting only participants that had good experiences with the CBSI. However, the research team tried to adopt various tactics to help ensure informants would talk openly, such as establishing rapport, ensuring confidentiality of discussion and right to withdraw, and iterative questioning. Finally, interpretation and analysis throughout the study may have been influenced by the personal views and biases of the researchers. Specific steps were followed to minimise this influence: the screening, data extraction and thematic analysis were undertaken by two researchers independently, and the interpretation and analysis of case studies were checked with in-country partners. The study also benefited from expert advisory group who provided peer review in addition to internal quality assurance review.

3. Results: Understanding CBSIs

In this chapter we present the findings from across the case studies, the systematic review and expert consultation.

Firstly, we give an overview of how the data collected from the systematic review were used by:

i. Providing a summary of key findings from the systematic review (full details of methods and analysis provided in Appendix A).

ii. Providing a more detailed description of the characteristics of CBSIs identified through the systematic review. These represent descriptive data that allowed a focus on key categories to compile the draft typology.

iii. Presenting the draft typology with an explanation of how it was developed.

Secondly, we provide details on how the data collected from the case studies was employed, giving further details on the selection of the case studies and how the knowledge gathered from this work package contributed to the typology refinement and the overall project. Full details on the case study methodology and findings are presented in Appendix B, which contains a working paper on the CBSI typology, and Appendix C, which presents all ten case study reports.

Thirdly, we present the revised typology, which was developed taking into account the data from the systematic review, case studies and expert consultation. The report from the expert consultation is available in Appendix D.

In the last two sections of the chapter we synthesise two of the main elements highlighted in the expert consultation and arising across all data collection streams: the impact of CBSIs on healthy ageing and the sustainability and scale-up of CBSIs.

3.1. Understanding the evidence base: Results from the systematic review

3.1.1. Summary of key findings from the systematic review

Searches yielded 23,036 titles and abstracts. After removing duplicates, 13,262 remained for screening, of which 13,005 were excluded based on the title and abstract. Full papers for 257 articles were assessed for inclusion, of which 44 papers met the inclusion criteria and were included in the qualitative synthesis. Of the 44 included studies, 31 reported quantitative results in some form and 13 reported qualitative results only. Of the 31 reporting quantitative results, 13 also reported qualitative results; therefore, 26 studies in total reported qualitative results.

The 31 quantitative studies report a very wide range of outcomes, including:

- **Clinical measurements such as BMI, biochemical and haematological measures** (such as in Coull et al, 2004; Safford et al, 2015; Sanchez-Rodriguez et al, 2009).
- **Psychological health** (Aday et al, 2006; Bøen et al, 2012; Butler 2006; Cohen-Mansfield et al, 2010; Crane-Okada et al, 2012; Droes et al, 2004; Even-Zohar, 2014; Phelan et al, 2002).
- **Quality of life** (Creech et al, 2013; Cordella et al, 2012; Hillman, 2002; Paul et al, 2016).
- **Well-being** (Cordella et al, 2012; Ruffing-Rahal and Wallace, 2000).

- **Performing certain type of activities such as walking, gardening, exercise** (Coull et al, 2004; Holland et al, 2008; Thomas et al, 2012).
- **Knowledge, for example in dietary management** (Bertera 2014; Coull et al, 2004).
- **Social support** (Bøen et al, 2012; Greaves and Farbus, 2005; Ho 2007) and social skills (Martina et al, 2012).
- **Autonomy and empowerment** (Creech et al, 2013; McWilliam et al, 2004) and fall incidence (Cohen et al, 2006; Wurzer et al, 2014).
- **Resource use, for example hospital bed days and costs** (Ciechanowski et al, 2004; Cohen et al, 2006; Coull et al, 2004; de Bruin et al, 2011).

Most of the studies (including all of the qualitative studies) report that the interventions had positive impacts on the participants, though the vast majority of studies were classified as being at medium (19 studies) or high (18 studies) risk of bias.

In terms of effectiveness, most of the studies report that the interventions had positive impacts on the participants. However, the quality of evidence supporting effectiveness varies, limiting the degree of establishing attribution between intervention and outcomes. It was possible to conduct some exploratory meta-analysis for two of the outcomes most reported in the included studies – depression and social support. Exploratory meta-analysis was conducted for the outcomes of social support and reduction in depression, which were the two most commonly reported, and showed no difference in social support but a small reduction in depression. However, the interventions and outcomes were too heterogeneous for the summary results to be generalisable and it is unclear whether the lack of difference in social support was due to too few studies reporting this outcome.

The qualitative analysis highlighted that from the perspective of older people themselves, CBSIs may have the potential to impact either on improved health (physical and mental) or through enhanced well-being, increased social interaction and greater empowerment. Thematic analysis of the included studies led to the emergence of four main analytical themes: 1) CBSIs give a sense of togetherness by fostering social interaction; 2) CBSIs are seen as contributors to improved health and sense of well-being; 3) CBSIs equip participants with new skills that enable independence and empowerment; and 4) CBSIs contribute to individual and community resilience. However, these themes are interlinked and it can be considered that some descriptive themes could contribute to different analytical themes to those shown below. Therefore, this analytic framework is fluid, with the identified themes complementing and interacting with each other. All themes indicate positive effects as a result of CBSI participation.

3.1.2. Characteristics of the CBSIs identified in the systematic review

A typology of interventions was thematically derived from examination of all 44 studies included in the review, regardless of their quality.

In reviewing the included studies and consulting wider literature on CBSIs we identified five categories by which it seemed possible to compare and describe different types of CBSIs:

- Location of the CBSI
- Role and function of older people
- Range and type of activities
- Organisational structure of the CBSI
- Links with social and health systems.

Below, we define and discuss each of these categories in turn, outlining the characteristics we identified underpinning each category before expanding on the findings from the CBSIs examined in the included studies. The inclusion and exclusion criteria used during the systematic

Table 2 Descriptive and analytical themes identified from studies that used qualitative research methods

Descriptive themes capturing CBSI contributions	Analytical themes
• Avoid social isolation and loneliness • Offer companionship and sense of belonging	CBSIs give a sense of togetherness by fostering social interaction
• Improved mental health • Increased physical activity • Cognitive awareness improvements • Reduced risk of falls • Better sleep • Better health behaviours (e.g. less heavy drinking, better diet, cooking healthier foods)	CBSIs contribute to improved health and a sense of well-being
• Increased undertaking of other activities outside the CBSI • Increased enjoyment of life • Learning new skills • Rewarding experience offering a sense of empowerment and achievement • Gaining independence	CBSIs equip participants with new skills that enable independence and empowerment
• Sense of financial improvement • Increased dignity and self-respect • Exceeding own expectations of CBSI experience • Increased optimism • Benefits for family carers (greater interaction at family level and gaining new skills) • Community benefits in the form of social support networks • Individual reliance, feeling strong, not giving up	CBSIs contribute to individual and community resilience

review are presented in Table 1 Summary of inclusion/exclusion criteria.

Location of the CBSI

In assessing the studies against the location in which the CBSI took place, we categorised studies based on three characteristics:

- **Country of the CBSI:** For each CBSI included we recorded the country in which it took place and the World Bank income group for that country (World Bank N.d.).
- **Geographical setting:** The geographical setting of a CBSI is an important consideration for both transferability and sustainability. We assessed whether the CBSI took place in a rural or urban setting.
- **Location of the CBSIs activities:** We assessed and grouped the settings in which the CBSI took place. These include beneficiaries' homes and community settings including seniors' centres.

The characteristics for each of the three criteria relating to the location of the CBSI are specified in Table 3 below.

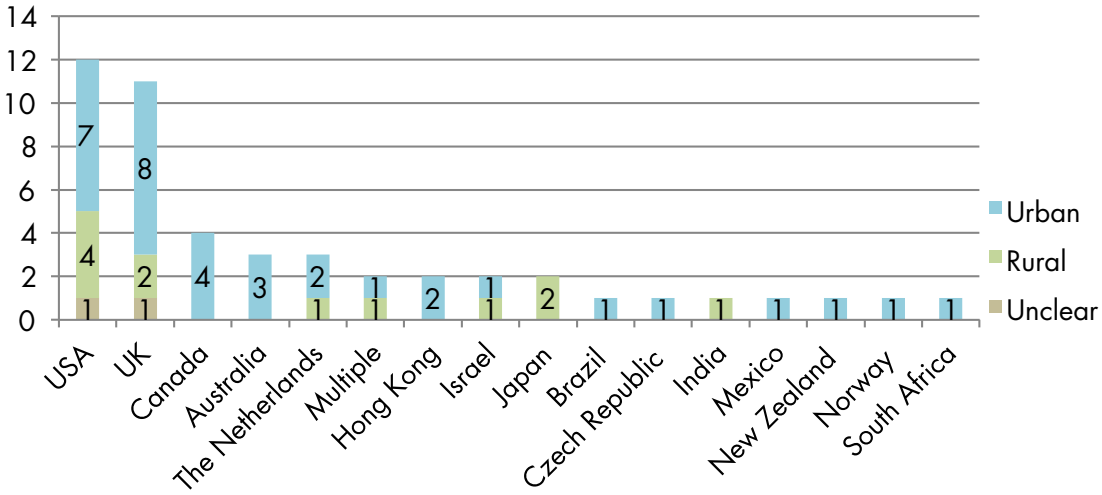
Just over half of the studies included (n=23) were focused on a CBSI in either the UK (n=11)[6] or the USA (n=12)[7]. Only four of the studies focused on interventions in middle-income countries (Brodrick and Mafuya, 2005; de Souza 2003; Paul et al, 2016; Sanchez-Rodriguez et al, 2009).

The Red Hat Society®, an international CBSI for women aged over 50 discussed in Son et al (2007, 2010) was the only example which took place in multiple countries. The locations of the CBSIs identified are summarised in Figure 4 below. In examining the geographical setting of the CBSIs, we also assessed the balance of urban and rural innovations in the studies included. The majority took place in urban settings (n=29), with only seven in rural settings and five

Table 3 Characteristics associated with the location of the CBSI

Criteria	Characteristics
Country of the CBSI	Name of Country/High-income Country/Middle-income Country
Geographical setting	Urban, Rural, Both, Unclear
Location of CBSI activities	Beneficiaries' homes, CBSI facility (a facility owned or created by the CBSI), Public spaces, Health and social care settings, Other, Combination, Unclear

Figure 4 Country and geographical setting of the CBSIs



6 Cant and Taket, 2005; Cattan et al, 2011; Coull et al, 2004; Creech et al, 2013; Greaves and Farbus, 2006; Hillman 2002; Holland et al, 2008; Milligan et al, 2015; Skingley, 2010; Son et al 2007; Son et al 2010.

7 Aday et al 2006; Bertera, 2014; Butler, 2006; Ciechanowski et al, 2004; Cohen et al, 2006; Cohen-Mansfield et al, 2010; Crane-Okada et al, 2012; Gammonley, 2006; Phelan et al, 2002; Ruffing-Rahal and Wallace, 2000; Safford et al, 2015; Son et al 2007; Son et al 2010.

8 In two of the studies (Aday et al, 2006; Creech et al, 2013), it was unclear whether the CBSI took place in an urban or rural setting.

in both urban and rural[8]. While these factors are not necessarily defining characteristics of the CBSIs, the fact that the majority are located in high-income, urban settings is likely to impact on the generalisability of the findings.

