Global AgeWatch Insights

The right to health for older people, the right to be counted

AARP Real Possibilities

HelpAge International

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Older person from Myanmar

Contents

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Abbreviations

ADL	activities of daily living
CD	communicable disease
CEDAW	Committee on the Elimination of Discrimination against Women
CESCR	United Nations Committee on Economic, Social and Cultural Rights
COPD	chronic obstructive pulmonary disease
CRVS	civil registration and vital statistics
CVD	cardiovascular disease
DALY	disability-adjusted life year
DHS	Demographic and Health Survey
GPW	general programme of work
HALE	healthy life expectancy
HIC	high-income country
IADL	instrumental activities of daily living
IAEG-SDGs	Inter-agency and Expert Group on Sustainable Development Goal Indicators
ICESCR	International Covenant on Economic, Social and Cultural Rights
LE	life expectancy
LMICs	low- and middle-income countries
MDG	Millennium Development Goal
NCD	non-communicable disease
OHCHR	Office of the United Nations High Commissioner for Human Rights
SDG	Sustainable Development Goal
UDHR	Universal Declaration of Human Rights
UHC	universal health coverage
UN	United Nations
WHO	World Health Organization
YLDs	years lived with disability

Foreword

In 2018 the world celebrated two important milestones – the 70th anniversaries of the Universal Declaration of Human Rights and the founding of the World Health Organization. At the heart of both was the global commitment to protect the right to health of all people everywhere. These concurrent anniversaries, therefore, offer an opportune moment to assess progress concerning the health-centric vision they share and, specifically, how inclusive that progress has been of members of the older generation – that is, the very people who grew up and have grown old in this era of the right-to-health commitment.

2018 also marked another milestone. This year, for the first time in human history, the global population of people aged 60 and over has surpassed one billion. The number of older people will continue to rise in almost all countries around the world in the coming years. This demographic change is contributing to a shifting pattern of disease and different demands being placed on health systems. Health systems around the world, and particularly in low- and middle-income countries, have struggled to adapt to these changes, leaving millions of older people unable to gain equitable access to the health services and support they need.

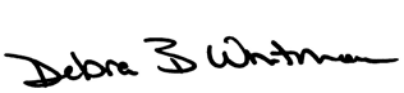
Work continues on that front. The right to health across the life course gained increased attention with the adoption by the United Nations in 2015 of Agenda 2030, which set out 17 Sustainable Development Goals. At the heart of the goal on "health for all at all ages" is a commitment to extend global access to universal health coverage (UHC). The aim of UHC is to ensure affordable access to essential health services for everyone, regardless of age, sex, disability, race or other socioeconomic characteristics.

This report considers the progress being made in realising the right to health of older people in light of the renewed opportunities offered by the global drive towards UHC. It also explores the extent to which older people are currently served by health systems, and the kinds of changes that will be needed to ensure the right to health not only for the world's one billion older people today, but also for the generations of older people to come.

Policy-makers need access to good-quality, timely data on the health and wellbeing of older people, particularly those living in low- and middle-income countries, to enable models of UHC that are responsive to demographic change and fully inclusive of older people in implementation. The truth is that older people are frequently invisible and inadequately represented in existing data systems. The consequences are a failure to benefit from the promise of UHC; more broadly, the denial of their right to health is, literally, life threatening.

The report illustrates the deficits in health and wellbeing experienced by older people. It shows how health systems, and UHC in particular, must adapt in response to global demographic and epidemiological transitions. Crucially, the report provides a clear path to action on the data issues and gaps that currently block effective health systems planning and implementation for older people in low- and middle-income countries.

It is time for decision-makers – in governments, multilateral agencies, national statistical offices and civil society organisations – to take coordinated action to achieve progress in realising older people's right to health. Some 70 years on from the Universal Declaration of Human Rights, we invite you to join our call to action for change.



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Older person from Pakistan

Executive summary

The universal right to health

At the heart of the Universal Declaration of Human Rights (UDHR) and the foundation of the World Health Organization (WHO) was the global commitment to establish the right to health of all people everywhere. Now, 70 years on, is a good time to assess how far in practice this vision has been inclusive of older people.

The right to health was recognised in the International Covenant on Economic, Social and Cultural Rights (ICESCR), and goes beyond access to health services to embrace "a wide range of socioeconomic factors that promote conditions in which people can lead a healthy life, and extends to the underlying determinants of health". The United Nations Committee on Economic, Social and Cultural Rights (CESCR) set out four core components to the right to health: availability, accessibility, acceptability and quality. These aspects have become foundational for universal health coverage (UHC) and the people-centred approach to health, both of which will be key to the realignment of health systems needed to ensure older people's right to health is met.

Older people's right to health

The right to health, like all human rights, is universal and inalienable and must be enjoyed without discrimination on the basis of age, ethnicity or any other status. Specific reference to older people's right to health has been made by the CESCR, which stated that it is "clear that older persons are entitled to enjoy the full range of rights" recognised in the ICESCR. The committee asserts the importance of an integrated approach, combining preventive, curative and rehabilitative health treatment, stating that such an approach should maintain the functional ability and autonomy of older persons. Other provisions also specifically include older people, including the recommendation by the Committee on the Elimination of Discrimination against Women (CEDAW) to ensure older women's access to affordable care and to specially trained health workers.

Despite these protections, progress in health for older people remains deeply unequal and often limited. Older people's right to health is not therefore being realised. In low- and middle-income countries (LMICs) in particular, older people continue to suffer exclusion and to face multiple challenges in accessing services.

Older person from an intergenerational self-help group in Vietnam

A rights-based approach to health requires that health systems and services address inequity by making those who are furthest behind the first priority. This principle is echoed in the United Nations (UN) *2030 Agenda for sustainable development* and its Sustainable Development Goals (SDGs), and in efforts towards UHC.

This report outlines the extent to which older people are being left behind through an analysis of the available data on older people's health and by highlighting the gaps – where older people are simply not being counted.

Barriers to older people's right to health

Older people experience a number of barriers to their inclusion in health systems and services.

Discrimination in the form of ageism is common, including among health workers, who may fail to consult older people on their care and restrict or deny access to interventions on the basis of age. Other barriers include poor physical accessibility of services, lack of outreach to communities, poverty and prohibitive costs, lower health literacy and less access to health information. In many LMICs, health workers are inadequately prepared to respond to health challenges common in older age, and there is a lack of medical and gerontological training in the care of older people.

Many health systems are structured to manage acute, episodic illness and are less able to respond to longer-term, chronic health conditions. This means they are often unable to provide the people-centred, integrated care that is important in older age, and fail to respond to the specific needs of older populations.

In addition to such barriers, health systems have failed to keep pace with two major, interlinked global transitions: a demographic transition and an epidemiological transition.

Demographic transition

Progress in global health and development has led to declines in the rates of both fertility and mortality, and rapid ageing of the global population. By 2020, the number of people in the world aged 60 and over is projected to pass the 1 billion mark, and to reach 2 billion by 2050. The pace of this demographic change is fastest in LMICs, where 70 per cent of people aged 60 and over live.

Epidemiological transition

The global pattern of disease has been shifting over recent years away from communicable diseases towards non-communicable diseases (NCDs). NCDs have a disproportionate impact on people in older age. It was estimated that, in 2011, people aged 60 and over accounted for 75 per cent of deaths from NCDs in LMICs. In addition to high rates of NCDs in older age, there are also high rates of multimorbidity. As people age, they are more likely to experience more than one chronic condition at the same time.

The health-related challenges represented by the high rates of NCDs and multimorbidity in older people are often accompanied by the need for more support with tasks of daily living in order to sustain independence and autonomy, resulting in health and social care becoming increasingly complex and interdependent. Health systems, and care and support systems, have so far failed to address this complexity. The demographic and epidemiological transitions require health systems to adapt to a new reality, moving away from the vertical structures that address specific diseases towards more integrated and coordinated services that respond holistically.

There is a clearly gendered dimension to the demographic transition, and by extension to the epidemiological transition. The clearest difference between men and women is in life expectancy. Women continue to outlive men in most countries of the world, living for an average of 4.7 years longer. The prevalence of different conditions varies by sex for

older people. Older women and men face different consequences of discrimination based on their sex and other factors, including socioeconomic status. Gender- and age-sensitive health systems and services are needed that are able to respond to the gendered drivers of health differences.

Universal health coverage

The 2030 Agenda as agreed by world leaders establishes 17 goals to "realise the human rights of all". Its central pledge is to leave no one behind and to reach the furthest behind first. Significant opportunities are thus opened up by the 2030 Agenda to advance the realisation of human rights for people of all ages, including older people. The right to health across the life course has gained increased attention with the adoption of the SDGs. To ensure healthy lives and promote wellbeing for all at all ages, SDG3 provides a critical opportunity to realise older people's right to health.

Significantly, target 3.4 on NCDs recognises the shifting burden of disease and promises increased focus in this area of particular concern for older people. Meanwhile, to achieve UHC, SDG target 3.8 provides a potential pathway for the transitions needed to meet the demands of the demographic and epidemiological transitions. Older people currently face a number of challenges in realising the right to health however, including those related to access, quality and affordability – the three core components of UHC. Given the high rates of income insecurity in older age, the financial risk-protection element of UHC will be key. In order to address the barriers, the implications for access, quality and financial

Older person from Buenaventura, Colombia

protection for older people should be explicitly identified in each step of the process of developing systems to deliver UHC. The complexity of health in older age, including the prevalence of multimorbidity, means adaptations to systems to achieve UHC should ensure that care is person-centred and integrated.

The 2030 Agenda commits to the SDG indicators being disaggregated by income, sex, age, race, ethnicity, disability, geographical location and migratory status, including the indicators to measure progress towards UHC. Despite this commitment, older people are still excluded from the data currently collected against many indicators.

Care centred on older people

Beyond universal health coverage

Advocates for UHC have tended to focus on responses such as the removal of financial barriers, abolishing user fees in particular. But the global health community also needs to address other barriers impeding access to health services, such as geographical distance, cultural differences, gender norms, citizenship and the social determinants of health. The goal of UHC, reaffirmed by SDG3, is to reach vulnerable populations so that no one is left behind, and therefore, "innovative methods are needed so that health services reach beyond and around these barriers".

People- and person-centred care

While a single definition of people-centred care has not been agreed, key features include putting people and communities rather than diseases at the centre of health systems, and empowering people in relation to their health rather than making them passive recipients. Provision should thus be integrated rather than fragmented. The people-centred approach is at the level of populations and health systems, while for individual health providers and patients, the relationship is person-centred. To achieve the best outcomes for older people, the principle of organising care around the concerns and priorities of the people themselves is a central goal in both people- and person-centred care.

Measuring progress in establishing integrated people-centred health services is challenging, however. Measures of integration or people-centredness are not included, for example, in WHO's global health observatory, in the monitoring and evaluation frameworks for UHC and the SDGs, or in the WHO global reference list of 100 core health indicators.

Person-centred care is especially challenging – and necessary – with the most physically and mentally frail older people. Given that a high proportion of those needing care and support in older age are living with dementia, building an evidence base around the key features of person-centred care is of great importance here. Person-centred care is not confined to treatment in an institutional setting – person-centred approaches can also inform prevention and management in the community. Singapore, for example, has paid increasing attention in recent years to a range of interventions addressing the needs of people living with dementia as part of the wider older population, including appropriate public housing and transport, employment and support services.

Older people from Buenaventura, Colombia

Long-term care and support

While the focus of this report is older people's health, social support plays a key role. For people who experience a significant loss of intrinsic capacity, long-term care and support may be needed. Long-term care is defined as the activities undertaken by others to ensure that people with, or at risk of, a significant ongoing loss of intrinsic capacity can maintain a level of functional ability consistent with their basic rights, fundamental freedoms and human dignity. This definition moves the purpose of such care and support beyond that of meeting basic needs, recognising the agency of older people, including their right to make decisions about their own lives and living arrangements.

In almost all LMICs, the most significant provision of care is that provided by close relatives without financial or other support. "This results in millions of vulnerable older people not having their basic needs met, or in some instances experiencing flagrant abuses of their fundamental rights. It also places an unnecessary burden on caregivers, who are overwhelmingly female."

One of the limiting factors in constructing policy around long-term care and support is the marked absence of comprehensive data. There is no consistent data collection on long-term care and support at the global and regional levels, and there are often gaps at the national level. The studies that do exist reveal that a significant proportion of older people are care-dependent, a prevalence that increases with age. This prevalence is also significantly higher in LMICs, where care infrastructures are weaker than in high-income countries.

Data systems hinder older people's right to health

The ability to assess whether the universal and inalienable right to health is enjoyed by all older people, without discrimination and on equal terms with others, depends on the existence of, and access to, good-quality, timely data. So too does the ability to identify gaps in relation to the availability, accessibility, acceptability and quality of health services for older people. The international data system has failed to keep step, however, with the shifts both in understanding of health as people age and in the reality of the population dynamics and trends in patterns of disease.

A number of issues persist across the collection, analysis, reporting and use of data on ageing and older people. These exist within data systems in general and in the production of health statistics specifically.

Older women and men are frequently excluded from data collection mechanisms. Much of the data relied on in LMICs, including on health, comes from household surveys. Some have age caps and therefore do not routinely include older people. Another limitation is that they often provide data and analysis at the household rather than individual level, telling us little about older people's health situation or access.

When data is collected, it is not always disaggregated and analysed by age. Data collected during humanitarian and emergency situations, for example, is often disaggregated by age in only two cohorts, aged up to five and over five.

Under-reported data includes that for adults in institutional care, individuals residing in informal settings or who are homeless, and people whose sexual orientation or gender identity is lesbian, gay, bisexual, transgender or queer or questioning.

To compile the research informing this report, the researchers set out to gather and analyse national data on older people's health from 12 countries. This exercise in itself revealed the following significant issues in the accessibility of data on health in older age.

- Data across several indicators was difficult to locate or did not exist in some countries.

- Data was not readily accessible, and locating sources relied heavily on personal professional relationships and networks, and was very time consuming.
- Where the researchers were able to access data, in some cases it could not be included in the analysis due to factors such as missing or incomplete labelling and the lack of guidance to understand how the data was organised.
- For some data sets, metadata needed to assess the quality of the data was missing, while other data was not stratified by key variables.
- The comparability of variables across data sets was particularly challenging as the wording of questions and possible responses varied considerably.
- Other issues included the age of the data and the regularity with which it had been updated, sample sizes, and challenges compiling qualitative and quantitative data.

HelpAge's medical express tests in the field, Moldova

Predictions based on global estimates to understand trends across countries, population groups and time have limitations in the general quality of underlying data sources, model assumptions and in time lags between conduct of national surveys.

