Why health systems must change:

Addressing the needs of ageing populations in low- and middle-income countries

Contents

Facts on ageing

- **By 2050, 80 per cent of older people will live in low- and middle-income countries.**
- **The main health burdens for older people are from non-communicable diseases.[1]**
- **Healthy ageing starts with healthy behaviours in the earlier stages of life. Diet, physical activity, smoking and alcohol are all risk factors for non-communicable diseases.**

Introduction

The world's population is ageing rapidly, with the over-60 population growing fastest.[2] Since 2000, there have been more people aged 60 or over than children under 5.[3] Multiple transitions are impacting health worldwide.[4] These include demographic shifts resulting from changes in mortality and fertility rates, and an epidemiological shift away from infectious diseases towards chronic and degenerative diseases associated with longevity, and urban and industrial lifestyles.[5] Chronic or non-communicable diseases (NCDs) are the leading cause of death globally and are accelerated by population ageing.[6] NCDs also disproportionately affect low- and middle-income countries where nearly 80 per cent of NCD deaths occur (29 million) each year.[7]

Vertical and horizontal approaches

Health systems are made up of a "horizontal system" of general services, providing prevention and care for prevailing health problems, and of vertical programmes for specific health conditions.[9]

A rapidly ageing population presents large and unique challenges. Vertical approaches to health programming have been the norm in international development to date. In some contexts, for specific activities such as vaccination delivery, this approach can work quite well. Ageing, however, brings with it a number of challenges that suggest the need for more integrated horizontal and vertical approaches if health and care services for ageing and age-related health conditions are to be effective.

This is an analytical report of a two-year HelpAge programme, sponsored by the Federal Ministry for Economic Cooperation and Development (BMZ) in four countries in Asia, southern and eastern Africa, and Latin America.[8]

The programme piloted a range of interventions to address ageing and health in Cambodia, Mozambique, Peru and Tanzania. Project activities in the four countries focused on service delivery through community-based interventions, and policy work to improve access to – and quality of – health services to address NCDs. With the exception of Peru, the community-based interventions targeted rural communities. This project gave these four countries, whose health systems are at various stages of development, the opportunity to pilot and develop integrated health and care approaches to respond to the unique challenge of ageing in each context.

The range of direct service delivery and policy-influencing activities varied between countries. Table 1 illustrates examples under each of these project components. Community-based interventions were designed to improve the delivery of age-friendly primary healthcare services. Countries also sought to influence health policy by working with different levels of the government health structure. The table does not represent an exhaustive list of project activities but it does highlight key areas. It is important to note that activities at the community and national level were intended to be mutually reinforcing.

Table 1: Examples of service delivery and policy-influencing activities carried out as part of this project

Community-based programming	National policy-influencing activities
Health camps (screening for NCDs, referrals and health education)	Reviewing technical guidelines (NCDs, nutrition) to ensure the inclusion of older people to address their specific needs
Age-friendly curriculum development on NCDs	Participation in high-level meetings/working groups
Home-based care activities	Calling for disaggregated data (by age, gender, disability) and data on burden of NCDs
Monitoring data on older people's health	Strengthening government patient-monitoring systems
Health outcomes surveys conducted (assess access to/quality of health services, perception of health, financial burden)	Development/validation of training manual for government community health workers
Training of low- and middle-level cadre health workers on ageing and NCDs/chronic diseases	Collaboration with ministries of health to produce training manuals
Screenings (high blood pressure, diabetes etc) and referrals	Participation in delivery of training(s) for government health staff
Health education/promotion activities (NCD awareness and health lifestyles) through various forums	Contribution to development of national health plans/strategies

"Before our involvement in this project we mainly provided therapeutic care to older people; today, through senior clubs, not only do we provide therapeutic care but we are increasingly focused on delivering education and preventative activities."

Member of CESAMICA older people's self-help club, Castilla, Peru

"We are teaching older people and others throughout the life course that risk of certain chronic diseases can be reduced and that there are treatments to prevent more serious complications."

Dr Jorge Ancajima, CESAMICA, Peru

This project revealed some of the specific challenges to healthy ageing in low- and middle-income countries. This has provided an opportunity for HelpAge and our partners to begin to tackle some of the problems, including the availability of essential treatments, drugs or rehabilitation; physical access issues (ie transportation), the need for home-based care, and the need for community-based health services.