The setting in which CBSI activities took place also varied across the studies, with the majority of such activities taking place either through a dedicated CBSI facility (n=17), such as a community centre or senior association, or at beneficiaries' homes (n=10). Four of the studies (Dickson 2000; Greaves and Farbus, 2006; Holland et al, 2008; Son et al, 2010, 2007) examined CBSIs that took place in multiple settings, in part depending on the activities that were offered. Figure 5 below shows the locations CBSI activities were taking place across the included studies.[9]

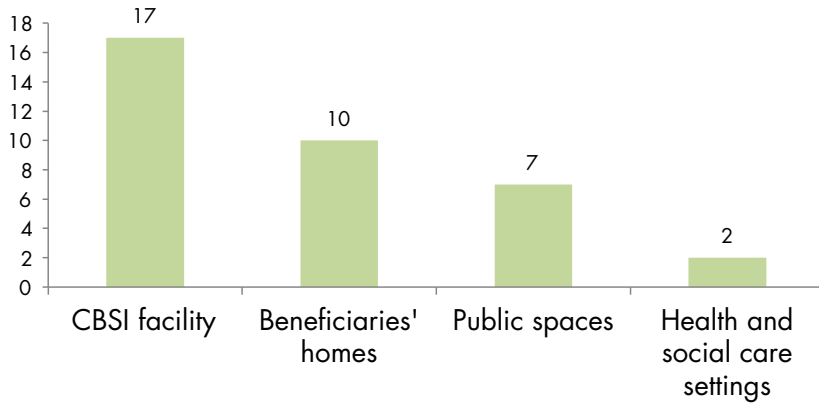
The role and function of older people

One of the most important aspects of these initiatives is the role and function of older people involved, as a resource both for themselves and others such as peers, family and the wider community. In particular, we were interested in understanding the beneficiaries of the CBSIs' 'agency' in the initiatives, in regard to both their empowerment and mobilisation. While the different levels are not necessarily mutually exclusive, Table 4 below highlights the different levels of beneficiaries' agency against which each of the initiatives was categorised.

Table 4 Differences in beneficiaries' agency in the CBSIs

Score	Differences in beneficiaries' agency in CBSIs
1	Beneficiaries have limited engagement in the programme
2	Beneficiaries are involved in peer support
3	Beneficiaries are involved in decision-making processes in the CBSI
4	Beneficiaries are active in the management and development of the CBSI
5	Beneficiaries are actively engaged in all aspects of the CBSI and are shaping policy

Figure 5 Location of the CBSI activities



9 In three of the studies (Bertera 2014; Kondo et al, 2007; Sanchez-Rodriguez et al, 2009) it was unclear where the CBSI activities took place.

The majority of CBSIs identified show limited engagement of older people (n=19). There were small number of CBSIs where older people are actively involved in the designing and running of the intervention. For example, the Maidment and MacFarlane (2009) report on craft groups for older women in Australia highlights the crucial role of older people in the informal leadership of two groups examined. An evaluation of the Upstream Healthy Living Centre in the UK also noted that older people were encouraged to support the CBSI through a range of activities, including 'help with finding venues, fundraising, setting up management committees, providing contacts for community transport schemes and for appropriate activity providers' (Greaves and Farbus, 2006, 136). Figure 6 shows the levels of beneficiaries' agency across the CBSIs.

The range and type of activities

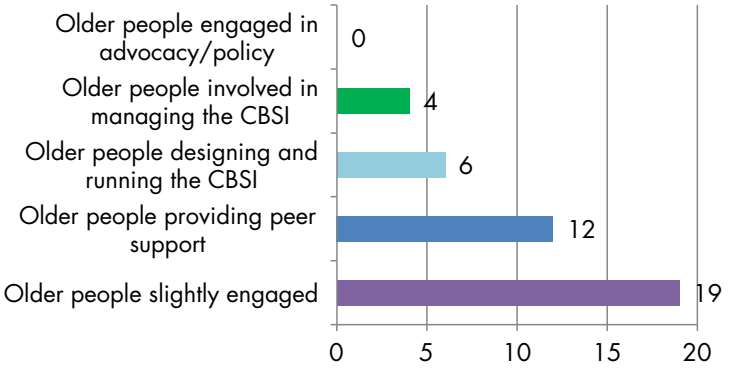
As noted in the first expert consultation in low-income countries, CBSIs could broadly be categorised into three main types in terms of services delivered: health promotion and prevention activities, healthcare services (delivered either by volunteers or older people), and social and livelihood services. Building on these findings, as well as the 2002 Active Ageing Framework developed by the WHO (WHO 2002), we developed the following categories for the type of activities undertaken by CBSIs:

- Healthcare services.
- Teaching and educational activities (including health promotion/prevention activities).
- Livelihood programmes (income-generating activities).
- Physical activities and nutrition.
- Cultural activities (arts and crafts, music, gardening, etc.).
- Social activities (talk-based interactions).

In addition to the categories outlined above, we also made a qualitative assessment of the eligibility criteria of the CBSI, where applicable. In particular, we were interested in whether certain populations of older people were being targeted by the CBSIs, based on gender, health condition, place of residence, socio-cultural group or economic status.

The CBSIs included in the review represent a broad range of activities, as shown in Figure 7 below. Main activities were either social activities (n=12), such as peer-counselling (e.g. Bøen et al, 2012; Cattan et al, 2011; Crane-Okada et al, 2012; Ho 2007), psychosocial support groups for other non-communicable diseases such as diabetes and cancer (e.g. Brodrick and Mafuya, 2005; Safford et al, 2015) or intergenerational social activities (e.g. de Souza 2003). Teaching and educational activities were also common among the CBSIs (n=10) and included both health promotion/prevention courses (e.g. Sanchez-Rodriguez et al, 2009; Wurzer et al, 2014) and more general educational courses (e.g. Keller et al, 2008; Narushima 2008). Many of the CBSIs – for example, Green Care Farms, which 'combine agricultural production with care services for people with care needs' (de Bruin

Figure 6 Differences in beneficiaries' agency in the CBSIs



et al, 2012) – combined multiple activities, both within and across the characteristics identified above.

Organisational structure of the CBSIs

This criterion refers to how the CBSIs are organised in regard to their governance, management and financing arrangements. There is significant variation in the role of public and private actors in the health and social care systems across high- and middle-income countries and this is reflected in the variety of stakeholders involved in CBSIs. The characteristics for each of the three criteria relating to the organisational structure of the CBSI are summarised in Table 5 below.

The majority of CBSIs identified were either run by local non-governmental organisations (NGOs) (n=17) or local government authorities (n=6). Figure 8 below presents the different stakeholder groups involved in running and financing the CBSIs.[10]

In addition to the stakeholders identified in the figure above, four of the studies were run by a combination of different stakeholders. This included collaborations either between local healthcare providers and local NGOs (Even-Zohar 2014; Holland et al, 2008) or between local educational authorities, researchers and NGOs (Cordella et al, 2012; Narushima 2008). Three studies reported a combination of funding sources, comprising either state funding and

Figure 7 Types of activities across the CBSIs

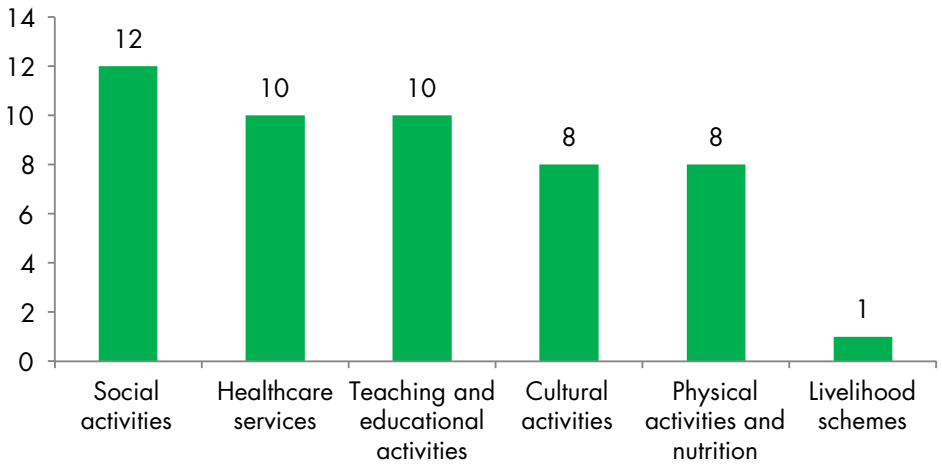
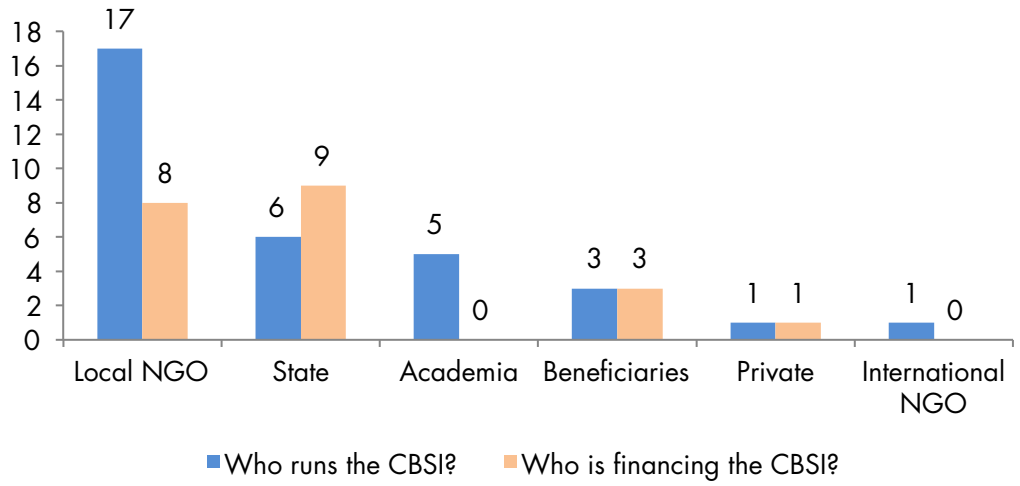


Table 5 Characteristics associated with the organisational structure of the CBSI

Criteria	Characteristics
Who runs the CBSI?	State, Local NGO, International NGO, Beneficiaries, Private, Other, Combination, None
Who is financing the CBSI?	State, Beneficiaries, Private, NGO, Other, Combination, None
CBSI's main personnel?	Paid staff, Volunteers, Paid beneficiaries, Unpaid beneficiaries, Multiple, Other

10 In six of the studies (Aday et al, 2006; Creech et al, 2013; de Bruin et al, 2012; McWilliam et al, 2004; Martina et al, 2012; Safford et al, 2015) it was unclear which stakeholder group ran the CBSI. In 15 of the studies the stakeholder group financing the CBSI was unclear.

Figure 8 Stakeholder groups involved in running and financing the CBSIs



membership fees (Cohen-Mansfield et al, 2010; Even-Zohar 2014) or a mix of public funding and charitable donations (Holland et al, 2008). Across the studies, there were two examples of CBSIs which were both financed and run by beneficiaries (Kondo et al, 2007; Maidment and MacFarlane, 2009). In the third study identified that was run by beneficiaries (Martin and McCann, 2005), it was unclear who financed the CBSI. That reported in Narushima (2008) was the only example of a CBSI that was financed but not run by beneficiaries.