There is a pressing need for data to be collected across the life course and then disaggregated by age, but also by social group, gender, disability, ethnicity and location, to draw attention to the differentials in health and life expectancy within ageing populations, and to enable effective planning to meet their needs.

This includes the need to improve the coverage and quality of civil registration and vital statistics (CRVS) across LMICs to provide continuous demographic and health data on births and causes of death.

In addition, large-scale longitudinal studies conducted in multiple settings have an important role to play in improving the data environment. These have the potential to capture data on the distribution of health and disability among older populations as well as on morbidity trajectories.

New sources of data (such as mobile phones, internet usage and social media, credit and debit cards, satellite imagery) generate real-time data faster, in a greater amount and on a wider range of topics than ever before. It is not clear, however, to what extent new sources of data can close the evidence gaps.

There have been positive responses, though, to the data gaps on ageing and older people, such as the establishment of the Titchfield City Group on ageing-related statistics and age-disaggregated data, and the emerging development of conceptual and analytical frameworks for ageing-related statistics collected over the life course.

What the data tells us about the health of older people

Life expectancy

Data from the 12 profile countries included in this report shows that life expectancy for both men and women has been rising. Rates of increase differ across the countries, showing different stages of demographic transition, and therefore likely epidemiological transition, as well as significant inequities in health and wellbeing between countries.

The ratio of healthy life expectancy (HALE) to life expectancy indicates the proportion of life expected to be in good health. Globally, HALE is increasing, but may not be doing so at the same rate as life expectancy. For the proportion of life in good health to increase, gains in HALE will need to outpace those in broader life expectancy. In Kenya, Moldova and Serbia, the gap between HALE and life expectancy is increasing for men, meaning a greater proportion of life in poorer health. In Pakistan, Vietnam and Zimbabwe, by contrast, HALE is rising faster than life expectancy. Globally, women's HALE both at birth and age 60 is higher than men's, but women can expect to live a greater proportion of their lives in poorer health than men.

The shifting burden of disease

The majority of the burden that diminishes healthy life expectancy is now created by NCDs. While communicable diseases remain a concern for people of all ages in many LMICs, NCDs and injuries are the major contributors to poor health and death in most.

The prevalence of NCDs typically rises with age. The leading contributors to disease burden in the older population globally are cardiovascular disease (CVD, accounting for 30.3 per cent of the total disease burden), cancers (15.1 per cent), chronic respiratory diseases (9.5 per cent), musculoskeletal diseases (7.5 per cent), and neurological and mental disorders (6.6 per cent). While CVD is declining as a cause of death among older people in many of the profile countries, the data suggests cancer is increasing in 11 out of 12. There is also a general trend towards an increased contribution from diabetes as a cause of death among older people. In the African countries, HIV remains a significant cause of death in the group aged 15 to 49, but also contributes, albeit to a lesser extent, to deaths at older ages.

Cardiovascular disease

Data for the 12 profile countries shows that the prevalence of heart attacks increases with age. In many, the prevalence of heart attacks tends to be lower in women than men in younger old age, but rates rise more quickly as women get older.

Diabetes

Across the countries, prevalence of diabetes is generally increasing with age, peaking around age 70 before starting to decline. Increasing prevalence with age could be related to a host of both individual and systemic issues, including insulin factors in older age, higher levels of abdominal obesity and other conditions that increase the risk of diabetes, and inadequate screening and poor access to treatment and support for older people. For both older women and men, the impacts of diabetes are high and increase with age, as shown by data on the disease's complications, such as visual impairment.

Cognitive and mental health – dementia, depression and suicide

The contribution of dementia to mortality and years lived with disability is increasing. Around 50 million people live with dementia worldwide, the majority in LMICs, a figure projected to increase to 82 million by 2030. The understanding of dementia remains limited, care inadequate and diagnostic coverage low.

The prevalence of dementia increases with age in all the 12 profile countries, rising steadily until mid-older age at around age 70 before rising more rapidly and then levelling off in the oldest (aged over 90). The prevalence of dementia is higher in women than in men aged 70 and over in all 12 countries.

Data on depression for the 12 profile countries shows a somewhat less consistent trend than was seen with the other physical and mental health conditions. A gender analysis presents more consistency: in all countries, prevalence of depression is higher in older women than men (with the exception of Myanmar, where the difference is very small, but the prevalence is higher for men).

In seven of the 12 countries, mortality rates due to self-harm are highest in the group aged 70 and over, followed by the group aged 50 to 69, and lowest among 15- to 49-year-olds. Self-harm or suicide mortality rates are higher in men than women across the 12 countries. The trends point to the importance of targeted interventions on depression and self-harm that are sensitive to the specific needs of population groups and individuals.

The complexity of health in older age: what do we measure?

For health systems to be adapted to respond to the changing contexts of the demographic and epidemiological transitions, far more specific and nuanced data is required. This should highlight the complexities of health in older age, and how health challenges may be accompanied by a declining functional ability requiring health and social care. Data on activities of daily living (ADLs) and instrumental activities of daily living (IADLs) could provide more useful information, yet large-scale, comparable data is not available.

One example of how ADL and IADL data can be collected is shown by the 2012 Myanmar ageing survey. This included an analysis of older people's mobility, a key element in assessing ADLs. The results show that challenges with mobility increase with age across the range of questions asked. For example, 16 per cent of men and 22 per cent of women between the ages of 60 and 69 reported some degree of difficulty with walking 200-300m, increasing to 38 per cent for men and 53 per cent for women aged 70 and over.

The Myanmar ageing survey also included other ADLs focused on older people's ability to take care of themselves without daily assistance from others – and the challenges increased with age for both women and men. IADLs were also included, with older people asked about their ability to do household chores, manage money, use transport, make phone calls and remember to take medication. Difficulties with IADLs increased with age but were typically more pronounced in older women than in men.

Universal health coverage

To adequately monitor whether older people's right to health is being met, the core components of the right to health and of UHC need to be measured. The sourcing of data for this report has highlighted an almost complete absence of relevant data, however, and data that is collected within a broader population group is rarely disaggregated by age. Data has not been found that specifically covers the issues faced by older people in relation to the right-to-health components of availability, accessibility, acceptability and quality. On older people's access to health services and support more broadly, large-scale, representative, comparable data is again not available. Instead, there is a reliance on smaller-scale data sets or individual pieces of research. Where these have been found, they have shown that older people's right to health is not being met, and challenges with inequity, including by age and gender, persist in many countries.

Looking at the social determinants of health and linking with the SDG indicators, this project attempted to explore data on violence, water and sanitation, and poverty. The only issue for which data was found specifically for older people was violence. Some data on the prevalence of physical, sexual and psychological violence was available across all 12 countries for people aged 50 and over, with further age disaggregation.

There was no data for older people on access to water and sanitation, nor on SDG poverty indicators as reported by the UN Statistics Division. Sourcing data on the components of UHC was equally challenging. The SDG indicator on the coverage of essential health services is measured using an index reliant on WHO-managed non-communicable disease data that mostly excludes older people, and age disaggregation is not possible. The SDG indicator that monitors the financial risk-protection element of UHC is measured at the household rather than the individual level, thus providing no evidence for older people. Broader measures of the financial element of UHC, such as out-of-pocket expenditure, have similar limitations.

If efforts towards the achievement of UHC are to be monitored effectively, significant work will be needed to ensure appropriate disaggregation is possible.

Conclusions

Across different societies, many long-established norms, practices and systems regarding ageing and older people are no longer fit for purpose, and older people are not enjoying their right to health. The data reviewed for this report shows that older people in LMICs are living longer but often with unnecessary ill health, disability and loss of wellbeing. Across the majority of the 12 profile countries surveyed, the data indicates that the gap between healthy life expectancy and life expectancy is growing.

Clear variations are evident in national patterns of life expectancy, healthy life expectancy, trajectories of disease and causes of death. Women can expect to live a greater proportion of their lives in poorer health than men, for example. These variations highlight the inequities in people's experience of health and wellbeing in older age.

If the challenges facing health systems in LMICs are immense, so too are the possibilities in settings where health and care systems have not become as institutionalised and entrenched as they are in high-income

Older person in Kibondo, Tanzania

countries. There is an opportunity to shape holistic and integrated responses to the health needs of older populations, and to develop people-centred care models. UHC offers an opportunity for countries to strengthen their health systems and to adapt to demographic and epidemiological transitions.

The international data system has failed to keep step with the shifts in our understanding of health as we age, in the reality of population dynamics, and in trends and patterns of disease. Far more precise and nuanced data is required that highlights the complexities of health in older age and the challenges associated with declining functional ability that require integrated health and social care responses. Data on activities of daily living (ADLs) and instrumental activities of daily living (IADLs) could inform the development of more targeted services and support for older people.

In relation to availability, accessibility, acceptability and quality – the components of the right to health – almost no data specific to the issues faced by older people has been found. Both the focus of health data collection on younger age groups and the way data is collected results in this exclusion.

The findings of our mapping of data systems provide further concrete evidence of the gaps at national levels in the data available for planning for ageing and the health and wellbeing of older people. The gaps are such that it is simply not yet possible to systematically measure those SDG indicators that are relevant to older people. Notwithstanding the data gaps, the review of data for this report has clearly shown that, as populations grow older, the transition from acute infectious disease to NCDs presents a huge challenge.

Actions needed

As we celebrate the 70th anniversaries of the UDHR and the foundation of the World Health Organization, now is a key time to make the changes needed to realise older people's right to health. The following actions are needed.

Stakeholders must work in partnership with older people:

- older people's voices, knowledge and perspectives should inform and guide collaborative action to design and implement integrated health systems that are shaped around the priorities and concerns of older people themselves.

In response to the current demographic and epidemiological transitions, governments must:

- include ageing and older people in national health policy, planning and implementation
- establish the right to health in legislation at the national level
- close the gap in the recognition of dementia, depression and other mental and cognitive health conditions in older age
- implement gendered and inclusive-health responses, taking account of the needs of specific groups of older people
- recognise and respond to the violence, abuse and neglect experienced by older people
- develop models of UHC that are holistic, person-centred and integrated across health and care and support systems
- define services for inclusion in UHC that are age-specific and responsive to the needs of older people
- support the development of geriatric and gerontological competence among all sectors of the health workforce.

Multilateral agencies, governments and national statistical offices must ensure that:

- older people are counted and included in statistical systems, and at all stages of data collection, analysis and use
- age caps are removed from international surveys
- statistics frameworks incorporate a life-course approach, providing more nuanced and useful data on ageing, health and functional ability
- data is disaggregated by age, gender, disability and location, and that age-specific results are published
- use of the ageist concept of “premature mortality” is discontinued
- LMICs are adequately supported in the development of CRVS and that capacity is built in their national statistical offices
- measurements of UHC are extended to include indicators on older people
- data is collected for a better understanding of the relationship between poverty and health across the life course and, specifically, in later life
- the deliberations and outputs of the Titchfield City Group on ageing-related statistics and age-disaggregated data are proactively supported, disseminated and used.

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Older person, 72, from Kenya

1. Introduction

1.1 Older people's right to health

In 2018 the world celebrated two important milestones – the 70th anniversaries of the Universal Declaration of Human Rights and the foundation of the World Health Organization. At the heart of both was the global commitment to protect the right to health of all people everywhere. This is therefore a good time to assess how far in practice this vision has been inclusive of older people, the generation who grew up and have grown old in the era of the commitment to the right to health.

These milestones in health and human rights coincide with an important demographic turning point as we approach 2020 – for the first time in human history, the world's population of people aged 60 and over is projected to pass 1 billion.[1] The number of older people will continue to rise in almost all countries around the world in the coming years – and people aged 60 and over are projected to keep expanding as a proportion of the global population, to 16 per cent in 2030 and 21 per cent in 2050.

This demographic change is contributing both to a shifting pattern of disease and also to different demands being placed on health systems. Health systems around the world, and particularly in low- and middle-income countries (LMICs), have struggled to keep pace with, and adapt to, their changing contexts. As this report will show, older people face multiple barriers in accessing health services and support. Challenges are seen across the core elements of the right to health, with older people facing issues with the availability, accessibility, acceptability and quality of health services. As a result, older people's right to health is not being met.

As we mark these significant health, human rights and demographic milestones, this report reflects on the demographic and epidemiological transitions the world is seeing and considers the progress being made to realise older people's right to health. Focusing on LMICs, it explores current levels of inclusion of older people and how a health systems transition will be needed to ensure their right to health and the rights of future generations of older people.

70 years since the Universal Declaration of Human Rights

This enshrined everyone's right to health without discrimination based on age, gender, ethnicity or any other status. However, the right to health has not been specifically applied to the context of older age in international human rights law.

This report considers the opportunities provided by the current political commitment to, and efforts towards, the achievement of universal health coverage (UHC). These efforts can be supported in a way that ensures they are responsive to changing demands, and to the health issues faced by older people. It considers the role of data in driving and informing changes to health systems and the services they deliver. Data must be collected with and about older people to ensure adequate evidence for service design and delivery that is targeted and appropriate. This report explores the adequacy of current data systems and collection mechanisms and how, alongside health systems, they must be adapted in an ageing world.

The achievement of the right to health for older people is dependent on a multi-sectoral response that facilitates access to health services while also responding to an older person's complex and interdependent health and social care and support needs, linked for example to their potential

need for assistance with daily tasks to sustain independence and autonomy. This report is focused, however, specifically on health. The importance of social protection and social care systems that go beyond health is clear. Even though these contribute to health, this report does not focus on the linkage between these systems.

1.2 The aims of this report

In considering older people's right to health, this report aims to:

1. analyse older people's right to health in the context of current demographic, epidemiological and health systems transitions

2. explore UHC and relevant aspects of the 2030 Agenda for sustainable development as contemporary policy frameworks for the realisation of older people's right to health[2]

3. consider how health systems can respond to population ageing and shifting disease patterns, to ensure the availability, accessibility, acceptability and quality of health services for older people, including through the delivery of person-centred care as a key element of UHC

4. highlight the need for more availability of data on ageing and older people's health, pinpoint the gaps in the collection, analysis and use of data (including those to do with the indicators for the Sustainable Development Goals), and reveal the implications of these data issues for older people's right to health

5. provide an overview in LMICs of older people's physical and mental health and shifting disease patterns, highlighting the main health issues experienced and the key trends

6. give recommendations on what is required to ensure health and data systems are more inclusive, more enabling of the right to health for older people, and so fit for purpose in an ageing world adapting to demographic and epidemiological transitions.