The challenge of ageing

The wide range of activities implemented in this project reflects the challenges of the ageing process itself, which gradually brings together two already complex areas – health and social care. For example, with older people who are frail it is difficult to distinguish between the need for social care and healthcare. These two forms of care need to be delivered simultaneously, especially among the "oldest old". When addressing the health needs of an ageing population, it is impossible to separate the need for prevention, promotion and treatment services.

Similarly, it is difficult to ascertain if home-based care and community-based health provision are entirely separate issues. Older populations, like paediatric populations, require health and care services simultaneously. The demand for these services can increase as the majority of people first enter older age, through to frailty and then eventually to end of life. This continuum in the life course of an older person necessitates the broad package of work within this HelpAge project. It also highlights the need for the fundamental reform of primary healthcare systems in order to prepare for the growing health and care needs of a rapidly ageing population. This is particularly important in low- and middle-income countries where often societies do not grow wealthy before growing old.[10] The ageing journey, health-wise, is a complex one.

Why take a life-course approach?

Using a life-course approach, from a health perspective, enables us to identify critical points for preventive intervention. This approach allows us to take account of the biological, behavioural and psychosocial pathways that operate across an individual's life course, to influence the onset of health issues. For example, exposure to particular risk factors or diseases in an earlier stage of life (such as childhood or adolescence) might be linked with illness in later life.

Jeff Williams/HelpAge International

Older man in Tanzania with grandchildren.

Paul Ong/HelpAge International

Blood pressure checks at a health camp in Battambang, Cambodia.

How to address older people's health challenges: HelpAge's experience

Broadly, we identified five major areas of learning from this project. These are:

Good care for ageing populations

Primary healthcare system reform is essential to meet the needs of rapidly ageing populations in low- and middle-income countries. For older people, especially the oldest old, mobility and cognitive issues, declining social engagement[11] and the distance to clinics or hospitals are common physical barriers to accessing health services. This is in addition to financial barriers, such as a lack of secure income and the absence of social protection systems. Strengthening community-based health and care can reduce the physical barriers to accessing health services and improve affordability for older people and their families.

This project has shown that improving community-based health provision can meet older people's immediate health needs. However, to meet all of their health needs, older people require continuity of care, provided holistically (including primary, secondary and tertiary health services). Strengthening and integrating these different levels of healthcare within low resource settings is needed in order to respond to ageing and health issues by seeking to prevent expensive and avoidable hospital admissions and enable older people to manage chronic illnesses.

A recent report in the UK highlights the drastic rise (48 per cent over 12 years) in avoidable hospital admissions for conditions, especially in older people, that could be better managed in the community by the patient or primary care providers.[12] Population growth and an ageing population accounted for just under half of the overall increase in rates of potentially avoidable admissions.[13] A survey in Australia found that programmes targeting medication use, healthy behaviours and social isolation may help reduce multiple hospital admissions for chronic disease.[14]

The end of life has its own distinct challenges; at this stage, health and care provision is less about vaccinations and curing than it is about enabling older people to maintain a good quality of life. This project has found that primary healthcare can meet many of the health and care needs of older people, either at home or through age-friendly health services located within the community.

The context of older people's lives in Peru and Cambodia illustrates this principle. Ageing teaches us about the futility of building more and more 200- or 500-bed hospitals. Instead, a revolutionary health system is needed that has at its core a primary care orientation that can turn the whole community into a 10,000-bed "hospital" which is based in every community, village and home.

In Cambodia, we uncovered a complex chain of inter-linking parts that described the "minimum" model of primary healthcare (see Figure 1). The health centre is, within the primary healthcare system, the "tertiary" level of primary care. This is the last resort in a community because accessing it entails costs, time, transportation and physical effort. Secondary levels of care, within this system, involve community-based healthcare such as health camps, run within the community, village self-help groups run by community health workers and locally provided home-based care. Finally, the most basic form of primary care is often provided within a household though informal home care or through individualised self-care.

One major challenge with such a range of different health and care providers is the coordination of services. This suggests that there is a need for a coordinating mechanism which is familiar with the patient journey and can act as a case manager to ensure continuity of care. In Cambodia, the older people's associations have stepped into this role.