Links with social and health systems

As highlighted in the first expert consultation on CBSIs in low-income countries, it is important for community-based approaches to have some level of local services with which to engage, otherwise they may not be effective in providing access to treatment and managing declining health and serious disabilities in older populations (Ong et al. 2016). Here we build on the categories introduced by Leutz (1999) to demonstrate the level of integration of each CBSI with the surrounding health and social care systems. We have divided the level of integration into three categories:

- Linkages with health and social care systems (referral mechanisms into health and social care systems).
- Coordination (formal contractual relationship with local services, referrals into the CBSI).
- Full integration (direct service provision as part of local services delivery system).

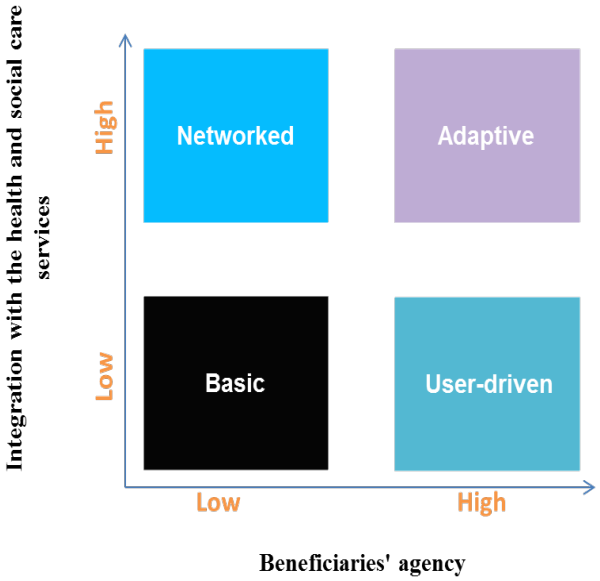
While the linkages to wider health and social care systems are a crucially important aspect of a CBSI, we found that for the majority of CBSIs included in the review these linkages were unclear or not apparent (n=26). Table 6 below highlights the different levels of linkages found across the remaining studies.

Table 6 Different levels of integration with health and social care systems

Criteria	No. studies
Linkages with health and social care systems	7 studies *Ciechanovski, 2004; Crane-Okada et al, 2012; de Bruin et al, 2012; Droes et al, 2004; Gammonley, 2006; Ho, 2007; Paul et al, 2016*
Coordination	5 studies *Cant and Taket, 2005; Coull et al, 2004; Milligan et al, 2015; Phelan et al, 2002; Safford et al, 2015;*
Full integration	3 studies *Bøen et al, 2012; Even-Zohar (2014); Nomura et al, 2009*

The majority of studies which demonstrated linkages involved CBSIs that had mechanisms of referral to state-provided health and social care services or that had informal relationships with local care providers. We also found evidence of more established integration. In the three studies where we found CBSIs with stronger integration, this tended to include multidisciplinary teams from across the care pathway being involved in providing direct services through the CBSI. For example, Nomura's et al (2009) participatory action research study into dementia care in Japan emphasised the multiplicity of stakeholders involved in providing dementia care through the CBSI, including nurses, psychiatrists, occupational therapists, social workers and researchers.

Figure 9 Initial typology of CBSIs from the systematic review



3.1.3. Developing a typology of CBSIs

Overall the mapping showed that there is significant variation in the types of CBSIs in terms of activities, organisational structures, locations, linkages and levels of engagement of beneficiaries. Across the five categories, the research team noted that two key categories stood out in terms of conceptualising CBSIs. These were: (i) the role and function of older people, and (ii) links with social and health systems. In particular, these categories address both the intrinsic capacity of older people and the environmental factors.[11] Furthermore, the other categories identified contained too much variability or lacked enough information to assess and therefore would not be suited to constitute the main pillars of a typology. Another consideration in choosing these categories was their usefulness. The chosen categories were selected to describe CBSIs regardless of their activities and also to allow exploration of key concerns that come with running such organisations, including empowerment and resilience and further development.

We used the two categories to suggest an initial typology which proposes four models of CBSIs: 'basic', 'networked', 'user-driven' and 'adaptive'.

While challenges exist in terms of the extent to which sub-categories within the two chosen categories are mutually exclusive, our preliminary analysis has attempted to map CBSIs onto these four types (Figure 9). These typology types represent the first attempt at developing the typology, later transformed into a final form as presented in Section 3.3.

1. **Basic** – The engagement of older people is limited in these types of structures. While certain linkages may exist with the health and social care systems, these are limited. These initiatives have basic structural elements of CBSI. Some of the studies containing such initiatives are de Bruin et al, 2012; Cant and Taket, 2005; Crane-Okada et al, 2012; Droes et al, 2004; Gammonley, 2008; Ho, 2007; Paul et al, 2016.

11 The WHO World Report on Ageing and Health describes intrinsic capacity as the composite of all the physical and mental capacities of an individual, while environments comprise all the factors in the extrinsic world that form the context of an individual's life.

2. **Networked** – The engagement of older people is limited or comprises the provision of peer support. There is however a stronger coordination or integration with the health and social care systems and initiatives rely on these linkages between peers and services. Some of the studies containing such initiatives are Coull et al, 2004; Even-Zohar, 2014; Safford et al, 2015.

3. **User-driven** – The engagement of older people is strong, with beneficiaries designing or managing the CBSI or even engaging in advocacy or decision making and policy activities beyond the CBSI. These initiatives have a strong empowerment element and while certain linkages may exist with the health and social care systems, these are limited. Such an initiative is described in Milligan et al, 2015.

4. **Adaptive** – Both the engagement of older people and the linkages with the health and social care systems are strong. These initiatives are adaptive in the sense that they mould to the context they operate in by bridging with existing environmental factors, and turn the beneficiaries into resources for themselves and their peers. Such an initiative is described in Bøen, 2012.

A mapping of the studies against these types shows that most studies show either limited engagement of older people or older people providing peer support within programmes that involve linkages or some level of coordination services but not more developed integration.

3.2. CBSIs in practice: Results from ten case studies in middle-income countries

3.2.1. Case studies selected

We received 36 submissions, which were reviewed against the selection criteria (see Section 2.2.1). CBSIs were selected from ten countries, as highlighted in Figure 10 below. Table 7 provides a brief description of each CBSI.

Figure 10 Ten case study countries

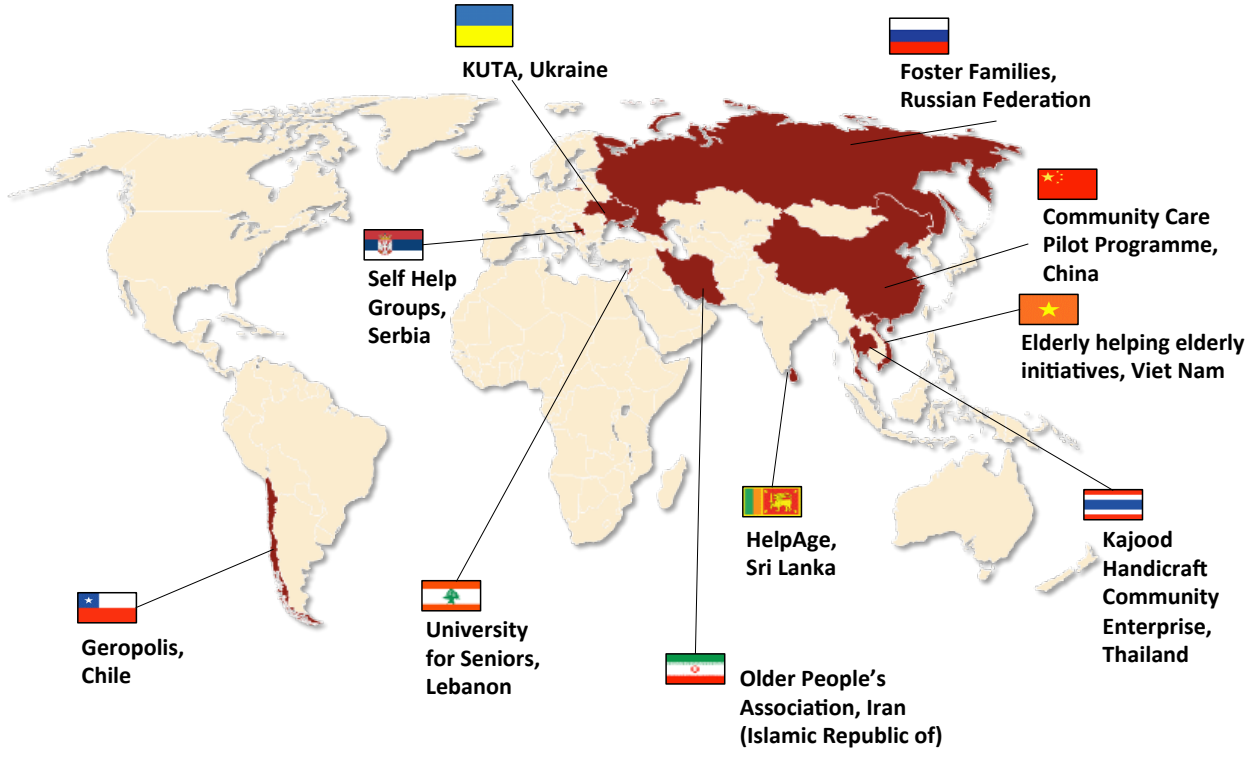


Table 7 Description of the ten CBSIs included in the case studies

Name of the CBSI	Location	Description	Year of establishment
Geropolis	Chile (Urban)	Geropolis is an institution improvement programme created by the University of Valparaíso which aims to develop an integral and replicable model of education, health activities and urban planning that can improve the quality of life for older people.	2015
Community Care Pilot Programme	China (Rural)	The Community Care Pilot Programme is a CBSI started by the Ageing China Development Centre (ACDC), which aims to develop a care model that will address the growing needs of disabled and semi-disabled older people in rural areas.	2016
Foster Families for Older People	Russian Federation (Rural)	The Foster Families programme is a community intervention established across several regions, which pairs older people with adoptive foster families who are responsible for providing care to these older citizens. The programme aims to provide older people with a better quality of life by offering social services in a home environment as opposed to residential facilities (e.g. nursing homes).	2011
Kolping University of the Third Age (KUTA)	Ukraine (Urban)	KUTA was set up across six Ukrainian cities as a reaction to the demographic changes occurring in Ukraine. The overall goal of the KUTA programme is to support older people in adapting to modern social life, through providing educational and voluntary activities to help their physical and mental health.	2011
HelpAge Sri Lanka (HASL)	Sri Lanka (Urban/ Rural)	HASL is a not-for-profit, charitable NGO working for and on behalf of disadvantaged senior citizens in Sri Lanka to improve their quality of life. HASL's mission is: 'by working together, we ensure that people in Sri Lanka understand how much older people contribute to society and that they must enjoy their right to healthcare, social service and economic and physical security'.	1986
Older People's Association	Iran (Islamic Republic of) (Urban)	The Tehran Municipality established the Older People's Association programme as a network of clubs aimed to promote the health status and social participation of older people in Tehran and to increase voluntary participation in community-based activities.	2006
Elderly helping elderly initiatives	Viet Nam (Urban)	Elderly Home Care Volunteers (EHCVs) form part of Intergenerational Self-Help Clubs (ISHCs), which are self-managed, multifunctional organisations involving different generations within communities that aim to improve equitable and inclusive development. EHCVs provide home care help and assist with daily living for older people, typically those living alone in the community.	2009
Kajood handicraft community enterprise (HCE)	Thailand (Rural)	The Kajood handicraft community enterprise is a community-based organisation producing handicrafts made from Kajood, a plant material which grows in swamps in southern Thailand. It was established to promote the production of Kajood-based products in the local community, and aims to contribute to older people's active ageing in the region through addressing the three core components of health, social participation and economic security.	2006
University for Seniors (UfS)	Lebanon (Urban)	The UfS programme is a lifelong learning initiative run through the American University of Beirut (AUB). It aims to provide a lifelong learning experience for older people and over time it has become increasingly framed as a public health intervention.	2010
Self-help Groups	Serbia (Rural)	Self-help Groups (SHGs) for older people were initially established in Serbia under the Dialog of Civil Society Organizations in Western Balkans. The project aims to provide participants with a space to discuss issues of concern for their well-being and together to try to come up with solutions, whether on their own (as a peer community) or through initiatives advocating for and mobilising action by other local or national stakeholders.	2010