This report is supported by 12 country profiles (for Argentina, Colombia, El Salvador, Kenya, Lebanon, Moldova, Myanmar, Pakistan, Serbia, Tanzania, Vietnam and Zimbabwe; see Appendix 1). These provide national information on trends in the physical and mental health status of older people, and population-level information on access to UHC. The profiles are supplemented by data mapping, showing the national data available on older people's health in the 12 profile countries, and revealing the data gaps. The data mapping results are available at www.GlobalAgeWatch.org.

Two in-depth country studies (for Tanzania and Vietnam) will be launched in 2019 to provide a more detailed analysis of progress towards UHC and the inclusion of older people.

1.3 Analysis of data

As expected, our mapping of the relevant national data revealed major gaps in relation to ageing and older people on all the salient issues. Where data was available, a range of barriers, detailed in this report, were encountered in relation to access and quality (see Appendix 2 for a note on methodology).

In short, the issues encountered during the preparation of the data for this project have provided first-hand experience of many of the data issues that are limiting effective planning for the demographic, epidemiological and health systems transitions under discussion.

The data informing the review of older people's health status in this report is necessarily largely sourced from global estimates and projections that are based on statistical modelling.[i] It is therefore presented with caution, and emphasis is placed on the discussion of the broad global and national trends rather than on an analysis at a granular level.

i Most of the disease-specific data was sourced from the Institute for Health Metrics and Evaluation, *Global burden of disease 2016*. The data was accessed during September–October 2018.

2. The right to health – barriers to access for older people

2.1 The right to health for people of all ages

For all of us, health is at the heart of our sense of wellbeing and dignity, and that of our family and friends. Our health is a factor in our ability to do the things that are important to us, our functional ability. It is therefore crucial that we are able to access services to support our health and wellbeing. This access is protected through the right to health, a fundamental element of our human rights and of our understanding of a life lived in dignity.[3]

The right to enjoy the highest attainable standard of physical and mental health is not new. It was first articulated in the 1946 constitution of the World Health Organization (WHO), which came into force on the establishment of WHO on 7 April 1948 and defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity". It states that "the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition".[4]

In 1948, the right to health was enshrined in international human rights law through its inclusion in the Universal Declaration of Human Rights (UDHR). The right to health was included as part of the right to an adequate standard of living.[5] It was again recognised in the International Covenant on Economic, Social and Cultural Rights (ICESCR),[6] which provides the most comprehensive article on the right to health in international human rights law.[7] The wording of this makes clear that the right to health goes beyond access to health services and "embraces a wide range of socio-economic factors that promote conditions in which people can lead a healthy life, and extends to the underlying determinants of health, such as food and nutrition, housing, access to safe and potable water and adequate sanitation, safe and healthy working conditions, and a healthy environment".[8]

The right to health was further defined by the United Nations (UN) Committee on Economic, Social and Cultural Rights (CESCR) in 2000, when it set out four core components of the right to health: availability, accessibility, acceptability and quality.[9]

Availability, as described by WHO, refers to "the need for a sufficient quantity of functioning public health and health care facilities, goods and services, as well as programmes for all".[10] Accessibility has four dimensions: non-discrimination, physical accessibility, affordability, and the accessibility of health information. Accessibility means health services are accessible to everyone without distinction or discrimination. Acceptability means providing people-centred care that caters for different specific needs across diverse population groups, and so is appropriate and sensitive to culture and gender, for example.[11] Acceptability also means honouring ethical duties such as protecting confidentiality and providing informed consent. WHO defines quality services as being safe, effective (evidence-based), people-centred ("responds to individual preferences, needs and values"), timely, equitable, integrated (provides "the full range of health services throughout the life course") and efficient.

These aspects of the right to health have become foundational both for UHC and the people-centred approach to health that, as this report argues, are central to the realignment of health systems to meet the needs of ageing populations.

The four components of older people's right to health

1

Availability

Health workers are not trained to respond to health challenges common in older age. Across 11 African countries, ***only 4 per cent of medical schools offered specialist courses in geriatrics and nearly 50 per cent had no geriatrics training*** in the broader curriculum at all.

2

Accessibility

Physical accessibility: a lack of community-level health services means older people, many with declining mobility, must travel long distances to receive care. This puts services out of reach. ***The average distance to a health facility in Zimbabwe is 10 km.***

Affordability: cost can discourage older people from accessing health services. ***In China 62 per cent of older people did not seek health services for financial reasons when they felt unwell.***

Health information: older people often lack information about their health and where to access services and support. ***In middle-income countries, 1 in 10 older people did not know where to access health services.***

3

Acceptability

Health systems are often insensitive to older women's specific issues. ***In rural Pakistan, most of the older women one doctor saw had a physical health issue relating to menopause.*** Yet older women are rarely considered in sexual health services.

4

Quality

Without adequate health data, services cannot effectively meet the needs of the people accessing them. ***In Africa, 34 of 40 countries that have conducted the WHO STEPS survey on non-communicable diseases have not included anyone over the age of 64.***

2.2 The right to health for older people

These definitions make it clear that the right to health, like all human rights, is universal and inalienable and must be enjoyed without discrimination on the basis of age, ethnicity or any other status. Yet while this right clearly includes older people, it has not been specifically applied to the context of older age in international human rights law. Specific reference to the right to health for older people has been made, however, in various advisory documents. The CESCR, for example, has stated that it is "clear that older persons are entitled to enjoy the full range of rights recognised in the [ICESCR]".[12] The committee asserts the economic, social and cultural rights of older persons by outlining the importance of an integrated approach, combining preventive, curative and rehabilitative health treatment,[13] stating that such an approach should maintain the functional ability and autonomy of older persons.[14]

The UN system also recognises the importance of the right to health of women, including older women. The Committee on the Elimination of Discrimination against Women (CEDAW), for example, has recommended the adoption of comprehensive physical and mental healthcare policies that ensure older women's access to affordable care and to specially trained health workers, with programmes tailored to their physical, mental, emotional and health needs.[15]

Other UN provisions underline specific health rights that are of key importance to older people. A core obligation of the ICESCR, for example, is the provision of essential drugs. In 2011, when considering the realisation of the rights of older people, the then Special Rapporteur on the right to health of the Office of the United Nations High Commissioner for Human Rights (OHCHR) described how access to such drugs for palliative care can affect older people disproportionately. Anand Grover also described how limiting equal access to palliative care on the basis of age does not comply with the right to health.[16]

Furthermore, the OHCHR's independent expert on the enjoyment of all human rights by older persons said in 2015 that states should ensure the availability of geriatric and gerontological specialists in different types of care services and facilities, that the right to palliative care should be enshrined in the legal framework, and that states should ensure the availability and accessibility of palliative care.[17]

Despite such provisions, progress in health for older people has been, and remains, deeply unequal and often limited. Older people's right to health is not therefore being realised. In LMICs in particular, older people continue to suffer exclusion and to face multiple challenges in accessing services to support their physical and mental health, functional ability and wellbeing.

A rights-based approach to health requires that health systems and services address inequity by making those who are furthest behind the first priority. This principle is echoed in the 2030 Agenda with its Sustainable Development Goals (SDGs), and in efforts towards UHC.[18] This report outlines the extent to which older people are being left behind, through an analysis of available data on older people's health and by highlighting gaps in data, where older people are simply not being counted. It makes the case for older people's inclusion in global and national health efforts and the data systems that support these, to ensure the realisation of their right to health.

2.3 Barriers to inclusion for older people

Health systems and the services they deliver are not fit for purpose in an ageing world. This reflects a widespread lack of concern in health policy-making about the impacts of population ageing. For example, a recent review of 12 LMICs across Africa, Asia and Latin America found scant attention being paid to older populations, with the focus remaining on maternal and child health.[19] In a HelpAge survey across 32 countries, 63 per cent of older people said they found it difficult to access health services when needed.[20] These findings are reflected in a

"I live on the outskirts of Bishkek, with my husband and two grandchildren. We have 5 children, 3 boys and 2 girls as well as 21 grandchildren and 5 great grandchildren. We moved to Bishkek 20 years ago. I worked as an accountant for 25 years. My pension is KGS5,250 [US$76], but most of it I spend on the medicine I need. I am lucky to have children who support us but there are so many older people who face challenges every day.

"These people have to try and make their small pension last for a month. They have to choose between buying food, having the gas or electricity at home, or buying medicine. I wish our government provided better support to older people in Kyrgyzstan by increasing their pension, providing benefits to pay utility bills and control the price of medicines for age-related diseases."

Midiakan, aged 64, Kyrgyzstan

Source: 2016 interview with HelpAge

survey of over 300,000 people undertaken by WHO, which highlighted the main barriers to access for older people (see Table 1).[21]

As the findings of this survey demonstrate, barriers to older people's inclusion in health systems and services severely limit their enjoyment of the right to health. An overarching issue is discrimination, with widespread ageism within health systems underpinning and reinforcing the challenges of access for older people. Discrimination is often overt and direct, with older people frequently reporting the behaviour of health workers as a barrier to access to services.[22] Such ageism within health systems can take a number of forms.[23] Health workers can have negative attitudes towards older people and ageing. They may patronise older people or fail to consult them on their care, due to ageist views about older people's abilities to absorb information and engage in decision-making. In a HelpAge consultation of 450 older people from 24 countries, for example, one respondent said:[24]

"The employees of the health system or public servants are imposing; they do not have the attitude of listening to us to know what we want or need. They simply decide for us and give orders."

Older person in Colombia

Access to treatment and other medical interventions may also be restricted or denied on the basis of a person's age. In a survey of ageing experts from across Europe, 80 per cent were worried about the standard of care they would receive in older age. Fifty-one per cent felt that older people were significantly less likely to receive adequate assessment and treatment compared with younger people.[25]

An analysis of the core components of the right to health identified by the UN further reveals the limitations for older people. Accessibility to services takes a number of forms. Physical accessibility is limited by inadequate primary healthcare infrastructure in many LMICs, and a

Table 1: Reasons given by people aged 60 and over for not accessing health services

Reason for not accessing health services	Country income category (% of respondents)			
	High income	Upper-middle income	Lower-middle income	Low income
Could not afford the visit	15.7	30.9*	60.9*	60.2*
No transport	12.1	19.3*	20.7*	29.1*
Could not afford transport	8.7	12.9*	28.1*	33.0*
Health providers' equipment inadequate	11.2	10.5	14.1*	16.7*
Health providers' skills inadequate	19.0	8.3	7.8	13.1*
Previously treated badly	23.8	8.7	7.9	8.3
Did not know where to go	12.2	9.7	9.8	7.8
Was not sick enough	21.5	31.8	27.3	25.8
Tried but was denied access	20.0	16.2	8.3	8.5*
Other	43.8	22.5*	23.5*	13.9

* Results are significantly different (P<0.05) from those reported by adults younger than 60 years

Source: WHO[21]

"One of the things we are having difficulties with is the medication on diabetes. I don't think they [the government] are doing enough for diabetics where medication is concerned. The government needs to invest in research and the expertise to find out more about how to treat diabetes.

"Some of us have done a lot for society and yet we are not getting anything back. Instead, we are abused at health centres and some of the doctors don't give us the service they should. We need better quality healthcare all round, both the medication and the service."

Glandford, aged 84, Jamaica

Source: 2016 interview with HelpAge

lack of outreach services delivered to communities. A study in rural Tanzania found that older people's access was substantially affected by transport availability and cost.[26] The most common means of reaching a health facility for older people was walking, with journeys taking up to four hours. Similar issues arise with physical accessibility in Zimbabwe, where the average distance to a health facility is 10 kilometres.[27] For older people with declining levels of mobility, health services are often simply out of reach, as illustrated here:[28]

> *"[The health clinic] is too far for me to walk to. It takes a day to get there on foot and I don't have enough money to go by bus. If I am really sick and cannot walk, I just have to stay at home until I get better."*
>
> Chaussauca, aged 89, Mozambique

Economic access is similarly problematic for older people. Poverty is one of the main threats to their wellbeing worldwide. Surveys show that in most Latin American and sub-Saharan African countries, older people make up a disproportionate number of the poor.[29] Older people are often faced with prohibitive costs for health services, whether for consultations, medication, diagnostic tests or treatment. Where out-of-pocket payments for consultations are high, older people are less likely to seek health services. In China, for example, nearly 62 per cent of older people who reported illness did not seek health services for financial reasons.[30]

Older people often lack information about their health, conditions that might affect them, and about where to access health services and support. Levels of health literacy are lower among older age groups compared with other sections of the population, often due to lower access to primary and secondary education in their youth.[31]

Older people also face significant barriers in terms of the availability of health services. In many LMICs, health workers are inadequately prepared to respond to health challenges common in older age. Many training approaches and curricula were developed in the 20th century in response to a different pattern of disease, and therefore do not include geriatrics or gerontology, and often lack even a basic focus on the conditions seen in older age.[32] Older people also often struggle to access medicines to treat non-communicable diseases (NCDs). These medicines are not always included on essential medicines lists and so remain unavailable, particularly in LMICs.[33]

A key element of quality care is that it is effective – that evidence-based services are provided to those who need them. To achieve this, data must be collected for all people to highlight the health issues and experiences faced by different groups, and to inform the best ways to respond to these. Current data systems and collection mechanisms do not support such evidence-based service delivery. Many health-related surveys exclude people over a certain age by using age caps. Health information systems are also often not set up to ensure adequate analysis and use of data. Where data is collected at the facility level for individual patients, with sex, age and other characteristics, an adequate breakdown by age is lost as the data is aggregated up the system. A wealth of information on older people's health is therefore not

analysed, understood or used to inform health policy, system design or service delivery.

The acceptability of health systems for older people is often limited. Even those people who are able to access health facilities may find a system unable to meet their specific needs. Many health systems in LMICs are structured to manage acute, episodic illness, focusing on diagnosis and cure. As a result, they are less able to respond to longer-term, chronic health conditions and NCDs more commonly experienced in older age. The nature of these systems means they are often unable to provide the person-centred, integrated care important in older age and necessary for the realisation of older people's right to health. Facilities also often fail to respond to the specific needs of the older population. Barriers include a lack of accessible toilets, long waiting times for services and queues to use them, and a lack of available seating. These present particular challenges for older people, especially for those with disabilities and declining levels of mobility.[34]

Health systems also often fail in their gender sensitivity in relation to older age. Older women are rarely considered in sexual and reproductive health services even though they may have specific health needs associated with the menopause and post-menopause. According to one doctor working in rural health facilities in Pakistan, most of the older women she sees need treatment for illnesses that are either directly or indirectly related to post-menopausal conditions, such as arthritis and osteoporosis, or to issues such as uterine prolapses and vaginal bleeding resulting from difficult and multiple childbirths.[35] Yet older women are rarely, if ever, included where reproductive health services are available to younger women.