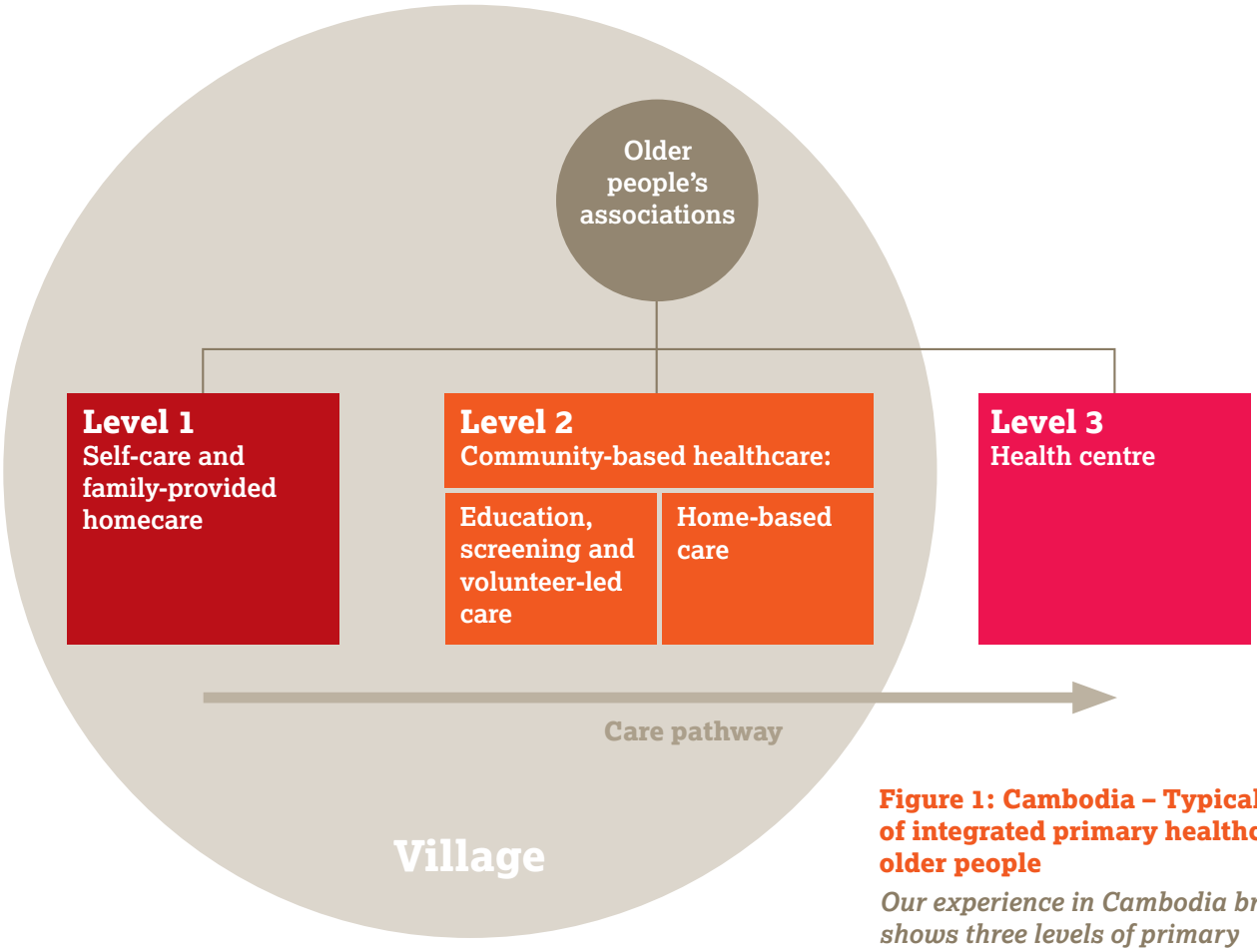


Figure 1: Cambodia – Typical model of integrated primary healthcare for older people

Our experience in Cambodia broadly shows three levels of primary healthcare as illustrated by the different levels in the diagram. Older people's associations should not necessarily take on a coordinating role in this context; however we have found that in the absence of other coordinating mechanisms they have naturally stepped into this role.

Antonio Olmos/HelpAge International

Eusebio Conga Inga, 71, a casual day labourer, mostly working in agricultural fields.

Health literacy is essential to healthy ageing

Education is central to healthy ageing. Therefore, it is crucial to raise communities' awareness of health risk factors, disease management and disability. Even in a middle-income country such as Peru, where basic education levels are relatively high, for the most basic level of primary care (family-based or self-administered care) to work, older people and their families need sufficient health knowledge to care for age-related health conditions. When this health knowledge is absent, the most basic form of care becomes professional- or volunteer-led led primary care, provided within the community. At this level it is possible to screen older people for NCDs and provide education in geriatric health for both communities and health professionals.