3.2.2. Key characteristics of the ten CBSIs included in the case studies

Data gathered through the case studies was mapped against the features of the draft typology. The ten CBSIs provided a higher degree of granularity that allowed exploration of the two main axes of the typology. This meant that through the case studies it was possible to test whether the level of empowerment of beneficiaries and the links to health and care services could indeed be used as axes to describe CBSIs. This was confirmed, allowing characterisation of CBSIs at various stages of the logic model. This meant, for example, that the empowerment of beneficiaries could be seen as an input, because beneficiaries were those running the CBSI (thus showing a high degree of empowerment and constituting resources for the initiative). Empowerment can also be seen as a process – in the sense of entailing activities aimed at empowering beneficiaries – or as an outcome, with participation in the CBSI leading to empowered individuals. Similarly, linkages to health and social care services were seen as an important feature, as these were domains of interest to beneficiaries: while in some few cases the CBSIs did not engage in any linkages, they were presented as areas of consideration.

However, judging from the rich data that was gathered, the research team considered that further refinement could exploit the full potential of a typology. The following elements were identified as relevant to further enrich the typology: CBSIs' potential to contribute to equity in accessing various services; increase social capital or make use of existing networks; integration and linkages with other sectors outside health and social care; monitoring and evaluation (M&E) and governance arrangements, scaling up and sustainability, and impacts on health. As typologies need to involve a limited number of categories to be operational, a decision needed to be made regarding which features could add most value in the form of an additional layer of the typology. This was furthered discussed during the expert consultation. The main characteristic which became apparent in the analysis of the ten case studies and from the expert consultation was the importance of scope, scale and complexity. The characteristics relating to 'scope, scale and complexity' for which we had data for from the case studies are shown in Table 8. How the ten case studies compared in relation to scope, scale and complexity and the other two dimensions – level of beneficiary agency and linkages to health and social care systems – is given further consideration below.

3.2.3. Defining features of CBSIs

In this section we present the three defining features of the typology, drawing on the examination of the ten case studies and feedback from the expert consultation.

Level of beneficiaries' agency

The CBSI definition entails a certain level of empowerment for older persons; therefore, as expected, there were no CBSIs that did not facilitate this to a certain degree.

This being said, there was variation in the level of empowerment. Two CBSIs (China, Russian Federation) involve frailer populations, which can realistically achieve only a limited degree of empowerment due to the physical limitations of the older persons. These CBSIs focus on keeping older persons in their own homes or in a family environment and help them continue familiar activities and routines (to the extent these are physically possible). This may represents an element of empowerment that would not be achieved in an institutionalised environment or it might represent making the best of the situation given few available alternatives. However, CBSIs may benefit the older persons, who provide the support to the primary beneficiaries. The majority of the CBSIs in the case studies entail beneficiaries providing peer support or being involved in decision-making processes in the CBSI. This implies being involved in the governance bodies of the CBSIs in an advisory capacity. Two CBSIs (Iran

Table 8 Scope, scale and complexity: key characteristics of the ten CBSIs included in the case studies

Name of the CBSI	Range/type of activities	Level of funding	Source of funding	Approx. number of beneficiaries
Geropolis	Multiple	High	Government	~2,000
Community Care Pilot Programme	Peer support	Low	International	280
Foster families for older people	Peer support	Medium	Government	148
Kolping University of the Third Age (KUTA)	Teaching and educational activities	Low	Local NGO	350
HelpAge Sri Lanka (HASL)	Multiple	High	Local NGO, Government, International	~600,000
Older People's Association	Multiple	Medium	Government	61,548
Elderly helping elderly initiatives	Peer support and training	Medium	Government	~ 3,240 EHCVs in 1,296 ISHCs*
Kajood handicraft community enterprise (HCE)	Livelihood programme	Low	Government, Members, Products	60
University for Seniors (UfS)	Teaching and educational activities	Low	Members	300
Self-help Groups	Peer support	Low	Local NGO, international	572

* HelpAge supplied data estimated that ISHC direct beneficiaries would amount to 221,000 people living in the 1,300 communities

(Islamic Republic of) and Thailand) provide examples of beneficiaries being active in the management and development of the CBSI. The Sri Lankan CBSI managed to actively engage beneficiaries in all aspects of the CBSI, including in shaping policy on ageing at national level.

Linkages to health and social care systems

The ten CBSIs have various degrees of linkages with the health and social care services in their respective countries, with the majority being at the lower end of the linkages scale. However, three CBSIs (Chile, Iran (Islamic Republic of) and Sri Lanka) provide examples of greater connectivity with health and social care services. In these three cases these linkages have developed as the CBSIs have evolved, and were not a core focus of the initial projects. It is to be noted that we were guided in choosing this category of linkages by the results of the first WHO consultation on CBSIs (Ong et al. 2016). While the CBSIs included in the study also showed examples of linking to other sectors, in particular education, the focus of our typology was on health-related CBSIs for ageing. Therefore, linkages to sectors other than health and social care are not included as a criterion within the typology developed.

Scope, scale and complexity of the CBSI

The third dimension of the typology is represented by the scope, scale and complexity of the CBSIs. As indicated above, this is a composite variable that tries to capture the funding that is available for the CBSI, the years it has been active, the variety of activities it

runs, the number of beneficiaries, and whether it is operating in a single location or spread out geographically. As described in Table 6, only one CBSI (Sri Lanka) operates in both urban and rural settings, with an almost equal distribution between the rest (four rural and five urban). The Sri Lanka CBSI is also the oldest operating CBSI, being active since 1986. In contrast, the other nine CBSIs were established after 2006. In summary, one has been active for 31 years, one for 11 years, five between six and eight years and two for one to two years. The activities run by CBSIs vary, often increasing for CBSIs that have more funding available. The highest funding was registered for the CBSIs in Chile and Sri Lanka. Three others were classified as medium (Russian Federation, Iran (Islamic Republic of) and Viet Nam) and the remaining five CBSIs were assessed as having a low level of funding. There is great variation in the numbers of beneficiaries; for example, the CBSI in Thailand reported 60 beneficiaries whereas a long-standing CBSI such as Sri Lanka managed to benefit approximately 600,000 older persons. Half of the CBSIs – five – had between 100 and 600 beneficiaries. While in many cases the activities were spread over various places throughout the same city or geographical region, in the majority of CBSIs they were still connected through their governance mechanism.

3.3. A revised typology of CBSIs

In order to compare and contrast these main characteristics of the CBSIs examined in the case studies, we developed scoring criteria to describe the diversity of CBSI approaches and experiences. Table 9 below presents the scoring criteria for each of the five levels for all three characteristics.

Two project team members independently scored each of the ten case studies on a scale of one to five, in accordance with the criteria outlined above.

Table 9 Scoring criteria for three defining characteristics of CBSIs

Score	Linkages to health and social care system	Level of beneficiaries' agency	Scope, scale and complexity of the CBSI
1	The CBSI operates without coordination with the health and social care system	Beneficiaries have limited engagement in the programme	The CBSI operates on a small scale in terms both of the geographical region and the number of activities. The CBSI is focused on a small number of beneficiaries and receives relatively small amounts of funding
2	The CBSI has informal linkages with the health and social care system through training and education programmes	Beneficiaries are involved in peer support	The CBSI operates several different activities on a small scale geographically or operates a small number of activities on a medium scale geographically
3	The CBSI coordinates with the health and social care system through formal contractual relationships with local services	Beneficiaries are involved in decision-making processes in the CBSI	The CBSI operates on a medium scale in terms both of the number of activities and the geographical reach of the programme
4	The CBSI coordinates with the health and social care system through referral systems	Beneficiaries are active in the management and development of the CBSI	The CBSI is operating a large number of different activities, has a large number of beneficiaries; and small/medium scale geographically
5	The CBSI is fully integrated into the health and social care system	Beneficiaries are actively engaged in all aspects of the CBSI and are shaping policy	The CBSI is operating at a national level, with a large range of activities and high levels of funding from a variety of sources

For instances where the score differed between each researcher, discrepancies were resolved in discussion with the wider project team or through taking an average of both scores. Table 10 below presents the results from this scoring exercise for each case-study CBSI. We then compare the relationships between each of the three characteristics in Figure 11.

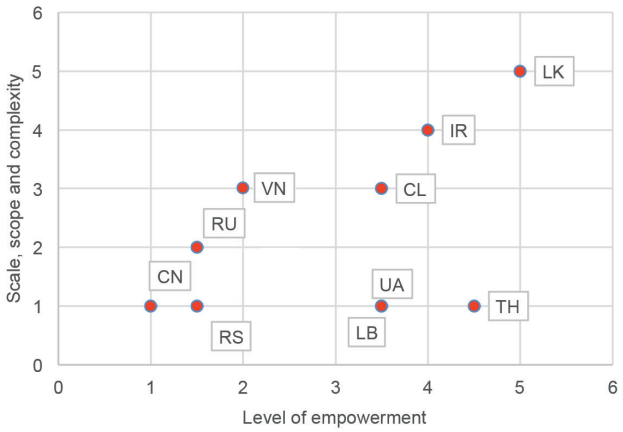
As highlighted in the figure above, we found that there was a lack of a relationship between the level of empowerment experienced in a CBSI and the scale, scope and complexity (as demonstrated by the scattered nature of the plots in Figure 11a). From the data gathered in the case studies, it was apparent that both smaller CBSIs with a relatively limited range of activities (such as the educational programmes in Ukraine and Lebanon or the Kajood HCE in Thailand) and larger, more complex CBSIs (such as HelpAge Sri Lanka) were able to facilitate a high level of empowerment. In addition, the level of empowerment in a CBSI did not seem to relate to its linkages with health and social care services.

While the scope, scale and complexity of the CBSI did not seem to have an influence on the level of empowerment of beneficiaries enrolled in the programme (Figure 11b), CBSIs which operated on a smaller scale tended to be less integrated into the wider health and social care system, whereas CBSIs which operated at a larger scale tended to be more integrated (Figure 11c). However, the causal relationship between the two characteristics remains inconclusive.