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"Before this project, I didn't know anything about diabetic retinopathy but I knew about diabetes. I used to care for my aunt who had glaucoma. She lost two of her toes because of diabetes and she has passed away now.

"When I used to visit the health centre I used to go there early to see the doctors. I would sit there waiting all day, from half past seven in the morning until about three in the afternoon, and I didn't get medication. It was costly too. When my mother was alive I had to take taxis to take her to the health centre, and sometimes we didn't get through and would have to take the taxi back again. My mother died in 2012 and I found it very hard."

Cynthia, aged 65, Jamaica

Source: 2016 interview with HelpAge

3. Demographic and epidemiological transitions

As outlined in the previous section's discussion of the current barriers to access for older people, health systems in many LMICs are not fit for purpose. To ensure the realisation of older people's right to health, health systems must be adapted to respond to the issues and challenges that are common in older age, through the provision of available, accessible, acceptable, quality services and support. Yet health systems have failed to keep pace with the changing contexts in which services are provided. Two major, interlinked global transitions are driving the need for health systems to change: a demographic transition and an epidemiological transition.[36]

3.1 The demographic transition driving the need for systemic change

A major demographic transition has taken place over the past century, which has changed the composition of the world's population. Progress in global health and development has led to declines in the rates of both fertility and mortality. This has enabled increasing numbers of people to survive into older age and has led to a rapid ageing of the global population. By 2020, the number of people in the world aged 60 and over is projected to pass the 1 billion mark.[37] Over the first half of the 21st century, population ageing will continue progressively, with the number of people aged 60 and over estimated to reach 2 billion by 2050. The pace of this demographic change is fastest in LMICs, where 70 per cent of people aged 60 and over live, a figure set to increase to 74 per cent by 2050.[38] In 34 LMICs, 10 per cent or more of the total population was aged 60 and over in 2015. This is projected to increase to 67 countries by 2030.[39]

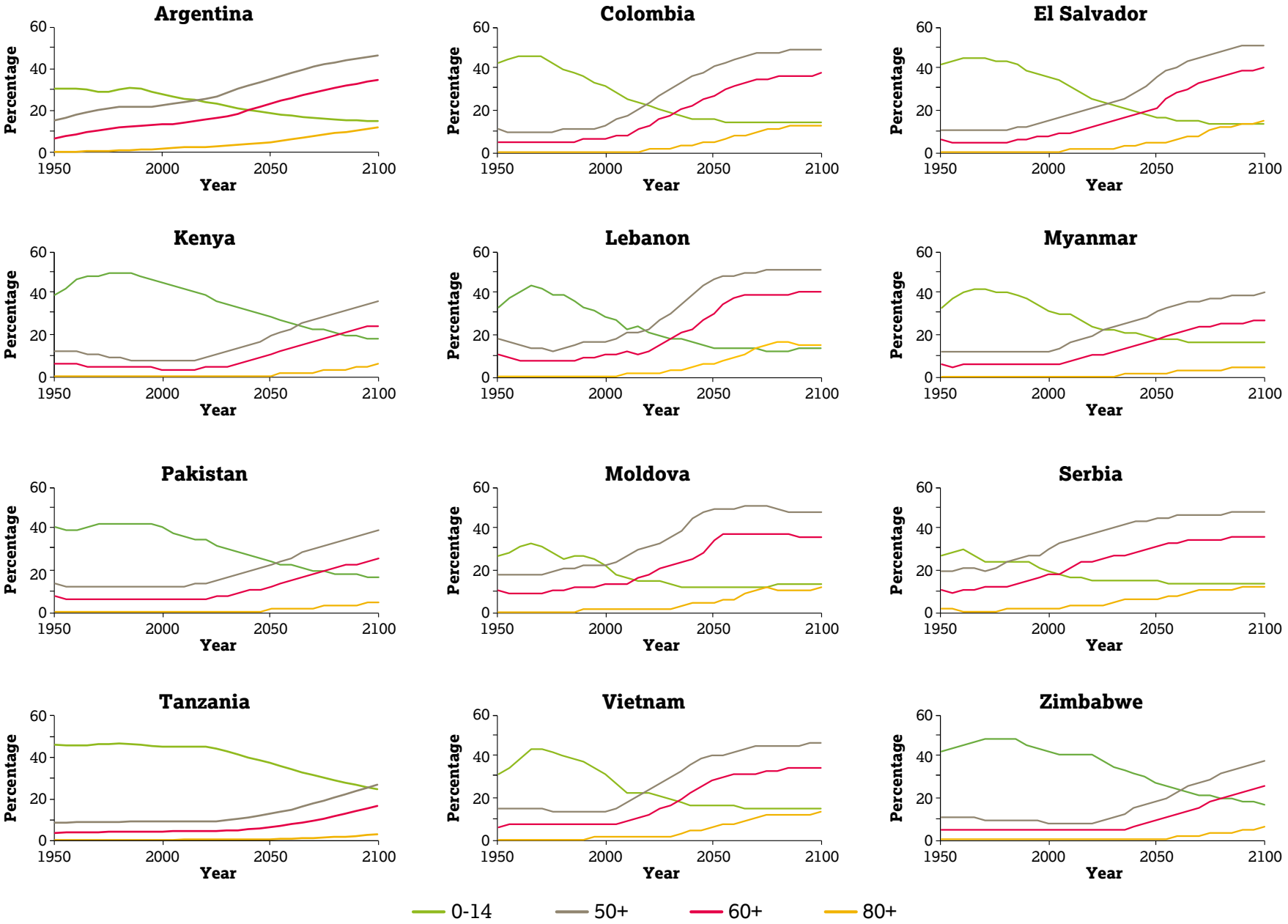
Another significant element of the demographic transition is the change in the composition of the population in terms of both the younger and older age groups. The population aged 0-14 will reach 2 billion by 2030, mirroring the group aged 50 and over but with a much slower rate of growth. Population trajectories will change over the coming years, with older people outnumbering younger ones. This shift is happening at different rates across LMICs. In many middle-income countries, including Serbia, the shift has already occurred. In El Salvador and Myanmar, the shift is imminent, and in some of the so-called younger countries, such as Kenya and Tanzania, it is still some years away. Figure 1 shows the population structure in each of the 12 countries from 1950 to 2100, for the age groups of 0-14, 50 and over, 60 and over, and 80 and over.

3.2 Gendered dimensions of the demographic transition

There is a clearly gendered dimension to the demographic transition, and by extension to the epidemiological transition. The clearest difference between men and women is in life expectancy. Women continue to outlive men in most countries of the world, living for an average of 4.7 years longer.[40] Gendered differences in life expectancy are seen at both birth and age 60.

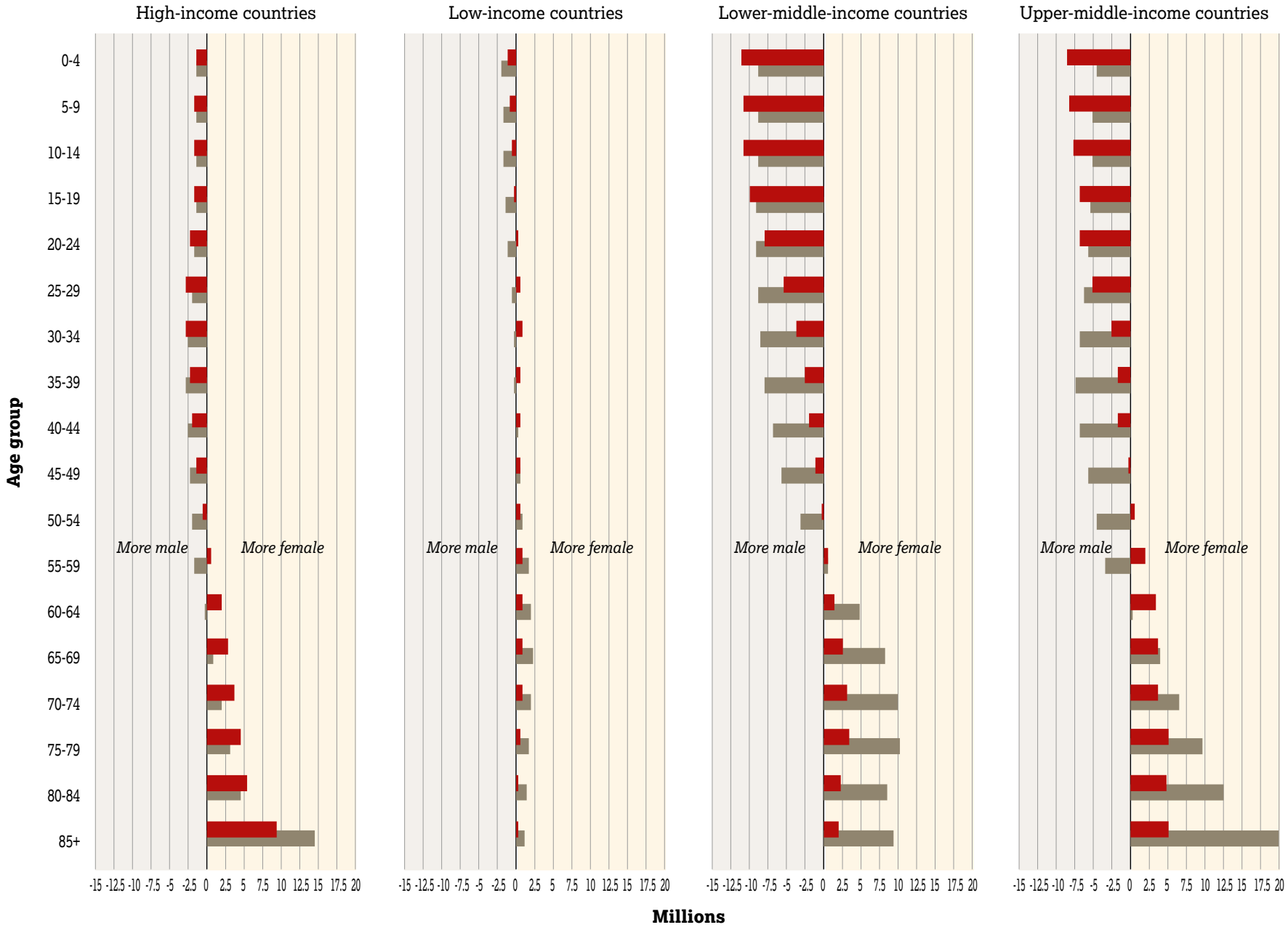
Sex ratios also demonstrate the gendered differences in population structures. While males tend to outnumber females at younger ages, this shifts with increasing age. In LMICs, the gap between women and men gets larger at progressively older ages (Figure 2).

Figure 1: Population structure in the 12 profile countries, 1950-2100 profile.



Source: United Nations, Department of Economic and Social Affairs, Population Division[41]

Figure 2: Population proportion of males to females



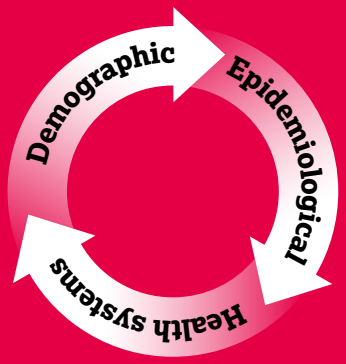
Source: United Nations, Department of Economic and Social Affairs, Population Division[42]

At the national level, the gendered dimensions of demographic change have implications for health in older age. Experiences of health differ for older women and men due to the different choices they have made and the health events they have experienced across the life course. The prevalence of different conditions varies by sex for older people. Older women and men face different consequences of discrimination based on their sex and other factors, including socioeconomic status. Gender- and age-sensitive health systems and services are needed that are able to respond to the gendered drivers of health differences, including the differences in the social determinants of health, the higher mortality in men, and the higher morbidity among women. A discussion of some of these gender dimensions, and the available data, is presented in Section 7 (What the data tells us about the health of older people).

3.3 The epidemiological transition driving the need for systemic change

The demographic transition towards an increasingly older population is a contributing factor in the epidemiological transition. The global pattern of disease has been shifting over recent years away from communicable diseases towards NCDs. WHO highlighted the rise in NCDs and its association with population ageing in *World health statistics 2008*. Data projections showed that, as populations in LMICs age over the subsequent 25 years, the proportion of deaths due to NCDs will rise significantly. It estimated that, globally, deaths from cancer will increase from 7.4 million in 2004 to 11.8 million in 2030, and deaths from cardiovascular diseases will rise from 17.1 million to 23.4 million in the same period.[43]

While NCDs are often associated with high-income countries (HICs), they actually have a greater impact on LMICs. Of the 41 million annual deaths caused by NCDs globally, 32 million occur in LMICs.[44] While there is a rapid rise in NCDs in these countries there is also a significant and continuing burden of communicable diseases. Many



The three transitions

The demographic transition

- The world is ageing rapidly – by 2020, there will be more than 1 billion people aged 60 and over.
- Low- and middle-income countries are home to 70% of the world's older people.
- Women outlive men around the world by an average of 4.7 years.

The epidemiological transition

- The global pattern of disease is shifting towards non-communicable diseases (NCDs).
- NCDs have a disproportionate impact on older people – in 2011, 75% of deaths from NCDs in low- and middle-income countries were of people aged 60 and over.