This evolution towards self-care supported by family as the most basic form of primary healthcare "will form the backbone of cost-effective ways of treating and caring for NCDs".[15] This transition is crucial to the development of a sustainable primary healthcare system suitable for ageing (Figure 2).

Figure 2: Transition towards sustainable primary healthcare

Currently, the most basic form of healthcare in most low- and middle-income countries is professional or volunteer-led health education or screening. As a community's basic health knowledge improves, self-care (initially step 2), starts to take its proper place as the most basic form of primary healthcare (becoming step 1).

"What is the good of me telling someone that something is wrong with them, if I have no means of helping them, because there are no drugs available?"

A doctor working in the Morogoro region of Tanzania

"As we started sensitising older people by raising awareness of NCDs, more people were seeking diagnosis and needed treatment, but the medicines were not available!"

MOREPEO and PADI staff, Tanzania

The availability of essential treatments

Medicines to treat NCDs are available in low-cost generic forms but they remain inaccessible and unaffordable for many people in low- and middle-income countries.[16,17]

Figure 3 shows two drug cabinets at a police dispensary in Tanzania. These police dispensaries serve not only police personnel and their dependants, but also civilians living in nearby communities. The cabinet on the right contains medicines procured from central government stores, run by the Ministry of Health. This is in stark contrast to the cabinet on the left, where medicines and supplies have been purchased from the private sector through parallel markets with the assistance of NGOs or through other agreements that allow for bulk purchasing of drugs.

As a result of the police health system's access to a much wider range of essential medicines through parallel markets, this dispensary was regularly accessed by people in communities up to 70km away. This example highlights the need to improve the efficiency of government supply chains by addressing issues of financing, procurement and distribution of essential medicines.

In Cambodia, Mozambique and Tanzania, we discovered convoluted systems with highly complex bureaucratic control over the government procurement chains for essential medicines. Frequently, we encountered health centre staff who reported their intense frustration with the system.

In Cambodia, older people came to our health camps looking for treatments, only to be disappointed because they only received screening, health education and guidance.

In addition to the general lack of affordable and accessible medicines in many low- and middle-income country settings, regular access to essential medicines is needed to treat and manage age-related chronic conditions. The availability of essential treatments is a life-course issue for health. The collaboration of NGOs and government agencies working across the whole life course is needed to address the ongoing shortages of drugs for health conditions associated with ageing, such as hypertension, alongside essential treatments for men, women and children. Research by the World Health Organization (WHO) has shown that in 27 developing countries where data is available, average public sector availability of essential medicines was only 34.9 per cent.[18]

Health financing or under-budgeting is one factor affecting the availability of medicines.[19] Systems will have to be put in place to make these essential treatments or drugs either affordable, or in a best-case scenario, available free at the point of consultation. In Tanzania, the project highlighted that when medicines to treat and manage NCDs are available, there are charges, unlike drugs for communicable diseases which are free of charge.

Jeff Williams/HelpAge International

Figure 3: Tanzanian police dispensary

This shows that the Ministry of Health medical supplies (pictured in the cabinet on the right) are insufficient in contrast to those procured through wider means (on the left) at this Tanzanian police dispensary.

One policy initiative to improve access to essential medicines is to ensure that drugs for age-related illnesses, such as hypertension, diabetes and glaucoma, are always included in countries' Essential Medicines Lists (EML). WHO states that 19 per cent of developing countries need to establish an EML or update existing lists.[20]

Health incentive schemes (HIS), which provide patients with a small financial incentive to attend health camps, could be used to improve healthy ageing, improve health education attendance, and assist older people with the cost of drugs or transportation for healthcare. In addition to stimulating healthy behaviour, HIS can potentially supplement work earnings and enable older people to buy medicines. Evidence shows that HIS can be an effective way to increase the uptake of preventive services, encourage some preventive behaviour, and in some cases improve health outcomes.[21]