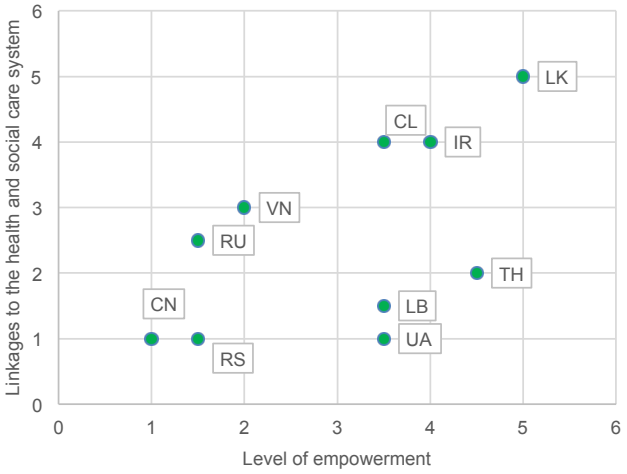
Figure 12 below presents all three characteristics together in a bubble graph, which allows us to identify four clusters of CBSIs with relatively similar characteristics. The position of the bubbles is dependent on the CBSIs' scores for linkages and empowerment, and the size of the bubbles represents the scale, scope and complexity of the CBSIs. Each of these clusters corresponds to a category of CBSI, represented with different colours. In particular we identify four main categories: (i) user-driven, (ii) foundational, (iii) state-supported, networked, and (iv) adaptive. We elaborate on the features of each category in the section below.

Figure 11 Relationships between the three main characteristics of the CBSI

a) Level of empowerment by scale



b) Level of empowerment by linkages to health and social care system



c) Scale by linkages to health and social care system

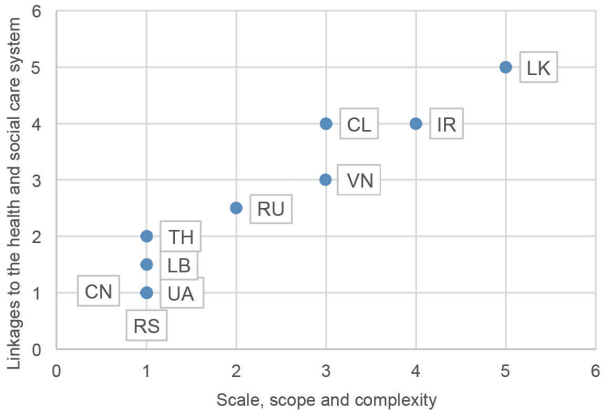
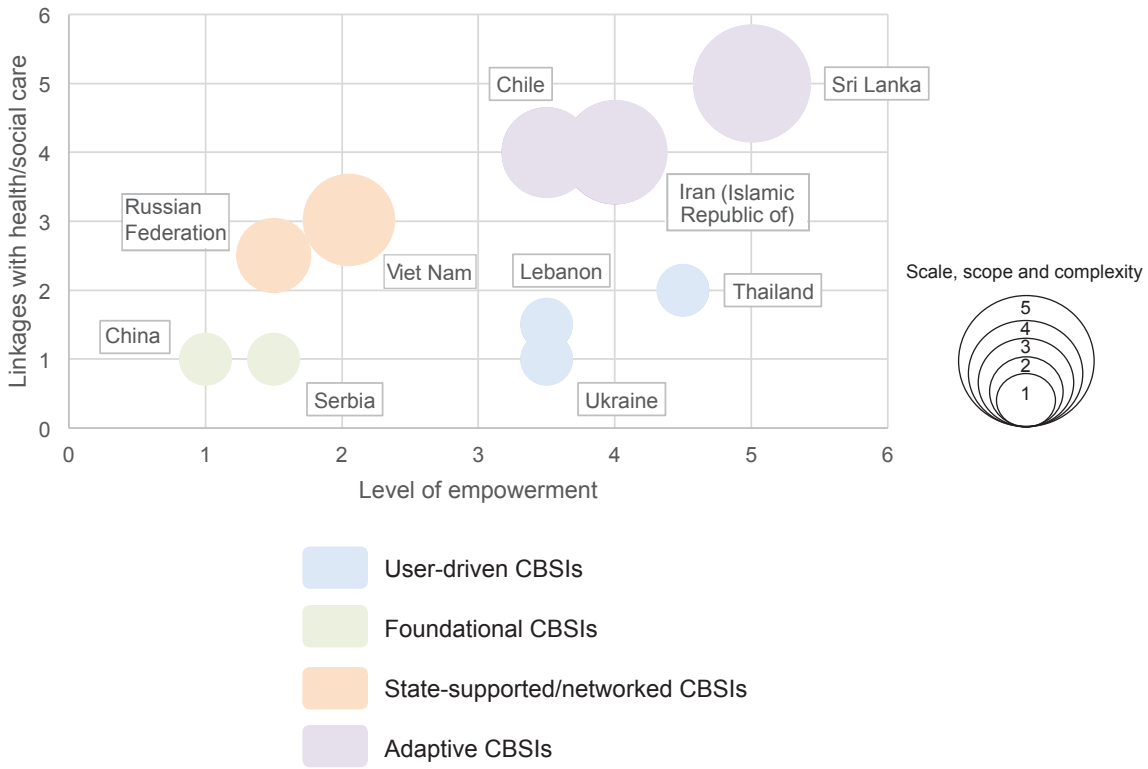


Table 10 Results of scoring CBSIs

Name of the CBSI	Location	Level of empowerment	Linkages to health/social care system	Scale, scope and complexity
Geropolis	Chile (CL)	3.5	4	3
Community Care Pilot Programme	China (CN)	1	1	1
Foster Families for Older People	Russian Federation (RU)	1.5	2.5	2
Kolping University of the Third Age (KUTA)	Ukraine (UA)	3.5	1	1
HelpAge Sri Lanka (HASL)	Sri Lanka (LK)	5	5	5
Older People's Association	Iran (Islamic Republic of) (IR)	4	4	4
Elderly helping elderly initiatives	Viet Nam (VN)	2	3	3
Kajood handicraft community enterprise (HCE)	Thailand (TH)	4.5	2	1
University for Seniors (UfS)	Lebanon (LB)	3.5	1.5	1
Self-help Groups	Serbia (RS)	1.5	1	1

Figure 12 Ten case study CBSIs, scored by empowerment, linkages and scale, scope and complexity



User-driven CBSIs

Examples: Ukraine, Thailand and Lebanon

Characteristics of User-driven, educational CBSIs

- Scale, scope and complexity – this category of CBSIs tend to be small in scale in terms of the geographical area in which they operate, and are often linked to a particular university. The CBSIs primarily offer training and educational activities, including cultural and recreational activities, and rely on shared resources and membership fees to fund their activities.
- Empowerment – this category of CBSIs tend to have a medium level of empowerment, with beneficiaries actively engaged in committees and meetings to help shape activities and courses offered.
- Linkages – this category of CBSIs tend to have a low level of linkage and coordination with local health and social care systems, beyond involvement in training courses, as they are often not explicitly designed as health interventions.

Strengths of User-driven CBSIs

The experience of the programmes in Ukraine, Thailand and Lebanon shows that these types of CBSIs can have positive impacts on older people's health, without having health as a primary objective. In this respect, well-being, social and psychological health appear to be the primary outcomes of the intervention, as well as increases in the health literacy or financial security of participants. Depending on the pre-existing relationship with universities or local educational authorities, these CBSIs can also be relatively low-cost or even income-generating, as is the case with the Thailand CBSI. In Ukraine and Lebanon, the CBSIs have made use of resources, meeting space and expertise from local universities/educational authorities, and in Thailand the CBSI has used an existing natural resource – the Kajood material. As a result, these types of CBSIs are able to sustain activities with relatively little funding and generate funds through membership fees.

Potential challenges of User-driven, educational CBSIs

One of the main challenges with this category of CBSI is connected to the target populations of interventions. We found that in the cases of Ukraine and Lebanon, the CBSI beneficiaries were predominantly older women from relatively affluent socio-economic backgrounds. In the case of Thailand, the beneficiaries need to be able to engage in income-generating activities, which requires a certain degree of physical fitness. In this respect, this type of CBSI may not be the most inclusive. An additional challenge faced by these CBSIs is that they may not be the right mechanism to target older people with particularly serious limitations (e.g. bed-ridden or severely disabled). They are difficult to link to health and social care systems, as they are not primarily focused on health. Nevertheless, they hold potential in terms of health promotion and covering health topics within curricula, and greater linkages could be possible in contexts where social prescribing is a feature of health services.

Foundational CBSIs/Pilot Projects

Examples: China and Serbia

Characteristics of Foundational CBSIs

- Scale, scope and complexity – this category of CBSIs tend to be small in scale, both in terms of the number of activities they are engaged in and the geographical area in which they operate.
- Empowerment – this category of CBSIs tend to have a low level of empowerment, with activities primarily focused on peer support.
- Linkages – this category of CBSIs tend to have a low level of linkage and coordination with local health and social care systems.

Strengths of Foundational CBSIs

The small-scale nature of this category of CBSIs means that they may provide a good opportunity to test or pilot a new intervention within a particular context. These CBSIs also require a relatively low level of funding, resources and skills.

Potential challenges of Foundational CBSIs

One of the main challenges with this category of CBSI is the scaling up of interventions; which is often reliant on pre-existing networks or infrastructures (for example the Older People's Associations in the Chinese Community Care Pilot Programme). Given the small-scale nature of these CBSIs, there is also a challenge in reaching a larger proportion of the older population in a region. In addition, outcomes associated with these CBSIs are primarily related to reductions in social isolation and loneliness, with foundational CBSIs having limited ability to affect long-term health in older populations or change ageing-related policies at a national level. While the level of funding is low, it may nevertheless be hard to attract, particularly when there is limited capacity among CBSI staff.

Adaptive CBSIs

Examples: Chile, Sri Lanka, Iran (Islamic Republic of)

Characteristics of Adaptive CBSIs

- Scale, scope and complexity – this category of CBSIs tend to be large, complex interventions often spanning a large geographical region or operating at a national level. These interventions tend to require high levels of funding and are able to reach a large proportion of the older population in a given region/country.
- Empowerment – this category of CBSIs tend to have a medium to high level of empowerment, with beneficiaries actively engaged in all aspects, including designing and managing the CBSI activities and policy/advocacy activities.
- Linkages – this category of CBSIs tend to have a high level of linkage and coordination with local health and social care systems, through referral systems and coordination on direct service provision and representation in national-level policymaking.

Strengths of Adaptive CBSIs

These CBSIs are able to establish good linkages with key stakeholders in the health and social care system and other actors in the wider ecosystem.

Whether enabled by a more consistent amount of funding or very good networks that make diverse resources available, the adaptive CBSIs manage to reach a large number of beneficiaries. They also have a more diversified range of activities, which results in a more holistic approach to ageing and the possible impacts of the CBSI. The connectivity with other sectors, their large population base and their scale also bring about the potential to attain health outcomes beyond the social benefits. These types of outcomes can be direct health benefits but also systemic transformations, as for example in Chile, where the CBSI is helping the local clinic to attain its public health goals (e.g. number of vaccinations given).