The health systems transition

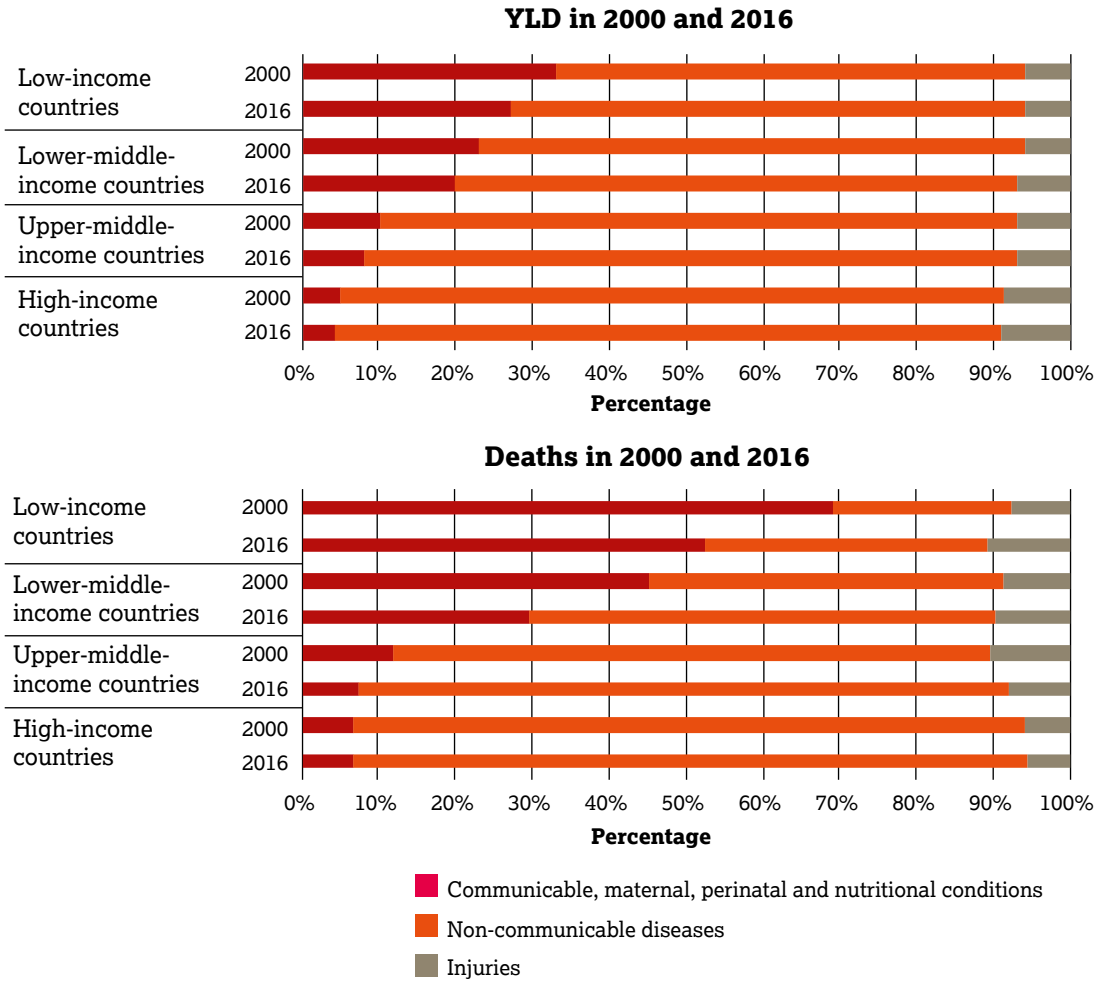
- Health systems need to adapt to the world's ageing population and the growth in NCDs to ensure older people's right to health is met.
- The Sustainable Development Goals and the global push towards universal health coverage provide opportunities to guide this transition.

LMICs thus face the double burden of communicable and non-communicable diseases (Figure 3).

NCDs have a disproportionate impact on people in older age. Data on mortality due to NCDs is rarely published for all older people, due to a focus on monitoring the so-called premature mortality. This is defined as death between the ages of 30 and 70 (HelpAge challenges the use of the term "premature mortality", however, because it suggests that mortality is acceptable at an older age). It was estimated that, in 2011, people aged 60 and over accounted for 75 per cent of deaths from NCDs in LMICs.[45]

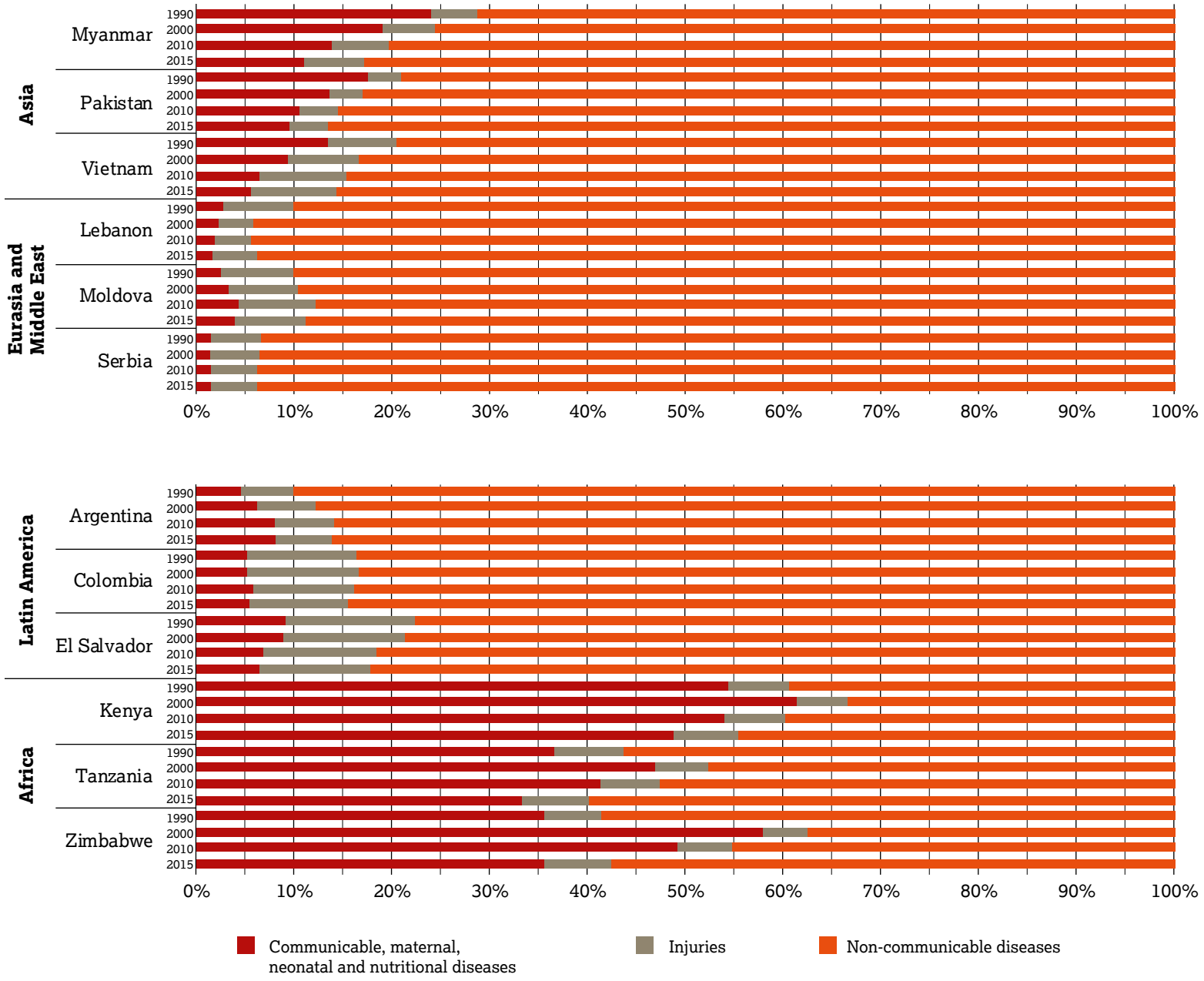
In addition to high rates of NCDs in older age, there are also high rates of multimorbidity. As people age, they are more likely to experience more than one chronic condition at the same time. This can lead to interactions among conditions, between one condition and the treatment for another, and among the medications prescribed for different conditions.[46] The lack of a standard definition of multimorbidity, and of the conditions included, means comparable data on its prevalence is lacking. A systematic review of studies in seven HICs showed that over 50 per cent of older people are affected by multimorbidity, and that prevalence increases sharply among the oldest old.[47] Evidence on multimorbidity in LMICs is more limited, but given the double burden of communicable disease with NCDs, multimorbidity is likely to be even more prevalent.[48] Figures 4 to 7 show the leading causes of death and years lived with disability (YLDs) for older people in the 12 profile countries.

Figure 3: Years lived with disability (YLD), and deaths, distributed between communicable and non-communicable diseases, and injuries in countries of different income levels



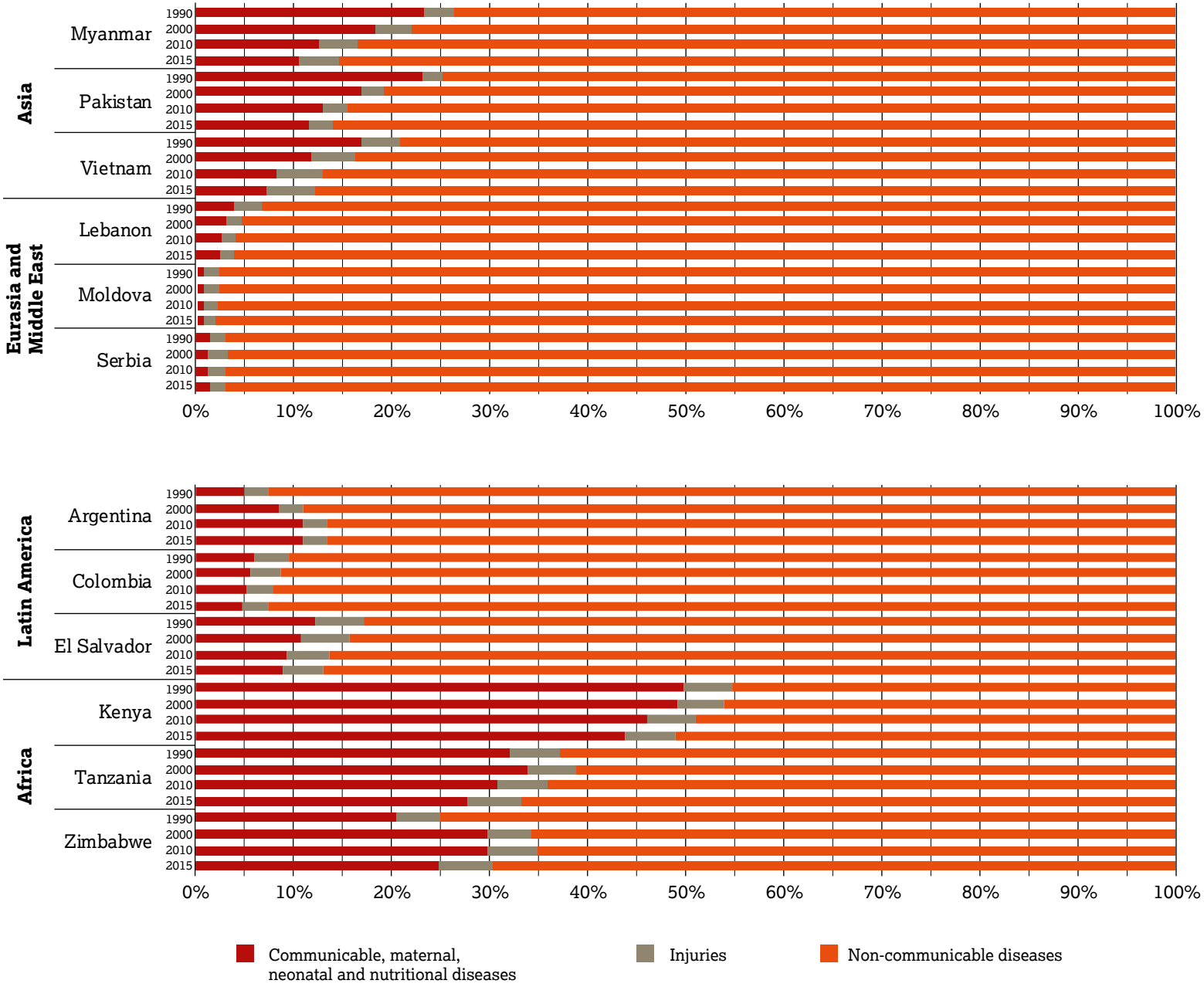
Source: World Health Organization[49]

Figure 4: Distribution of deaths by major disease burden categories in population aged 50-69, both sexes



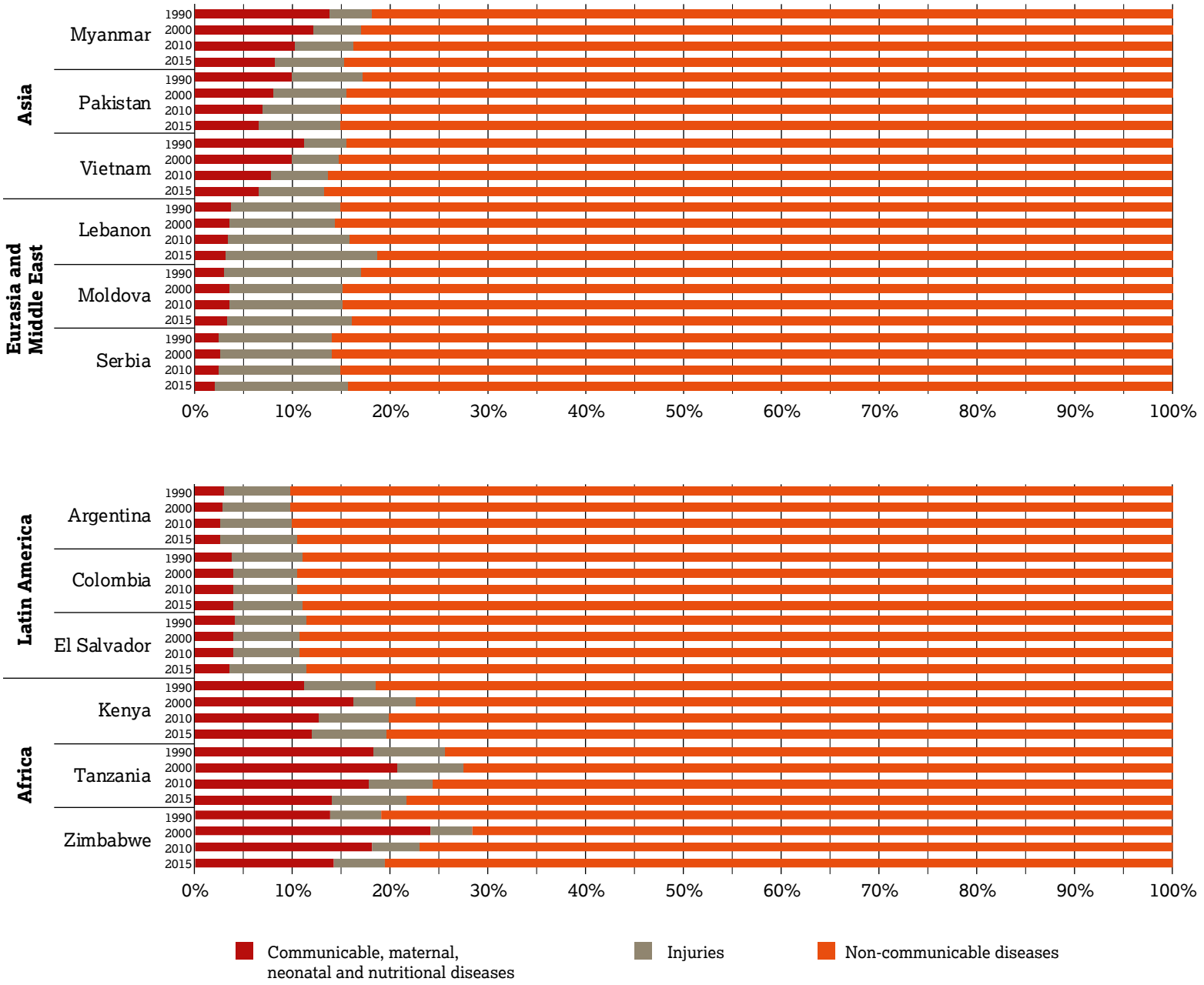
Source: Institute for Health Metrics and Evaluation[50]