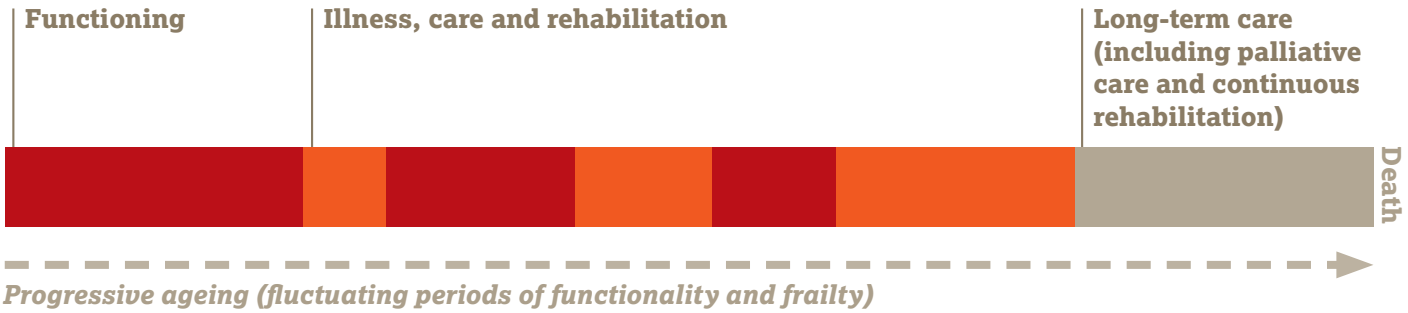
In Cambodia the project supported health centre staff to conduct regular health camps in five villages in Battambang province. The health camp activities included blood pressure readings, referral to health services, health education and promotion, and exercise. HelpAge found that even though nearly all members of the older people's associations reported attending one health camp during the two-year period, less than 40 per cent attended more than one of the health camps, over a one-year period. Two reasons for older people not attending a second time were that the camps were held during working hours, and medications were not available. HIS, in this context, could improve attendance at health camps and assist with the cost of other health services.

The caveat to this HIS system is that it is only a partial, medium-term solution. Systemic reform of the procurement system for drugs and supplies is still the priority in many low- and middle-income settings. This example of a potential HIS permits free choice on the part of the recipients to use the cash as they see fit, without directly encouraging the privatisation of healthcare which is possible if, for example, a voucher scheme was offered only for the purchasing of drugs from private pharmacies.

Rehabilitation systems are also part of this group of essential treatments. In Cambodia, Peru and Mozambique, muscle problems and chronic pain were identified as the most debilitating conditions by older people in our project areas. Some of our work on rehabilitation systems for pain and musculoskeletal pathologies in Peru suggests that even if return of function was periodic and sporadic (and it becomes progressively harder to achieve as frailty increases), it still has its place in providing windows of valuable and life-enhancing respite (Figure 4). An older person's functional status is not static, but can move between states of reasonable functionality and frailty throughout the later stages of the life course.

Figure 4: Continuity of care for later stages of life

A person's functional status can move between states of reasonable functionality and frailty throughout the later stages of the life course. Ensuring continuity of care through good collaboration between formal and informal care protects older people's ability to remain socially engaged and productive until extreme frailty sets in.



Lower-cadre health worker

This includes any health worker who performs functions related to healthcare delivery who has been trained in some way in the context of the intervention, but has received no formal professional or para-professional certificate or tertiary education degree.[22]

Health curriculum reform and creation

Many rural health systems have developed in step with the development of mother and child health initiatives or other developmental priorities. There has been little attention paid to ageing and NCDs and other chronic conditions. This was observed by the Country Director of HelpAge Cambodia who commented that *'there is a lot evidence and data to support other developmental priorities (eg maternal and child health) while there is very little evidence on ageing and health issues'.*

Many rural health workers, especially lower-cadre health workers, receive informal and uneven levels of health education that often exclude ageing and NCDs.

What constitutes lower- and middle-cadre health workers can vary considerably between countries. In some contexts lower cadre health workers are nurses, in others they might be community health workers. Generally, for lower-cadre health workers, on-the-job training for specific interventions is common.[23] This was certainly the situation in Mozambique and Tanzania, where significant pieces of work were done to improve the health knowledge of lower- and middle-cadre health workers, whether in the field, through on-the-job training or with new students looking to join the workforce. A significant piece of policy influencing was to encourage ministries of health to adopt new manuals or adapt and expand curricula to include topics on ageing and health (such as NCDs) and age-friendly healthcare.