Potential challenges of Adaptive CBSIs

One of the main challenges with this category of CBSIs is that they require a large amount of funding and a long-term approach. In addition to the inputs required, a policy context conducive to healthy ageing also appears to be an important requirement. Furthermore, all CBSIs that were placed in this category required a broad range of dedicated staff – whether beneficiaries or staff hired for the project – with a diverse set of skills to facilitate the undertaking of a wider range of activities. For small CBSIs in this category, it could be challenging to ensure availability of dedicated and skilled staff.

State-supported, networked CBSIs

Examples: Russian Federation and Viet Nam

Characteristics of State-supported, networked CBSIs

- Scale, scope and complexity – this category of CBSIs also tend to operate several different activities on a small scale geographically or operate a small or medium number of activities on a medium scale geographically.
- Empowerment – this category of CBSIs tend to have a low level of empowerment as interventions tend to be more top-down and aimed at beneficiaries with limited agency.
- Linkages – this category of CBSIs tend to have a medium level of linkage and coordination with local health and social care systems, beyond involvement in training courses, as they are often not explicitly designed as health interventions.

Strengths of State-supported, networked CBSIs

As exemplified by the Russian Federation case study, a state-run/networked CBSI has the potential to reach the most vulnerable older people, who have difficulties in accessing services because of physical or geographical limitations. With an element of state support, linkages with the health and social care services can be further coordinated and developed. The CBSIs usually operate across a medium to large geographical area and can be further scaled up as they mostly rely on dependable (if small amounts of) funding. These CBSIs are more likely to gain attention from other actors in the in-country ecosystem, such as universities, due to their increased visibility through state support. Furthermore as demonstrated in Viet Nam they can become interlinked with NGO efforts while still being state supported paving the way for a state- community partnership model.

Potential challenges of State-supported, networked CBSIs

One of the main challenges with this category of CBSI is in finding additional sources of funding. The particular profile of beneficiaries also makes them less likely to contribute to a higher level of empowerment.

A further challenge may be experienced in attempting to evolve state-supported models of CBSIs. Within highly centralised systems such as Viet Nam, linkages with the health system can be mandated relatively effectively, but the same features of the system mean that, although older people may be actively involved, for example, through volunteering, they are afforded little agency in the process.

3.4. CBSIs' impact on healthy ageing

Section 4.1 offers reflections on the value of our proposed typology. In the following two sub-sections we focus on CBSIs' impact on healthy ageing and sustainability, and on the scale-up of CBSIs. These were two areas highlighted for focus through the consultation and where evidence could be drawn across the different study elements to address.

The 2015 WHO World Report on Ageing and Health sets out a framework for action to promote healthy ageing. The report formulates healthy ageing as 'the process of developing and maintaining the functional ability that enables well-being in older age' (WHO 2015, 28). Functional ability is viewed as a set of health-related features that support people in being able to engage in activities which they find valuable. It consists of the individual's intrinsic capacity, environmental characteristics and the interaction

between the individual and the environment (WHO 2015). Through the various streams of this research CBSIs have been shown to make contributions to aspects of healthy ageing, regardless of the setting. We highlight the main learning from this below.

By positioning healthy ageing as a process, the question of well-being as an outcome becomes central.

Evidence from all the case studies showed that CBSIs have an impact on the well-being of older persons. As described in the WHO World Report on Ageing and Health, well-being is a wide concept that includes happiness, satisfaction and fulfilment. The theme of older people feeling that they are still important members of the society came through in all case studies, with older persons finding in the CBSI's activities a medium for them to interact with peers, be of help and live an active lifestyle. As expected, those CBSIs that had an intergenerational dimension contributed to a greater perception of societal inclusion for older persons.

CBSIs can also help address several environmental factors. Initiatives can contribute to creating receptive environments that ensure an 'ageing in place' process (such as in Russian Federation) or can help address the physical (geographical) challenges that older people can face, as shown by the activities run in Chile by Geropolis.

These CBSIs also contribute to ensuring the person–environment fit, which entails the dynamic and interactive relationship between older persons and their environments (WHO 2015). Involving older persons in managing or designing spaces brings an additional element of empowerment, which was highlighted as beneficial (e.g. involvement in the conceptual development of mural paintings in Chile).

Some CBSIs also have physical health impacts, although there are limitations on what can be assessed, given the relative lack of medium- to long-term M&E data.

As shown also by the results of the systematic review, currently the evidence for CBSIs leading to physical health impacts is limited and highly dependent on the particular CBSI activities. When these entail direct health service provisions it is more likely that health outcomes will be monitored and noticed (e.g. the case study from Sri Lanka). However, for many CBSIs, impacts on physical health are not the primary aim and therefore may not be expected; they are also then unlikely to be monitored. Furthermore, in some cases, CBSIs contribute to facilitating access to medical services; for example, in Chile, a health app reminds users of medical appointments. In this example, the programme used the numbers of people reached as an indicator. This type of indicator does not include the impact on these people's health and the value gained from their being able to attend medical consultations.

There is also a significant group of CBSIs that focus on education, training and income generation. It can be argued that increased levels of knowledge and health literacy could lead to direct health gains, in particular through managing lifestyle factors for chronic diseases such as diabetes and hypertension.

The primary health benefit is psychosocial (e.g. well-being, social and mental health benefits from participating in activities with peers) which has implications at both an individual and community level.

CBSIs have been shown to lead to improved perceived health status among older people, both self-reported and assessed. The evidence base for these impacts comes from the results from the systematic review – in particular the results from the thematic analysis of the qualitative studies – and the analysis of the data from the case studies. Involvement in CBSIs has often helped beneficiaries avoid social isolation and loneliness and offered them companionship and a sense of belonging, which in turn lead to mental health benefits.

Seen cumulatively these benefits can be considered at community level. It is expected that an improved mental health status of several members of a community can lead to greater

community resilience. Increased optimism and a more positive outlook on life in general, and forming a support network in which beneficiaries receive but also provide mental support, increase the capacities of communities to come together and increase social participation.

CBSIs can help contribute to people-centred services.

One of the strategic policy directions of the WHO's Framework on Integrated, People-Centred Services is empowering and engaging people and communities. Some of the CBSIs are demonstrating that they are empowering and engaging communities and helping build trust and social networks that can help support older persons. This can lead to empowering individuals to shape their environments, which contributes to the healthy ageing process as explained above. Such is the case with the CBSI in Serbia, where SHGs organised themselves to achieve small but meaningful changes (such as the provision of a bus shelter close to the hospital). Evidence from the systematic review also points to CBSIs' potential to equip older people with new skills, leading to greater independence and self-support.

Another way the CBSIs can contribute to the attainment of people-centred services is through engaging and empowering informal carers. The case studies from China, Viet Nam and Russian Federation show how peers of older persons can take on functions that could fall within the remit of social or healthcare professionals and fill gaps in the continuum of care that exist especially in rural areas. This also exemplifies the great potential of CBSIs to reach underserved and marginalised older populations such as persons that are bedridden or living in remote areas.

3.5. Sustainability and scale-up of CBSIs

In this section we consider factors affecting CBSI sustainability and the potential routes for scaling up, diffusing or expanding social innovations in order to reach more people.

Given that many of the CBSIs are relatively low-cost and rely on either volunteers or older people as agents of change, most models appear to be relatively sustainable.

Interviews across the ten case studies suggest that most CBSIs are able to continue in their current form and can therefore be seen as offering a sustainable approach to providing care for older people. However, interviewees also noted the challenges in regard to increased demand on services or factors affecting scale-up.

Reliance on volunteers was seen both as an advantage and a disadvantage to the sustainability of the programmes examined. For example, in Iran (Islamic Republic of) the bottom-up approach of relying on volunteers from the community was seen as a flexible, low-cost approach which ensured the CBSI remained relevant. However, in the case of the KUTA programme in Ukraine, dependence on volunteers to run training programmes was seen as a potential challenge for the future of the programme. What is apparent across all CBSIs is that it is important to consider the incentives for volunteers to get involved in activities, particularly, as in the case of Viet Nam, where volunteering programmes are being scaled up and relied on at a national level.

In order to scale up or expand activities, CBSIs may need to develop strategies for securing long-term funding.

While CBSIs may present a low-cost model for providing support to older people in middle- and high-income countries, many CBSIs face resource constraints in scaling up or expanding their services, as a result of either limited funding or increasing demand for services as a result of increases in ageing populations. Information gathered from our ten case studies suggests there is a need for CBSIs to develop strategies for long-term funding and/or fundraising activities.

Across the CBSIs identified in middle- and high-income countries, we observed great diversity in the funding sources and arrangements. Funding sources ranged from local government, NGOs,

international donors and charities to voluntary contributions from members, communities and the private sector. CBSIs tended to be primarily funded from one source, with only a few CBSIs (such as HelpAge Sri Lanka) managing to have leveraged funding from diverse sources. One model observed across some CBSIs (e.g. Ukraine and Thailand) assigned a central role to government or international donor seed funding in the initial development of the CBSI.

In regard to local fundraising, several of our case study examples have either adopted or are planning to introduce small membership fees for older people enrolled in the programmes, to cover basic costs such as refreshments, travel and events. While this may provide a sustainable strategy for funding some CBSIs, it will be important to ensure that membership fees do not pose a barrier to equitable access to the programmes. Fundraising was also achieved by some CBSIs through income-generating activities such as selling handicrafts (e.g. Thailand and Sri Lanka).

Diversification of funding and self-generated income were seen as important not only for the sustainability and scale-up of CBSIs, but also to help preserve their autonomy. As noted by one participant in our expert consultation, ‘a project fully managed by a community is difficult to imagine if the funds are provided by external public resources’.

Nevertheless, attracting and sustaining diverse sources of funding is not without its challenges. In order for CBSIs to be able to apply for and manage a wide range of funding options, they will require staff with the skills and capacities for financial management and reporting. An additional challenge for existing CBSIs, noted in the Serbian case study, is that of securing funding for continuing pre-existing programmes or approaches, with many funders preferring to fund new initiatives.

While the mix of people, skills and governance structures varied considerably across the CBSIs examined, the role of leadership and key individuals as ‘product champions’ appears to be a significant factor in the success of CBSIs.

CBSIs rely on the supply of a number of key skills, including those of volunteers, health practitioners, trainers, M&E experts and administrators. A common feature of all the CBSIs we examined in the case studies was the crucial role played by key individuals in managing, delivering and advocating the activities of the CBSI. For example, several of the interviewees noted that strong leadership was a key factor in their CBSI’s success, often citing the influence of particular individuals. The advantages of strong leadership ranged from helping to form linkages with other stakeholders and identifying opportunities for additional funding to ensuring that activities were meeting the needs of older people. The concept of effective, committed individuals, or ‘product champions’, who are essential to successful innovation, has also been built on within the academic literature in management studies (e.g. Rubenstein et al. 1976) and research policy (Wooding et al. 2013). While our case studies and the wider literature provide evidence that the role of committed individuals is a significant factor in the success of CBSIs, more research is needed to understand how CBSIs can build on these gains.

Evidence from both the systematic review and the case studies suggests a wide range of governance models, which reflects the variation in scale, magnitude and complexity of the CBSIs examined. Given the heterogeneity, it is difficult to assess clear pathways to scale-up, with only two case studies having scaled up their intervention over time. For example, it was noted in the CBSI in Viet Nam that sustainability and scalability were embedded from the beginning, by thinking through how the model would be replicated and scaled up. While the scope, scale and complexity of the CBSI did not seem to have

an influence on the level of empowerment of beneficiaries enrolled in the programme, CBSIs which operated on a smaller scale also tended to be less integrated into the wider health and social care system.