Figure 5: Distribution of deaths by major disease burden categories among population aged 70 and over, both sexes



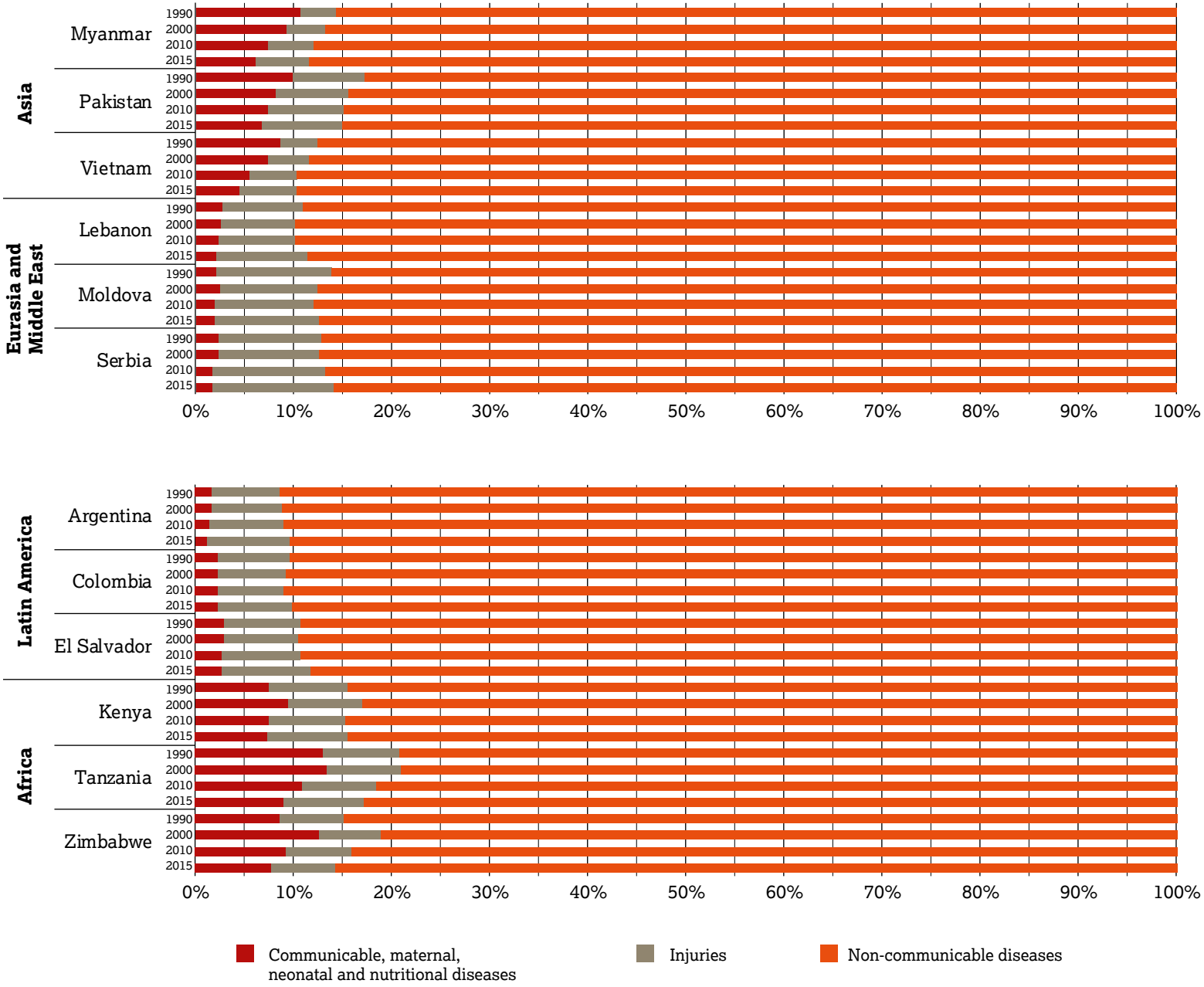
Source: Institute for Health Metrics and Evaluation[51]

Figure 6: Distribution of years lived with disability by major disease burden categories among population aged 50-69, both sexes



Source: Institute for Health Metrics and Evaluation[52]

Figure 7: Distribution of years lived with disability by major disease burden categories among population aged 70 and over, both sexes



Source: Institute for Health Metrics and Evaluation[53]

The data shows that the prevalence of multimorbidity is higher in older women than older men. Studies of incidence, however, have shown similar rates across the sexes, pointing to potentially lower survival rates in older men.[54] This is a further indication of the gendered dimensions of health in older age and the need for systems to be both age- and gender-sensitive.

The high rates of NCDs and multimorbidity, including a combination of NCDs and communicable diseases, are an indication of the complex health and care issues faced by many older people. The health-related challenges they represent are often accompanied by the need for more support with tasks of daily living. This results in the health and social care elements of older people's lives becoming increasingly complex and interdependent. It is this complexity that health systems, and care and support systems, have so far failed to address.

The demographic and epidemiological transitions require health systems to adapt to a new reality, moving away from the vertical structures that address specific diseases towards more integrated and coordinated services that respond holistically to health issues.

Taking a human rights-based approach to health means enabling all people to enjoy the right to health. To be able to do that, health systems must be equipped to respond to the specific disease patterns and health issues of their populations, while developing the ability to implement person-centred care.

Older person, 64, from Muthande Society for the Aged in South Africa

4. Universal health coverage – a pathway to achieving older people's right to health

4.1 The 2030 Agenda and human rights

In September 2015, world leaders gathered at the UN Sustainable Development Summit to adopt a new development agenda. *Transforming our world: the 2030 agenda for sustainable development* includes 17 Sustainable Development Goals (SDGs) that set out a collective plan of action to end poverty, fight inequality and injustice, and tackle climate change by 2030.[55] The 2030 Agenda will guide and influence global and national policies, and is unprecedented in its scope and ambition, going well beyond the Millennium Development Goals (MDGs) that came before.

The 2030 Agenda is also anchored in the human rights principles and standards discussed in Section 2 (The right to health – barriers to access for older people). The declaration that was agreed by world leaders established that the 17 goals sought to "realize the human rights of all". The agenda is grounded in the UN Charter and international human rights treaties and emphasises "the responsibilities of all States … to respect, protect and promote human rights and fundamental freedoms for all, without distinction of any kind".

Reflecting this commitment to human rights, the 2030 Agenda contains a central pledge to leave no one behind and to reach the furthest behind first. It is well established in the rhetoric around the SDGs that no goal should be considered met unless it is met for all.[56] This pledge puts equality and non-discrimination at the very heart of global and national sustainable development efforts and marks a paradigm shift towards a universal and inclusive development model.

The 2030 Agenda thus represents a major opportunity to promote a human rights-based approach to development and offers significant opportunities to advance the realisation of human rights for people of all ages. While there are several welcome and explicit references to older people within the final agreement, it is the implicit inclusion of older people, thanks to the pledge to leave no one behind, that has opened up room for a broader and more inclusive approach to development globally.

The advent of the SDGs has also been accompanied by a call for a data revolution, recognising the need for concerted action at all levels to improve the quality and range of data available to measure success. The pledge to leave no one behind sharpens the focus in particular on the need for disaggregated data covering all social groups. Progress against the goals at the global level will be tracked via a global indicator framework, with indicators to measure 169 targets. This framework was developed by the Inter-agency and Expert Group on Sustainable Development Goal Indicators (IAEG-SDGs), made up of 28 national statistical offices, and endorsed by the United Nations Statistical Commission.

The SDG implementation processes under way at the national level offer a mechanism to highlight policies and issues of relevance to older people and to hold governments to account on the inclusion of ageing and older people in policies, programmes and budgets. One area where the inclusion of older people is particularly clear is in the commitment of SDG3 to "ensure healthy lives and well-being *for all at all ages*" (emphasis added).[57]

4.2 SDG3 – an opportunity to realise older people's right to health

All people have the right to the highest attainable standard of health, including people in older age. SDG3 provides a critical opportunity to realise older people's right to health.

Improving global health has long been a central concern for development policy and practice, and was reflected in the MDGs. The interaction between health and poverty is well established. But while the MDGs have led to an unparalleled mobilisation of resources to support global development, and there was encouraging progress in relation to the health goals, successes fell short of the targets set within those goals, and did not match the progress in other MDG areas such as poverty reduction.[58]

Furthermore, the health MDGs were criticised for focusing on particular diseases and health risks for specific population groups, at the expense of strengthening broader health systems. This meant that a country could make significant progress towards health-related MDG targets without strengthening the capacity of the health system to respond to shocks and new challenges. This was perhaps most evident in the outbreak of Ebola in West Africa, where aid had been focused on the MDGs related to specific infectious diseases such as HIV, and maternal and child health services, while the capacity to respond sufficiently to events such as Ebola remained poor.[59] This skewed focus can also be seen in the response to the challenges many countries face in dealing with the increased burden of NCDs and the other epidemiological changes that are taking place alongside population ageing.

The approach to health in the SDGs is much broader than in the MDG era. The SDGs as a whole include a wide range of targets addressing the spectrum of diseases, as well as the systems and infrastructure needed to ensure health and wellbeing. This marks a significant step towards ensuring access to appropriate services, addressing age discrimination and exclusion in health settings and ensuring that all older people can access the health services they need, without prohibitive out-of-pocket expenses.

Significantly, the SDGs include a target (3.4) on NCDs, recognising the shifting burden of disease and offering the promise of increased focus and investment in an area of particular concern for older people. This new focus on NCDs is welcome, but the concept of "premature mortality" included in the target has been problematic. Setting on an arbitrary age-related threshold risks the exclusion of older people from health promotion and treatment programmes, denying people over 70 the right to the highest attainable standard of health and reinforcing ageist views about the value of life in older age. Several governments raised concerns in the discussion on indicators to measure SDG targets, and the age threshold for the indicator corresponding to target 3.4 has since been removed.

At the heart of SDG3 is target 3.8, which promises to "achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all". It may be just one of the 13 targets under SDG3, but UHC has a special importance within the discussion on sustainable development and global health in the SDG era, and it was prominent throughout the negotiations on the 2030 Agenda.

The UHC target is recognised as central to the achievement of all the others, providing a unifying structure to counterbalance a pursuit of various targets in silos rather than in a sustainable and integrated manner.[60] This special emphasis, and the subsequent discussion on how health systems must change and be financed, provides another critical opportunity to address older people's right to health. UHC is a chance for national health systems, and the global health community more broadly, to respond to the demographic and epidemiological transitions.

4.3 The third global health transition

UHC has been called the third global health transition, following the demographic and epidemiological transitions, and achieving it calls for

Members of Thanh Hoa's intergenerational self-help club in Vietnam do physical exercise before starting their monthly meeting

profound changes in the ways in which health systems are organised and financed.[61] UHC provides a potential pathway for the transitions needed within health systems to meet the changing demands that have resulted from the demographic and epidemiological transitions, and to ensure the realisation of the right to health for older people.

While the profile of UHC has been raised through the recent commitments of the 2030 Agenda and SDG3, the impetus towards it has a long history. The right to health was included in the constitution of WHO at its foundation in 1948, and this focus was reinforced in the 1978 Declaration of Alma-Ata on primary healthcare.[62] Since the beginning of this century, meanwhile, both individual countries and the global health community as a whole have increased their commitment to the development of UHC. WHO member states endorsed UHC at the World Health Assembly in 2005, as a central goal of health systems that must "be further developed in order to guarantee access to necessary services while providing protection against financial risk".[63]

There have been a number of recent reaffirmations of the need to make progress towards UHC. The 2012 Bangkok statement on UHC set out the rationale for urgent action: "one billion people worldwide do not have access to healthcare, 150 million people face catastrophic healthcare costs each year because of direct payments for healthcare, while 100 million are driven below the poverty line; thereby contributing to avoidable morbidity and premature mortality,[ii] aggravating inequity and impeding sustainable social and economic development".[64] Also in 2012, both the Mexico City political declaration on UHC and the United Nations General Assembly emphasised the responsibility of governments to "urgently and significantly scale up efforts to accelerate the transition towards universal access to affordable and quality health-care services".[65]

WHO has taken a leading role in the promotion of UHC, making it the focus of two world health reports. The 2010 report gave practical guidance on the reform of health financing systems to pursue UHC,[66] and the 2013 report again emphasised the need for progress.[67] Following these various global-level commitments and initiatives, increasing numbers of countries, including some LMICs, have begun to take concrete steps towards the implementation and achievement of UHC.

WHO defines UHC as ensuring that all people have access to the health services they need (including prevention, promotion, treatment, rehabilitation and palliation) of sufficient quality to be effective while also ensuring that the use of these services does not expose the user to financial hardship.[68] Closely aligned with the human rights principles and core elements of the right to health discussed earlier in this report, the three core components of UHC are equity in access, quality and financial risk protection. Equitable access to health services means that all people should be able to access health services and support. The achievement of UHC would require the quality of those services to be high enough to improve people's health. The financial component of UHC is focused on ensuring that the cost of accessing health services does not put people at risk of financial hardship.[69] WHO also states that, to achieve UHC, countries must advance in at least three dimensions: they must expand priority services, include more people and reduce out-of-pocket payments.[70]

A joint WHO and World Bank monitoring report provides the latest data on the status of UHC globally. It shows that at least half of the world's population still lacks access to essential health services, 800 million people spend more than 10 per cent of their household budget on health, and almost 100 million people are pushed into extreme poverty each year because of out-of-pocket health expenses.[71]

4.4 Universal health coverage and older people

Recognising that a higher proportion of future populations will be older, SDG3, and particularly the commitment to UHC, offers an opportunity for countries to move health systems away from a focus on vertical disease-specific programmes towards providing more integrated and coordinated services that respond to the new

ii As noted earlier, HelpAge contests the use of the term "premature mortality".

demographic and epidemiological dynamics. UHC requires a shift towards a health systems-strengthening approach to support this change (see Box 1).