In Tanzania and Mozambique, these approaches to directorates or bureaus for training within the ministries of health were successful influencing strategies and an effective way of introducing ageing to the agenda. In Peru, we were able to influence university curricula and specialist training for nurses and doctors. This suggests that curriculum reform or creation are effective approaches for reaching out to lower- middle- and top-level cadre health workers in order to build up capacity in local health systems for ageing and health.

In Tanzania and Mozambique there were requests to HelpAge from ministry officials, who were doctors at the highest levels of the civil service, to be supported financially to complete specialist geriatric health training. Also, in Cambodia we developed a new age-friendly curriculum which has been used by staff from the Ministry of Health and health centres and by village health support group volunteers to improve health education delivered at health camps.

Curriculum development and implementation seems to be an effective way of building geriatric health knowledge from the bottom up, and this approach has also stimulated debate at the highest levels of government policy making.

"Health workers do not get training in medical school on geriatric care. This needs to be included in the curriculum."
MOREPEO and PADI staff, Tanzania

"Having the curriculum validated has been a huge accomplishment. We spoke to one health worker and she was very happy to receive new knowledge and apply what she has learnt in the community."
Country Director, HelpAge International, Cambodia

"Equipment for screenings needs to be readily available. There is little point in raising awareness in the community if equipment for screenings is not available."
MOREPEO and PADI staff, Tanzania

Simultaneous bottom-up and top-down health strategy

All country project teams found that doing work without the blessing or cooperation of ministries of health was futile, no matter how good the programme. In order to improve and influence health systems, practices and policies in a sustainable way it is crucial to engage and work with ministries of health. This project found it was necessary to have more connected approaches by ensuring that ground-level projects were utilised in influencing strategies at the highest levels of civil service or government.

Older people's associations in Cambodia not only act as a case manager and organiser of healthcare within their communities but may also have functions in campaigning and advocacy, and act as a broker for more local health services. Project learning can be effectively used to influence governments in this way. Engaging different levels of government is key, starting with district governments, and then diffusing gradually through to regional governments and finally national governments.

"Now the director of the Provincial Health Department is interested in ageing and health so there is much more involvement with HelpAge on these issues."
Chief of Health Promotion Unit, Provincial Department of Health, Battambang, Cambodia

"We have learnt that it is important to involve key institutions/sectors who we partner with to implement projects to find ways to mitigate the impact of staff changes within the Ministry of Health."
HelpAge International staff, Mozambique

NGOs, through their networks in collaboration with academic institutions, other NGOs or UN partners, can forge links, and propose and collaborate on programmes with ministries of health. These networks and partnerships can influence the highest levels of policy making, for example by introducing curriculum reform or new curriculum implementation.

In more advanced systems such as Peru, an established focal point, desk or department of ageing may already be present. The task is to build on this work by strengthening these focal points and developing partnerships, as many of these units are still currently under-resourced. In less developed health systems, a priority could be to establish a focal point or department for ageing, depending on resources. This is one of the great successes of the programme in Tanzania, where a two-year geriatric focal point has been appointed within the Ministry of Health. Given that Africa will see a 13-fold growth in the size of its older population from 56 million today to 716 million by 2100, these successes are essential to addressing ageing issues.[24]

Changes within government departments or health-workforce discord have severely hampered project activities in all of the project countries. Loss of momentum occurs whenever political changes happen, especially if the knowledge and interest resides with just one or two officials within the ministry of health. In Tanzania we found that having a focal person for ageing in the Ministry of Health to spearhead and coordinate age-friendly health services was very important. This is the rationale for establishing a more permanent focus on ageing within the civil service itself. There is a greater likelihood of continuity if an ageing portfolio can be entrenched within both the higher levels of the civil service as well as with the political heads of ministries.

Conclusion

Vertical-horizontal collaboration is needed in order to develop ageing and health agendas in many low- and middle-income countries. This is because the needs of old age cut across a broad swathe of health and care issues which can require preventive, curative, rehabilitative and palliative services, to be accessible within formal health facilities and in the community.

Frailty, in particular, blurs the lines between health and social care services with older people requiring a combination of medical and social services often simultaneously on a short or long-term basis. The rehabilitation work in Peru highlights these complex linkages, as does the analysis of the minimum unit of primary care from Cambodia. This project has highlighted the importance of training health workers at all levels of the health service. Health workers often operate across all streams and themes of work, from maternal and newborn health to older people's health. At the World Health Assembly in 2013, Jim Yong Kim, the President of the World Bank, said:

"Many middle-income countries I visit are suffering from an epidemic of hospital-building… But when patients are released from these facilities, they can't get adequate support in the routine, daily management of illnesses like diabetes, because the primary care system has been starved of financing. It makes no sense to pour resources into responding to downstream complications, without investing in upstream prevention and disease management."[25]

This philosophy is also at the heart of what HelpAge is trying to achieve by putting ageing onto the global health agenda. An inclusive health system that is good for older people is also a reformed health system that has principally invested in primary healthcare for all ages and stages of life.