M&E processes were limited across CBSIs, although they were seen as crucial to learning and adapting, demonstrating success and potentially attracting the resources needed to scale up CBSIs.

While M&E was seen as a crucial component in learning in and adapting and scaling up CBSIs, the majority of cases identified, had limited to no M&E processes in place. Developing mechanisms for M&E may help CBSIs to demonstrate the health gains (by this we mean physical and mental health and broader well-being) as well as potential broader healthy ageing benefits (taking into consideration the environmental characteristics and the interaction between the individual and the environment) for beneficiaries from being involved in the programme. This in turn can be used to demonstrate success to policymakers and leverage funding from donors. Nevertheless, M&E processes require specific skills and resources, which are often lacking in small-scale interventions. As such, there is a need to develop low-cost, effective M&E processes which ensure that the activities are meeting the needs of older people and that evidence can be used to learn from, adapt and disseminate impacts.

One of the challenges in developing M&E systems is that CBSIs are dynamic models that need to be adaptive, as older people's needs change over time. As such, M&E processes will need to be suitable and sufficiently adaptable to reflect changes in these needs over time. The challenges associated with overly bureaucratic M&E processes were highlighted in Geropolis in Chile, where the programme's evolution had meant that M&E reporting requirements had become increasingly bureaucratic.

While linkages to the immediate health and social care system appeared to be limited across the CBSIs, many considered strategic partnerships with stakeholders in these systems as an important factor in a CBSI's sustainability.

As highlighted in the first expert consultation on CBSIs in low-income countries, it is important for community-based approaches to have some level of local services with which to engage, otherwise they may not be effective in providing access to treatment and managing declining health and serious disabilities in older populations (Ong et al. 2016). This feature of CBSIs was also considered as an important factor in their sustainability by interviewees. Nevertheless, in the majority of cases a higher level of integration with health and social care systems was aspirational, with most linkages comprising informal coordination over health training and education programmes.

Only three CBSIs (Chile, Iran (Islamic Republic of) and Sri Lanka) provide examples of greater connectivity with health and social care services, through referral systems and coordination on direct service provision as well as representation in national-level policymaking. In these three cases these linkages have developed as the CBSIs have evolved, and were not a core focus in the initial projects.

Despite the lack of linkages with health and social care actors, the CBSIs identified were establishing linkages with the wider ecosystem of actors involved in older people's day-to-day activities. From our case studies these include: education services and universities (e.g. Lebanon and Ukraine), urban planning and city planners involved in providing healthy environments (e.g. Iran (Islamic Republic of) and Chile), elderly associations (e.g. China and Sri Lanka) and other community-based groups and social innovations (e.g. youth clubs or faith-based organisations) able to share resources, expertise and space (e.g. Iran (Islamic Republic of)).

Factors identified by interviewees affecting linkages with health and social care systems appear to be rooted in informal networks and relationships, leadership and skills of CBSI staff and the reputation and longevity of the CBSI. However, more research is needed to fully explore these factors and how they vary according to context. In addition, given the informal nature of many linkages, determining the level of integration with health and social care systems is challenging.

The evidence gathered on CBSIs suggests that the external context in which a CBSI operates should be considered, especially with regard to the country or region's policy context regarding older people.

In addition to the internal factors highlighted above, both external contextual factors that influence health and social care systems and demographic and socioeconomic and political factors may help or hinder progress of CBSIs, as well as impacting on their sustainability and scale-up.

Policy contexts conducive to CBSIs, such as national-level legislation and policies for older people's rights, were seen as an enabling factor for some CBSIs. For example, interviewees in Chile noted that the Geropolis programme was able to align its objectives with the National Positive Ageing Policy, which in turn allowed the CBSI to engage with other local institutions working on ageing. In addition, CBSIs also have the potential to facilitate policy changes for older people, through advocacy and the promotion of rights. For example, interviewees felt that HelpAge Sri Lanka, through its 30 years of advocacy work, had helped to create a conducive policy environment for future work on older people's rights and well-being in Sri Lanka.

Demographic changes in middle-income countries were also cited as a crucial factor in the sustainability of CBSIs. For example, the rapid internal migration of younger people from rural to urban areas in middle-income countries was seen as both a catalyst to the establishment of some CBSIs (e.g. the Kajood HCE in Thailand) and a significant limiting factor in the future sustainability of others (e.g. Foster Families in Russian Federation).

A greater understanding of the contextual factors underpinning the CBSIs will help to inform reflections on their transferability and scalability by offering a richer understanding of the setting.

4. Discussion

Drawing on the evidence given in Chapter 3 above, in this chapter we discuss the implications of the research overall. Firstly, we present reflections on the typology developed and its utility, strengths and limitations. We then discuss the implications of our findings in three particular areas: the policy implications in middle-income countries, implications for the activities of current CBSIs and implications for future research on CBSIs for ageing. Finally, we reflect on the role of CBSIs within the wider context of UHC.

4.1. Reflections on the typology of CBSIs

We have developed a typology of CBSIs building on data gathered through a systematic review, a series of ten case studies and an expert consultation. The typology is organised around three main dimensions: empowerment of older persons, linkages with the health and social care services and scope, scale and complexity. The typology raises various reflections that span functionality, strengths and challenges that come with certain types of CBSIs, and policy recommendations and future areas of research.

The typology primarily offers a way to start to classify and better understand CBSIs. This implies an understanding of the elements that are intrinsic to them and the contextual elements that impact their design, as well as their operational features.

Both the systematic review and the case studies were framed around an existing broad understanding of what CBSIs are (as described in Ong [2016]). However, the research revealed a great variety of initiatives, which potentially makes it difficult for researchers and policymakers to comprehend CBSI functioning and needs, and to establish a conceptual framework that would allow these initiatives to be monitored and learned from. The community element of CBSIs can be viewed as an intrinsic feature of these innovations; however, it is important to understand what the notion of 'community-based' entails. Existing frameworks offer valuable starting points in delineating 'community-based' and 'community-level' interventions, which delineate interventions focused on achieving individual level changes (community based) or community-wide changes (community-level) (Draper et al. 2010). These considerations have implications for the M&E frameworks and outcomes of interest. While most of the interventions in the case studies brought about individual-level change, they also highlighted the dynamic and agile character of CBSIs and the potential to move along this continuum, sometimes maintaining elements of both dimensions. This continuum is mostly seen in the scale, scope and complexity axes of the typology, with CBSIs that manage to expand their remit and reach a larger number of beneficiaries being more likely to attain community-level outcomes.

This fluidity suggests the appropriateness of viewing CBSIs as complex interventions whose success is dependent on several contextual factors (Draper et al. 2010). The typology accounts for these contextual factors in several ways. Firstly, the aforementioned consultation around CBSIs in low-income countries (Ong et al. 2016) highlighted that CBSIs need some level of local service provision to engage with. From our review and typology, we see that even in high-income settings with more developed health systems, there are limited examples of integration between CBSIs and such systems.

In general, the studies represented in our typology tend to report CBSIs as somewhat isolated interventions. This may have important implications for empowerment too. Empowerment is important in relation to older people and health and well-being, because if an individual is empowered it can be argued that 'they possess the capacity to make effective choices; that is, to translate their choices into desired actions and outcomes' (Beals 2012). Existing models of empowerment show a range of facilitating and constraining factors in relation to empowerment and the range of actors and wider contextual factors that might be important (Beals 2012). It will be pertinent to consider these if models with greater empowerment for older people are to be achieved, which seems to be at the core of the ethos of CBSIs. On the whole, our findings did not contradict anything in earlier findings from low-income countries. This serves to emphasise further the gaps in the evidence base, but also that there may be commonalities across CBSI models in different country settings.

The case studies showed that while the typology does not present a hierarchical developmental model, it does support the possibility of CBSIs migrating from one category to another. This is highly dependent on the time that the CBSI has been in existence, as well as on the desire of the CBSI governance actors to scale up. Drivers that could facilitate CBSIs moving between categories include the skills and networks of CBSI staff, and the changing skills of older people from one generation to the other. In several CBSIs connected to the health and social care services, these links were established due to personal networks or other enabling factors for CBSI staff to engage with these actors. The skills and capabilities of CBSI staff can also facilitate transitions to higher levels of empowerment of older adults through coaching and giving them the confidence and skills to take on greater roles in CBSI activities and governance structures. Another channel that facilitates transitions could be funding, which would enable certain CBSIs to move away from a continuous 'pilot' stage or diversify their activities. Maintaining a continuous 'pilot' stage can be incentivised by existing funding streams, which are geared towards emergent innovations rather than sustaining existing innovations. It is therefore important to consider policy options that would create a fostering environment for CBSIs that have shown value in the pilot stage but cannot tap into the initial sources of funding, and which due to their population and model cannot realistically engage in activities that are income-generating.

While the CBSIs examined in the case studies showed predominantly community-based changes, there are several community-level potential impacts that could result from CBSIs. One feature that did not come through strongly in our research but should be further investigated is the potential of CBSIs to improve accountability in the system. The lack of this type of impact could be due to the few CBSIs that have linkages with health and social care systems and the relatively short period that some CBSIs have been in existence. However, in particular adaptive CBSIs with a high degree of linkages and empowerment of beneficiaries could bring value to the wider ecosystem by facilitating accountability mechanisms, such as greater transparency in decision making and feedback loops for health and social care professionals.

The typology is also useful in considering the potential role of CBSIs in transformation of health systems. The move towards integrated, people-centred health services as recommended by the WHO comprises five strategic directions.[12] The potential for community-driven participatory approaches comes through strongly in the strategic directions of empowering and engaging people and communities, strengthening

12 This framework has the following strategic directions: (1) engaging and empowering people and communities; (2) strengthening governance and accountability; (3) reorienting the model of care; (4) coordinating services within and across sectors; (5) creating an enabling environment.

governance and accountability and reorienting the model of care. The type of CBSIs that have a greater level of empowerment, such as the adaptive and the user-driven, seem to be best equipped to engage in policy options and interventions corresponding to these strategic directions. When it comes to coordinating services within and across services, CBSIs with a greater level of linkages (state-driven/networked and adaptive) can best contribute through intersectoral partnerships, integrating vertical programmes into state systems or improving care/patient flow through the pathway via 'navigators' – usually CBSI volunteers. Some CBSIs, for example a foundational CBSI such as in China, can help contribute to the strategic direction of creating an enabling environment to undertake transformational change in the system. In particular, CBSIs have the potential to tackle health workforce shortages by proposing a new model of such a workforce.

In assessing the opportunities that CBSIs can bring to wider systems development (e.g. health and social care systems) it is worth highlighting that these innovations should be seen as complementary efforts to those of state structures. As with any vertical intervention, CBSIs can create dependencies in a community and lead to changes in other systems. Considering the issues around scale and sustainability discussed in previous sections, it is important for the state structures to continue maintaining their responsibilities. This approach will ensure population protection, for example in situations where CBSIs cease their activities leading to a vacuum in service provision in the absence of state services. CBSIs should therefore ideally be seen as enhancers and complements to state services towards achieving individual and community-level impacts.