Older people currently face a number of challenges in realising their right to health (see Section 2, The right to health – barriers to access for older people), including those related to access, quality and affordability

Box 1. The building blocks of a health system fit for purpose in an ageing world

Service delivery
For health systems to be able to respond to older people's health, services must be provided through a person-centred approach to care, addressing the individual older person, and not particular diseases or conditions in isolation. This will support a more targeted response able to tackle the complexities of multimorbidity and the challenges associated with declining functional ability.

Health workforce
Health workforces must be better equipped to respond to the needs of ageing populations. Systems need to ensure an increased level of competence across the workforce in older people's health. More specialist care needs to be available through an increased cadre of geriatricians. To achieve this, changes are needed to training curricula and guidelines for medical students and in-service health professionals.

Health information systems
Data collected from individual patients on health outcomes, access and inequities must be analysed with an appropriate level of age disaggregation to ensure an evidence base on older people's health that can inform decision-making and service delivery. Processes must be put in place within health information systems to ensure detailed understanding is not lost as data is aggregated when it passes up the system.

Access to essential medicines
Medicines for conditions common in older age – hypertension and diabetes, for example – must be included in essential medicines lists. Procurement, supply and storage systems must be in place to ensure availability and affordability for older people. Assistive devices and technologies must also be accessible.

Financing
Governments should strive for services to be free at the point of access for older people. Where social health insurance schemes are used as the financing mechanism for health systems, these must be progressive, ensuring pooled resources with equal access for all, irrespective of age, gender, level of ability or any other characteristic. These schemes must also include coverage for conditions common in older age and their associated services and treatments.

Leadership and governance
The right to health should be incorporated in national law. Ageing and older people's health must be explicitly included in national health policies. These must be accompanied by national strategies for healthy ageing that are fully budgeted and funded, and include monitoring and evaluation plans.

– the three core components of UHC. Given the high rates of income insecurity in older age, the financial risk-protection element of UHC will be key. Data shows that households with an older person experience greater financial burden due to health costs, including impoverishment, catastrophic health expenditures and borrowing money to pay for health services.[72]

In order to address the barriers, the implications for access, quality and financial protection for older people should be explicitly identified in each step of the process of developing UHC systems.[73] As governments consider the services that need to be included in a basic package of services for the delivery of UHC, they will need to understand the shifting pattern of disease and the types of conditions commonly experienced by older people. A transition to person-centred, integrated and holistic care is needed to tackle the complexity of health in older age, including the prevalence of multimorbidity, so adaptations to systems to achieve UHC should ensure care is person-centred and integrated. WHO has committed to both these approaches. Such a transition will require fundamental reforms in how health systems are financed and organised. The implementation of a strong primary care system, for example, will require a shift in infrastructure investments and the deployment of human resources to primary facilities and health networks.

The financing of services is key to ensuring equitable access and financial protection, including for older people. Some high-income countries with more advanced ageing populations offer some lessons. Japan, for example, has 50 years of political commitment and experience in progressive financing mechanisms, providing health and long-term care services, and strategically purchasing services, drugs and devices. Successful financing approaches can result in cost savings, reduced cost escalation and enhanced gender equity, and can foster innovations towards UHC that are inclusive of older people.[74]

The question of how UHC is monitored is an overarching issue that will be essential in ensuring that efforts to achieve UHC are inclusive of older people. It will be possible to measure inequalities in service coverage only if data is collected for all people and if disaggregation is possible across the range of characteristics agreed in the SDGs. The 2030 Agenda commits to the SDG indicators being disaggregated by income, sex, age, race, ethnicity, disability, geographical location and migratory status, including the indicators to measure progress towards UHC (indicators 3.8.1 and 3.8.2). Data currently collected against many indicators, however, including those on UHC, exclude older people. Older people are excluded from indicator 3.8.1, which measures coverage of essential health services – defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, NCDs, and service capacity and access.[75] Data for many of the interventions is drawn from population-based surveys that include an age cap. The source of data on NCDs, for example, is the WHO STEPwise approach to surveillance (STEPS) surveys, which tend to include only people up to the age of 69.[76] As a result, older people's access to health services, and equitable progress towards UHC are not being measured.

WHO is in the process of developing an impact framework for its new 13th general programme of work (GPW13, 2019-2023), which includes a combined measure of UHC service coverage and UHC financial hardship that will be used to monitor the relevant GPW13 targets.[77] Attention has been given to the need to monitor UHC across the life course, with proposed tracer indicators specific to health in older age – cataract surgery, treatment for severe hip osteoarthritis and rehabilitation after complex injuries. Collection of this data, alongside age-inclusive data collection and adequate age disaggregation across the range of other tracer interventions to be measured, would be a positive step in ensuring better measurement of the inclusion of older people in efforts towards UHC. These potential changes by WHO would also provide an opportunity to make progress with SDG indicator 3.8.1 through similar additions.

5. Delivering care centred on older people

5.1 Beyond universal health coverage for the inclusion of older people

While universal health coverage (UHC) is a key foundation of equitable healthcare, its implementation will not necessarily guarantee effective services to all, since UHC will not by itself translate into assured access to health services. UHC, with its central focus on health financing, has, for example, concentrated at the individual level on the ability to pay for health services. The impetus for UHC has been driven in part by the sharp rise in out-of-pocket, often catastrophic, payments for essential services, with the key barrier to UHC identified as the lack of affordability of health services for the poorest people, including many older people. Advocates for UHC have therefore tended to focus on responses such as the removal of financial barriers, abolishing user fees in particular.[78]

Nevertheless, while action to reduce such costs is important – and indeed, without it, UHC will remain unattainable – financing reform addresses only part of the challenge. The global health community needs to address other barriers to health services. Factors such as geographical distance, cultural differences, gender norms, citizenship and the social determinants of health also impede access to health services. For older people, many of these issues build multiple barriers, so that, for example, age, gender, geography and poverty combine to ensure the exclusion of many rural women experiencing later-life poverty from health service access. The goal of UHC, reaffirmed by Sustainable Development Goal (SDG) 3, is to reach vulnerable populations so that no one is left behind – so "innovative methods are needed so that health services reach beyond and around these barriers".[79]

5.2 People-centred care and older people

While a single definition of people-centred care provision by health services has not been agreed, the key features include "people and communities, not diseases, [being] at the centre of health systems, and empowering people to take charge of their own health rather than being passive recipients of services".[80] This implies that health provision should in turn be integrated, rather than fragmented across health disciplines, services and locations.

In introducing its framework on integrated people-centred health services, WHO sets out its rationale for promoting both UHC and people-centred care, making clear the importance of older populations in driving this agenda:[81]

"Approximately half the world's population lacks access to essential health care. Longer lifespans and the growing burden of long-term chronic conditions requiring complex interventions over many years are also changing the demands on health systems. ... For health care to be truly universal it requires a shift from health systems designed around diseases and health institutions towards health systems designed for people. ... service delivery through an integrated and people-centred lens is critical to achieving this, particularly for reaching underserved and marginalised populations to ensure that no one is left behind."

For WHO, a framework for people-centred care has five key aspects that reflect the right to health. Services should be:

- equitable in access – for everyone, everywhere
- of high quality
- safe, effective and timely; they should also be participatory

- efficient – provided in the most cost-effective setting with the right balance between health promotion, prevention, and in- and outpatient care, avoiding duplication and waste of resources

- resilient – through the strengthened capacity of health actors, institutions and populations, to prepare for, and effectively respond to, public health crises.

This is an ambitious agenda, and there are still many challenges in the people-centred approach to health. Not least among these is that of data gathering, to provide evidence of the efficacy of people-centred care. WHO accepts this, explaining that they have developed a framework and not a measurable strategy. Since this is a new programme of work for WHO, "there are no universally accepted indicators to measure progress in establishing integrated people-centred health services".[82] Measures of integration or people-centredness are not included in WHO's global health observatory, in the monitoring and evaluation frameworks for UHC and the SDGs, or in the WHO global reference list of 100 core health indicators.[83] WHO accepts that the development of indicators will be a necessary element of the implementation of the framework, and working in partnership with academic institutions and other partners, "appropriate metrics for these critical, but less frequently measured domains of health care" will be needed.[84] This may underestimate the number of studies that have been undertaken on person-centred care in high-income settings, but certainly reflects the challenge involved in data-gathering in LMICs.

5.3 From people-centred to person-centred care

A distinction may be drawn between people-centred and person-centred care, but the description of each does not fundamentally differ. Their basic elements include the centrality of people rather than disease as the focus of health services. At the level of populations and health systems, this implies a people-centred approach, while for individual health providers and patients, the relationship is person-centred.

The challenge for each lies in interpretation. As for the wider people-centred approach, there is no single agreed definition for person-centred care. This is partly because person-centred care is still an emerging area and because, if care is to be person-centred, by definition its nature will depend on the needs, circumstances and preferences of the individual receiving the care. This is particularly true for older populations, whose varying and diverse health needs require, as we have seen, approaches that move beyond a reliance on curative, institutionally based health systems. To achieve the best outcomes for older people, the principle of organising care around the concerns and priorities of the people themselves is a central goal. As we age, our physical and mental capacities may decline (albeit at widely varying rates), and older people may accumulate long-term conditions with accompanying losses in functional ability. "The effects of these changes are mitigated by the availability (or not) of personal, family, social and financial resources, the quality of the built environment and the use of assistive technologies".[85] This calls for the comprehensive approach embraced by person-centred, integrated care to understand the complex and diverse elements of wellbeing in older age (Box 2).

These person-centred approaches to older people's care are critical because only in this way can an effective response be offered to the increasing diversity of people in older age (in which chronological age is no guide, and one older person with a particular condition at a certain age can have a very different set of needs and preferences from those of a similar older person). The potentially increasing complexity of an older person's health needs also demands a person-centred approach. The right to health and wellbeing does not diminish with advancing age, and should be a particular focus for people who are especially vulnerable physically and mentally.

5.4 Older person-centred care and dementia

Person-centred care is especially challenging – and necessary – with the most physically and mentally frail older people. As the incidence of dementia rises in LMICs, person-centred care is a particular focus

Box 2. Conventional care versus older person-centred and integrated care

Conventional care	Older person-centred and integrated care
Focuses on a health condition (or conditions)	Focuses on people and their goals
Goal is disease management or cure	Goal is maximising intrinsic capacity (a combination of the physical and mental capacities that contribute to functional ability)
Older person is regarded as a passive recipient of care	Older person is an active participant in care planning and self-management
Care is fragmented across conditions, health workers, settings and life course	Care is integrated across conditions, health workers, settings and life course
Links with healthcare and long-term care are limited or nonexistent	Links with healthcare and long-term care exist and are strong
Ageing is considered to be a pathological state	Ageing is considered to be a normal and valued part of the life course

Source: Adapted from Beard et al. [86]

of attention, yet evidence of its practice and outcomes is patchy. Nevertheless, given that a high proportion of those needing care and support in older age are living with dementia, building an evidence base around the key features of person-centred care is of great importance. A recent study from Singapore may point the way. It examined person-centred work with people with dementia in an institutional setting, outlining a number of factors that contributed to observed positive outcomes. Psychosocial care was combined with close attention to physical treatment (including early mobilisation, restraint-free care and management of hydration). This approach emphasised a knowledge of the patients' life histories, and of their preferences and values, and responded to the unmet needs of people with challenging behaviours.[87]

While this practice addresses treatment in an institutional setting, person-centred approaches can also inform prevention and management in the community. Singapore has paid increasing attention in recent years to a range of interventions addressing the needs of people living with dementia as part of the wider older population, including appropriate public housing and transport, employment and support services. The research evidence for Singapore's 2016 action plan for ageing was derived from a comprehensive year-long series of consultations with older people. This resulted in a 10-point action plan for implementation by the government, emphasising the important role played by participatory research, with older people being key informants for policy and practice change.[88]

Although studies such as these in relatively well-resourced settings in middle-income countries are valuable, they do not reflect the daily reality for the majority of older people living with dementia in LMICs. There has been a growth in interest in dementia research in Africa, Asia and Latin America in recent years, with a focus on models of health service delivery and social support. Two key research projects in particular are addressing dementia issues in LMICs. The 10/66 Dementia Research Group has 30 research partners in the Caribbean, China, India, Latin

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Older people in El Salvador

America, Russia and South-East Asia.[89] The group aims to gather the evidence needed to develop policies to tackle and treat dementia. Meanwhile, the STRiDE (strengthening responses to dementia in developing countries) project uses economics, epidemiology and policy analysis to help LMICs respond to the needs of people with dementia.[90]

The impetus behind these research initiatives is in large part a reflection of the rapid rise in the prevalence of dementia in LMICs, as people live longer. Estimates of prevalence in these countries have been revised upwards as identification and diagnosis improve. Yet, as a recent study of sub-Saharan Africa notes, even a most basic foundation of evidence is far from uniformly found, and entirely lacking for some parts of the region.[91] These data challenges are to be found in other regions too. In Latin America, for example, only a very small number of studies have examined the prevalence of risk and dementia types, and protective factors, and there is little data on the social and environmental conditions for older people living with dementia.[92]

The gradually accumulating evidence from LMICs does nonetheless provide some direction for policy and practice. Above all, a key message emerging is that the focus of health systems needs to be on the development of the capacity to provide meaningful assessment, care and support – in contexts where it has been estimated that typically less than 10 per cent of people with dementia have a timely diagnosis.[93] Recent studies of geriatric training and coverage in sub-Saharan Africa indicate how unprepared such regions are to respond to the wide challenges of ageing populations, let alone to the difficulties of specific frailties. One survey of medical schools in 11 African countries found that only 4 per cent had a geriatrics specialty, and nearly half offered no geriatrics training at all. This was attributed to a lack of staff expertise and funding, together with the absence of geriatrics in national curriculums.[94]

Elsewhere, the situation is similar. As recently as 2011, India, despite having an infrastructure to serve its ageing population (including a national policy for older people, and academic institutions and nongovernmental organisations), had only one medical training programme in geriatrics (the Post graduate Diploma in Geriatric Medicine, PGDGM). This created a lack of appropriate training for other health workers, meaning that "condemnatory attitudes and limited awareness, knowledge or acceptance of geriatrics as a legitimate discipline can manifest in inaccessible or poor-quality care".[95] In more recent years, progress has been seen. The new National Programme for the Health Care of the Elderly (NPHCE) has been launched and eight regional geriatric centres have been established. These run the PGDGM and are starting to run a full MD (Medicinae Doctor) in geriatrics. The vision is to expand the programme nationwide to ensure training is available in more locations around the country.