Therefore, this HelpAge project confirms the perception that older people face unique health and living challenges that demand innovative solutions. Delivering health and care work to meet the needs of an ageing population requires a different approach to those for other age groups and must respond to the specific context in which older people live.

Life expectancy and healthy life expectancy

Life expectancy (LE) is the number of years an individual is expected to live as determined by statistics. Health-adjusted/healthy life expectancy (HALE) is the average number of years that a person can expect to live in 'full health' by taking into account years lived in less-than-full health because of disease and/or injury.[26]

Health outcomes for older people can be broadly classified into three categories (see Table 2).

1. Firstly, there is a best-case scenario in circumstances where development has worked well and has been enabled equitably (such as Sweden); there is a good quantity of life (life expectancy from birth) accompanied by a good measure of health and quality (health-adjusted life expectancy from birth).
2. Secondly, some contexts (such as Bangladesh) are still classified as "low-income" but have seen significant gains in the basic condition of people's lives. For example, life expectancy in Bangladesh increased by 10 years between 1990 and 2010. Despite gains, inadequate provision for ageing, poverty, and other social determinants that affect health has resulted in a situation where there is quantity of life but often poor quality, especially in older age.
3. Finally, the worst-case scenario (such as Burundi), may be observed in countries at the bottom of the Human Development Index (HDI). We find very poor quality of life alongside significantly reduced quantity of life.

The second and third scenarios depict circumstances where interventions are urgently needed.

Certainly, in all three scenarios the end of life is inevitable in all settings. It is essential that professionals and care givers can enable people to maintain as good a quality of life as possible, even though quantity is no longer realistic. Access to palliative care is crucial in all countries, yet hospice and home-based care services are severely limited in many low- and middle-income settings. Palliative care must be recognised as an essential component of healthcare services and be incorporated into government policy and planning. Further, the lack of access to affordable pain medication must be addressed. The way we attend to the ageing process and the potential losses associated with it is a reflection of the success or failure of the development of any given society.

Table 2: Country-specific examples illustrating three contexts and outcomes for older people

Quantity with quality	**Sweden** Life expectancy – 82 Healthy life expectancy – 73	
Quantity with limited quality	**Bangladesh** Life expectancy – 70 Healthy life expectancy – 54	
Neither quantity or quality	**Burundi** Life expectancy – 53 Healthy life expectancy – 35	

Source: World Health Organization, Global Health Observatory Depository, Life expectancy by country, 2011, http://apps.who.int/gho/data/node.main.688?lang=en and HelpAge International, Global AgeWatch Index 2013, Healthy life expectancy, www.helpage.org/global-agewatch/data/healthy-life-expectancy-at-birth

We must strive for the first outcome, neither rushing nor delaying death unnecessarily, and we must recognise that quality of life is always the most important factor. Outcomes two and three are where the majority of HelpAge's health and care work is targeted. Appropriate health and care strategies for ageing must be context-specific tailored to the circumstances and life course of an older person.

Creating enabling environments for healthy ageing, early detection of and management of all diseases, and routine screening for older people is essential. Today, one in every nine people in the world is 60 years of age or older, and this is expected to increase to one in five people by 2050[27] with populations ageing fastest in low- and middle-income countries.[28] Access to age-friendly, affordable and appropriate health information and services must respond to this ever-changing environment. Increased longevity is a success story, and the right to the best possible health does not diminish as we age.[29]

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HelpAge International helps older people claim their rights, challenge discrimination and overcome poverty, so that they can lead dignified, secure, active and healthy lives.

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Front page photo by Jeff Williams/ HelpAge International
Design by TRUE www.truedesign.co.uk

ISBN 1 872590 85 3

This briefing was produced with the financial assistance of the German Federal Ministry of Economic Cooperation and Development (BMZ). The contents of this document are the sole responsibility of HelpAge International and do not necessarily reflect the views of BMZ.

Financed by
Federal Ministry for Economic Cooperation and Development