4.1.1. Strengths and limitations of the developed typology

The developed typology relies on a robust methodology that uses a large amount of retrospective data (data gathered from the 44 studies included in the systematic review) as well as empirical, prospective data (data gathered through the ten case studies). Furthermore, the typology was subjected to an expert consultation in which it was further refined. Another strength of the study consisted of the engagement of people operationally involved in running CBSIs and therefore intimately aware of these initiatives. In terms of generalisability, the typology also built on the findings from the original expert consultation (Ong et al. 2016), thus managing to draw on lessons from countries spanning all income groups.

However, there are some limitations that affect the typology. While the 44 articles included in the review provided a good number of examples, the way the interventions were described varied greatly, which affected the amount of data that could be gathered and analysed consistently. In particular, the category pertaining to funding was poorly described, as were the various roles of stakeholders. In terms of the case studies, the greatest challenge consisted in the fairly short time most of the CBSIs had been operating. This could be seen as limiting the understanding of two of the typology's dimensions which require time to develop: the development of partnerships, and the scale, scope and complexity dimension. As described in other sections, both the systematic review and the case study methodologies had their own strengths and limitations.

4.2. Reflections on policy implications of CBSIs

Building on the findings from each stage of the research study, and drawing on the project team's experience and lessons from wider literature, here we provide a series of reflections to inform policy and practice, particularly in relation to UHC and research on CBSIs.

4.2.1. Implications for policy in middle-income countries

Map and engage CBSIs at local level towards understanding their potential in furthering efforts to ensure people-centred health services

As discussed above, there are existing synergies between CBSIs and the WHO's Framework on Integrated, People-Centred Services. Policy options to ensure these types of people-centred services are dependent on national context. A greater understanding of CBSIs at national level could be ensured by undertaking a mapping exercise employing the typology created through this research. This could facilitate both public- and private-sector actors better understanding the opportunities for engagement with CBSIs. While the typology does not infer a hierarchy of models, it is likely that different models will be appropriate for different contexts. The typology does however offer a basis for discussion of existing models and where it would be desirable to develop further models.

Ensure a better understanding of the value for money that CBSIs bring

Findings from our systematic review show that there is existing literature from which to draw limited lessons around CBSIs for healthy ageing in middle- and high-income countries, but no clear evidence on cost-effectiveness. There may be an inherent assumption that CBSIs are cost-saving to health and social care systems, but this may not be the case and this will be important to ascertain, considering also hidden costs that may be borne by older people or volunteers. A societal perspective on costing CBSIs will also be important to capture the range and level of actors and resources involved and the range of potential benefits. However, it is important to note that in assessing the cost-effectiveness of CBSIs for older persons a key measure that needs to be considered in assessing effectiveness is quality of life.

Create a policy environment conducive to moving CBSIs away from a continuous pilot stage through dedicated funding streams

The case studies revealed that ensuring a sustainable funding stream for CBSIs can be a challenging endeavour. A policy environment conducive to CBSIs' functioning should consider not only creating opportunities for accessing seed funding but also potential funding streams that could be accessed towards diversification of activities and scaling up. These could be in the form of national funds or credit schemes for CBSIs.

Foster spaces to ensure knowledge translation and networking between various actors

On the basis of a better understanding of the CBSI landscape in each country, policymakers could foster interactions through various initiatives (e.g. as part of already established events dedicated to ageing) between CBSI representatives and other local actors (e.g. health professionals). These spaces would need to consider incentive mechanisms for the latter category to highlight the value of engaging with CBSIs.

4.2.2. Implications for existing CBSIs

Evidence gathered from the different parts of the research study also has implications for pre-existing CBSIs, especially in regard to scaling up their activities. In particular we highlight five key recommendations for current CBSIs below.

Look for opportunities to collaborate with community groups operating in the same geographical area

As we have seen from the experience of CBSIs in Iran (Islamic Republic of) and Chile, coordinating efforts with other local communities in the region may afford the opportunity to pool resources and share experiences. Coordination with existing initiatives supporting older people may also help ensure that duplication of effort is reduced and support wider, national-level advocacy for older people's rights. In addition to community groups,

pre-existing networks, such as Older People's Associations, may provide CBSIs with the infrastructure required to scale up their activities.

Build strategic partnerships with local policymakers or academia beyond the health and social care system, depending on the objectives of CBSIs

While we have witnessed certain structural barriers for CBSIs in developing further linkages with policymakers, such as the disconnect between healthcare and social care in many countries, CBSIs should consider where there are opportunities to coordinate or collaborate with existing services. In addition, adopting an ecosystem approach to partnerships, whereby the variety of stakeholders working on ageing-related issues are included in both formal and informal partnerships, can be seen as an important factor.

Promoting intergenerational activities, where applicable, may be an important feature in the sustainability of CBSIs and may help to reduce the stigma of ageing in middle-income countries

In the interviews with beneficiaries across our ten case studies, intergenerational links and activities were reported as particularly good for older people's well-being, and in some cases were seen as a key feature in the sustainability of CBSIs. In addition to knowledge transfer, both from older people to younger people and vice versa, these activities were seen as important to a community's preparedness in dealing with an ageing society. CBSIs should consider where there may be opportunities to promote intergenerational activities and what the incentives are for people's involvement.

Embed M&E processes in CBSIs which are low-cost, effective and not burdensome

Specific M&E indicators for evaluating the impact of activities on older people's health may help CBSIs to demonstrate progress to donors. Coupled with this, M&E indicators can be used by CBSIs to set milestones and measure progress against their own objectives. Generating certain types of M&E data may require additional resources and skills from CBSIs. In order to reduce this burden, CBSIs should look to build on pre-existing resources, guidelines and tools developed for evaluating the impact of interventions on older people's health.[13] It will also be important to include older people in the designing, managing and interpretation of M&E processes to ensure their effectiveness and relevance.

Create opportunities to disseminate learning and evidence of impact

While embedding M&E process will help CBSIs capture data on their processes, outputs and outcomes, there is a need for lessons learned to be shared more broadly in order to better influence national agendas and policies on ageing. CBSIs should consider advocacy and dissemination strategies to share learning among CBSIs and the wider policy community working on ageing-related issues.

4.2.3. CBSIs in the wider context of UHC

Although widely shared as a goal across health systems, a conceptual definition, meaning and scope for UHC can be hard to identify. Here, we therefore discuss the potential contributions that social innovations such as CBSIs can make to broad UHC agendas. Barber and Rosenberg (2017) identify three key areas where innovation can contribute to UHC agendas:

- Extending the reach of the health system
- Delivering better quality at lower cost
- Empowering individuals, families and communities.

13 For example, the resources developed by InnovAge, a European Commission-funded project dedicated to developing and testing, as well as surveying and cataloguing, social innovations that will have a solid impact on improving the quality of life and well-being of older people (InnovAge 2017).

The lack of comprehensive data on the impacts of the programme makes it difficult to conclude whether particular CBSI programmes have had a significant impact on UHC. Nevertheless, the data gathered from the case studies and systematic review suggests that CBSIs have the potential to contribute in many ways to broader UHC agendas, although they often rely on health and social care systems to provide essential services to older people.

Extending the reach of the health system

Given the lack of services available for older people in middle-income countries, as noted by many of our interviewees, CBSIs may play an important role in contributing to issues relating to access. However, the extent to which CBSIs can extend their reach to older people not covered by the current health system will depend on the type of CBSI. Many 'user-driven' educational CBSIs tend to reach only older women with relatively high socio-economic status. In this respect, the intervention does not necessarily directly engage the most vulnerable sectors of society. More networked or adaptive CBSIs have the ability to reach older people who may not be covered by current health service provision. Furthermore, as discussed above, CBSIs have the potential to lead to community-level effects, such as increasing community resilience, and potentially avoid the need to access formal health and care services.

Delivering better-quality healthcare at a lower cost

The first consultation report highlighted that CBSIs have the potential not only to reduce costs and improve care, but also to improve autonomy and give older people the power to make their own decisions over their health and daily living (Ong et al. 2016). Barber and Rosenberg (2017) note that with 'population ageing comes stronger emphasis on quality of life, functional ability, and social interaction' and that 'during the last years of life, health needs are often interlinked with social needs'. In this respect, CBSIs can be considered as making an important contribution to the social health of older people in middle-income countries. The perceptions of the beneficiaries interviewed from most of the CBSIs were overwhelmingly positive about the health benefits of the respective programme, with participants tending to cite social/psychosocial impacts (e.g. self-esteem, knowledge, belonging, friendship). Nevertheless, more research is needed to understand the quality of the services provided and the associated long-term health impacts of CBSIs on beneficiaries.

Out-of-pocket expenditure for older people on health and social care remains a significant challenge for many middle-income countries. The positive impact of CBSI participation on older people's health, whether physical or mental, has the potential to indirectly impact upon older people's health out of pocket expenditure, if it results in fewer hospital trips. However, without reliable evaluation data it is difficult to conclude that CBSIs can impact on older people's healthcare expenditure.

Empowering individuals, families and communities

Awareness raising and advocacy, which can be part of CBSI activities, can serve to mobilise political will, especially if accompanied by a critical mass of research and innovation activity or achievements and the existence of deployable solutions. This power of advocacy can in turn mobilise political commitments to access, affordability, equity and quality dimensions of UHC.

4.2.4. Implications for research

The review shows clearly that there is a need for further research to understand the effectiveness and cost-effectiveness of CBSIs. The nature of CBSIs may mean that RCTs, which provide a high standard of evidence, are unrealistic. Our findings also show that CBSIs are poorly defined and lack an underpinning theory of change. Standards of reporting should be encouraged for CBSIs as they have been for other complex

interventions. While it is important to break down and understand different types of community-based interventions, realist or theory-based approaches (Connell and Kubisch 1998; Weiss 1995) to evaluating CBSIs are also needed to understand the complex interactions between interventions and wider health and social care systems, and to examine how these interactions affect the desired impact and outcomes of a given intervention. Further case studies of CBSIs in middle- and high-income countries would help to inform how these evaluations may be framed and what indicators may be available.

Our proposed typology, grounded in available evidence, offers a first attempt to provide a framework for understanding the different models of CBSIs. We anticipate that this could help inform future research by developing a common understanding and language. However, it will be important to critically test and refine this. In a similar sense, the typology offers a framework to guide policy discussions, partly through language and understanding but also as a tool to facilitate deliberate decision making around the types of CBSIs developed and the nature of linkages between these and existing service provision.

It is notable that few studies (from the systematic review) were considered to be of high quality, and that CBSIs were often poorly described. Nearly half of the studies came from high-income, urban settings and particularly from two countries, the UK and USA, which has implications for the generalisability of the findings. It is not clear whether this is indicative of a more mature research field or more CBSIs being in place in these countries, or whether our search has in some way skewed the results despite the inclusion of studies in any language.

CBSIs also raise the important consideration of UHC. Further research could investigate a number of hypotheses to provide stronger evidence on the relation between CBSIs and extending the reach of the health system, delivering better quality at lower cost and empowering individuals, families and communities. These strains of research could be targeted per CBSI type, which would also shed further light on the trajectories and potential of particular types of CBSIs.

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Appendix A Systematic review working paper (under review - not available)

Appendix B Typology working paper (under review - not available)

Appendix C Case studies

Appendix D Expert Consultation Meeting Report, Kobe, 17 and 18 October 2017