5.5 Addressing older people's holistic health and social care needs

While the focus of this report is an examination of older people's health, it is important also to recognise that for many, health services are not the only means of maintaining wellbeing. Social support also plays a key role, and for people who experience significant loss of intrinsic capacity, long-term care and support may be necessary. Long-term care has been defined as the activities undertaken by others to ensure that people with, or at risk of, a significant ongoing loss of intrinsic capacity can maintain a level of functional ability consistent with their basic rights, fundamental freedoms and human dignity.[96] This definition moves the purpose of such care and support beyond that of meeting basic needs, recognising the agency of older people, including their right to participate in decisions concerning their health and wellbeing.[97]

The debates continue about how best to provide a continuum of care that meets the increasingly diverse needs of older individuals. The integration of health services and care and support is frequently proposed as a key means of maintaining the wellbeing and dignity of older people, with integration being not only within health systems but also between the two sectors of health and social care. Evidence

of successful integration is notably absent, however. Long-term care and support may be provided in a wide variety of settings, and by a variety of providers, including governments, leading to lively debates on the sustainability of such provision, and on the right balance between what families and governments should provide. Nevertheless, in almost all LMICs, the most significant provision of care is that provided by close relatives, who do so without financial or other outside support or guidance. "This results in millions of vulnerable older people not having their basic needs met, or in some instances experiencing flagrant abuses of their fundamental rights. It also places an unnecessary burden on caregivers, who are overwhelmingly female."[98]

> *"There are no support services available to older people in my community. Only family members are taken as or believed to provide assistance with daily activities. But this does not happen for all."*
>
> Woman aged 71, Nepal[99]

One of the limiting factors in constructing policy around long-term care and support is the marked absence of comprehensive data. There is no consistent data collection on long-term care and support at the global and regional levels, and there are often gaps at the national level. A systematic review in 2014 found a strong bias towards HICs: over 95 per cent of the relevant publications reviewed dealt with these countries, although only 37.5 per cent of people aged 65 and over worldwide were in HICs in 2010. The review found that Africa, India, and Latin America and the Caribbean were particularly underrepresented. Not only is the data coverage patchy, but the definition of care-dependence, especially in LMICs, needs analysis over whether it is defined by care professionals alone, or jointly with the recipients of care and support.[100] The continued imbalance in data and research availability reflects, and contributes to, ongoing neglect by policy-makers.[101]

The studies that do exist reveal that a significant proportion of older people are care-dependent, a prevalence that increases with age. This prevalence is also significantly higher in LMICs, where care infrastructures are weaker than in HICs. The rapidity of population ageing in LMICs will also create sharp increases in care-dependency.[102] Already, large numbers of older people in sub-Saharan Africa are unable to perform essential tasks of daily life without the assistance of others.[103] But the lack of data for sub-Saharan Africa (and indeed for elsewhere) means that in many cases the numbers are estimates. Data is required in areas such as: [104]

- provision in national legislation and regulations to establish rights for the universal coverage of long-term care and support services
- availability of services provided by both formal and informal caregivers
- affordability of long-term care and support
- impoverishing impact of out-of-pocket payments on caregivers and care recipients
- long-term care and support financing.

Steps are being taken to address some of these issues. The Asian Development Bank, for example, has conducted diagnostic studies on long-term care and is providing technical support for capacity-building towards national strategies in six countries (Indonesia, Mongolia, Sri Lanka, Thailand, Tonga and Vietnam). These studies assessed the current situation and the data available on the key building blocks of long-term care and support systems: governance, service provision, human resources, quality management and financing.[105] WHO, in recognition of the importance of the integration of health and care services to the effectiveness of long-term care and support, has conducted a Delphi study to evaluate the actions required, and generate a consensus on these, for the implementation of its integrated care for older people (ICOPE) approach. Significantly, the study identified the role of unpaid carers, such as family members, as a critical component of the long-term care and support workforce.[106] Such studies are only initial steps, however, and in developing effective long-term care and support strategies, the accumulation of further such data will be critical.

6. How data systems help or hinder older people's right to health

6.1 Data is key to realising older people's right to health

Our ability to assess whether the universal and inalienable right to health is enjoyed by all older people, without discrimination and on equal terms with others, depends on the existence of, and access to, good-quality, timely data. So too does our ability to identify gaps in relation to the availability, accessibility, acceptability and quality of health services for older people.

As this report has set out, our understanding of health in older age has become increasingly nuanced and there is a greater awareness among researchers, health professionals and ageing experts of the increasing diversity of people in older age and their diverse and often complex health, care and support needs. The demographic and epidemiological shifts make this an increasingly urgent area of public policy that must be addressed, particularly in the context of the global push towards UHC. Despite this, as we have seen, the broader policy discourse on health systems and UHC offers little to older people, and often fails to address the multiple barriers they face in accessing health services. The international data system has also failed to keep step with the shifts both in our understanding of health as we age and in the reality of the population dynamics and trends in patterns of disease.

6.2 The promise of a data revolution

Data is now generated faster, in greater quantity, and on a wider range of topics than ever before. The SDGs and the central pledge to leave no one behind have catalysed a global conversation on the data revolution that began even before the SDGs were agreed. As early as 2013, the high-level panel appointed by the UN to advise on the global development agenda after the MDGs called for a data revolution involving governments, international agencies, civil society organisations and the private sector that "would draw on existing and new sources of data to fully integrate statistics into decision making, promote open access to, and use of, data and ensure increased support for statistical systems".[107] The panel's view that better data and statistics would help governments to track progress and make sure their decisions are evidence-based, was widely shared, and several initiatives and partnerships have been established since to drive action on the data revolution. In parallel, modelled estimates, new data sources and technology are becoming more prominent, raising new questions about their role and use in traditional statistics. Yet five years after the idea first caught hold, the data revolution has not yet addressed the challenges in producing statistics on ageing and older people.

6.3 Data systems fit for purpose

A number of issues persist across the collection, analysis, reporting and use of data on ageing and older people. These exist within data systems in general and in the production of health statistics specifically, affecting both primary and secondary data at global, national and local levels.

6.4 Data collection

Older women and men are frequently excluded from data collection mechanisms. One of the major contributors to this evidence gap is that much of the data relied on in LMICs comes from household surveys that have age caps and therefore do not routinely include older people in

the sample. The Demographic and Health Survey (DHS) is an example of a widely relied-on nationally representative household survey. The DHS programme regularly administers the survey in over 90 LMICs, covering areas of population, health and nutrition, including topics such as HIV prevalence, and violence and abuse. However, the population sample excludes women aged 50 and over, and men aged 55 or 60 and over.[108] While the DHS incorporates a questionnaire that provides some information on older people in the context of a household, this data is mainly limited to information about basic demographic characteristics.

Efforts to build a consensus to address the caps in individual-level surveys have been unsuccessful because the survey provider and funders point to the defined and limited mandate of the DHS. In reality though, these surveys are being relied on to provide data well beyond their original mandates. The DHS provides data for around 30 SDG indicators, including domestic violence, access to clean water and sanitation, malnutrition, tobacco use, internet access and mobile-phone ownership, and these indicators are relevant to all population groups.[109] While there has been little progress towards changing the DHS questionnaires and guidance at the global level, certain countries have removed or raised age caps. In South Africa's recent 2016 DHS, for example, the age caps were removed completely, and in Haiti's 2016 DHS the cap was raised from age 59 to 64 for male respondents. While other countries may also want to extend the sample for DHS, there are cost implications of doing this. A similar issue can be observed in the WHO STEPwise approach to surveillance (STEPS), a survey mechanism for collecting national-level data on risk factors for NCDs. Despite the prevalence of NCDs among older people, 34 out of 40 countries in Africa that have conducted STEPS surveys have included people only up to age 64.[110]

A related challenge is that much of the limited information available on the important issues of older people's health is collected through surveys at the household level, and tells us little about dynamics within households or about individual access. For example, mapping

data on ageing across 25 LMICs in the Asia Pacific region shows that a majority of countries (17) did not collect information on individual respondents' sources or amounts of income.[111] The study reviewed data collected through censuses, the DHS and ageing surveys. Because this information is usually collected at a household level, we know little about the income security of different generations with different needs and priorities but living in the same household. From a health-data perspective, this means that our understanding of health expenditure in relation to income is based on assumptions about how resources are shared in a household. Furthermore, the household-level data available via DHS can provide only limited information about the environmental risk factors affecting the health of older people in households surveyed, such as sanitation, water supply, housing quality (assessed by construction material) and whether anyone in the household smokes tobacco. It does not provide any information on the individual health or disability status of older people.

Censuses can provide some individual-level information on older people in addition to household-level data, but this is limited by the scope of the survey, and does not provide in-depth information on older people's health.

Specialised surveys and longitudinal studies on ageing can provide much richer, more in-depth information on ageing and health. The lack of recognition and priority afforded to ageing, however, means that these are not widely undertaken. Mapping in Asia shows that countries with lower percentages of older people tend to have fewer surveys specifically addressing older people's issues.

Examples of gaps in statistics on health in later life that originate at the point of collection include the prevalence of HIV and other sexually transmitted diseases among older people, psychological wellbeing (for example, depression, loneliness, psychiatric disorders), access to health insurance, and use of health services. Even data on health behaviour among older people (for example, smoking, drinking, diet and exercise) was collected by less than half (11) of 25 LMICs in the Asia Pacific region.

Policy instruments that guide data collection can perpetuate the exclusion of older people in important areas. For example, WHO's NCD global monitoring framework uses an age-bracketed indicator on the unconditional probability of dying from four main NCDs, limited to death between ages 30 and 70 despite the fact that NCDs disproportionately affect older people.[112]

6.5 Data analysis and disaggregation

When data is collected, it is not always disaggregated and analysed by age, which makes patterns and trends among different age groups impossible to discern. WHO's recently released country profiles on NCDs and mental health are a case in point.[113] They present comprehensive information on NCDs for all countries, but the data on risk factors is presented in single cohorts for all adults. The indicator on harmful consumption of alcohol, for example, is reported for age 15 and over, while physical inactivity, obesity, high blood pressure and diabetes are reported for age 18 and over. Data collected during humanitarian and emergency situations is often disaggregated by age in only two cohorts, aged up to five and over five, leading to a lack of awareness of the number of older women and men affected or the type of support they need. Where disaggregation does occur, there is often a lack of consistency in the age ranges applied, leading to challenges for comparison across international data sets.

A review of most recent censuses in seven African countries shows a similar lack of consistency in reporting findings.[114] One country published demographic data by region and urban areas with no analysis of other collected data such as education, economic activity, chronic conditions and disability. Others included a very granular analysis of age, gender and disability across a range of domains.

It is estimated that more than 134 million people globally are in need of humanitarian assistance and protection.[115] However, there is a paucity of reliable and transparent age-, sex- and disability-disaggregated data

at the levels of programming, monitoring and assessment.[116] While up to 14 million older men and women with disabilities are currently affected by humanitarian crises, there is insufficient disaggregation to enable an analysis by sex, disability and age in later life.[117] Other under-reported people include adults in institutional care, individuals residing in informal settings or who are homeless, and people whose sexual orientation or gender identity is lesbian, gay, bisexual, transgender or queer or questioning.

6.6 Access, accessibility and comparability of data

Limitations on access to data on older people and their use of health services create further difficulties in the analysis and use of significant sources of data on ageing and older people, particularly at national levels. HelpAge's mapping exercise in the Asia Pacific region found that there was considerable variability in the accessibility of ageing surveys across and within countries.[118] The researchers in that study point to a common practice in Asia of limiting data access to researchers working for a particular institute or with the national statistical office, although they note that there is a trend towards greater accessibility of data on population ageing. While the health and retirement study (HRS) family of surveys in China, India, Indonesia and Thailand are fairly uniform and therefore comparable, the researchers encountered significant challenges in the comparability of data collected through other ageing surveys in these countries. Significantly, while DHS and census data provides far less information on older people, the researchers note that it is both more easily comparable and more readily available.

These findings from Asia reflect broader challenges in the data system. To compile the research informing this report, the researchers set out to gather and analyse national data on older people's health from 12 countries. This exercise in itself revealed the following significant issues in the accessibility of data on health in older age.

- Data across several indicators was difficult to locate or did not exist in some of the countries.
- Data was not readily accessible, and locating data sources relied heavily on personal professional relationships and networks, and was very time-consuming.
- Where the researchers were able to access data, in some cases it could not be included in the analysis due to factors such as missing or incomplete labelling and lack of guidance to understand how the data is organised.
- For some data sets, metadata needed to assess the quality of the data was missing, while other data was not stratified by key variables such as location or socioeconomic status.
- The comparability of variables across data sets was particularly challenging as the wording of questions and possible responses varied considerably.
- Other issues included the age of the data and the regularity with which it had been updated, sample sizes, and challenges compiling qualitative and quantitative data.

If the richest sources of data on ageing and older people's health are not available, accessible and comparable, this affects the reliability of the data available to inform national policy, supply comparative studies and be reported in the global system. Our understanding of older people's health at the national, regional and global levels is at risk of being disproportionately informed by data that is limited in its scope.

6.7 Global estimates

Demand for timely and comparable data, particularly to monitor global development frameworks such as the MDGs and SDGs, have been partially addressed through the production of estimates – data generated from statistical modelling.[119] This is especially relevant for cause-specific mortality data because typically fewer than a tenth of deaths in LMICs are recorded, the rest being estimated.[120]

The assumptions and methodological choices used in modelling can have a significant impact on estimates, and there are particular implications for health-related data on ageing and older people. Boerma et al. found that the prediction of maternal mortality by the UN and the Institute for Health Metrics and Evaluation differed by 35 per cent and 55 per cent, respectively, from the data collected by DHS. The authors note that "statistics for indicators such as mortality associated with non-communicable diseases or suicide, or monitoring access and quality of health care by estimates based on mortality by cause data, should be interpreted with great caution for countries with poor cause of death data."[121]

Global estimates serve an important role in understanding trends across countries, population groups and time. However, projected data has limitations. These relate to the general quality of underlying data sources, model assumptions and the time lags between the reference period of indicators or the reporting of underlying data on one hand, and the year of the predicted statistics derived from these data on the other.[122] This reinforces the need to strengthen efforts for routine and periodic national data collection, improve national analytical capacity, build political will and sustained financing to support these processes, and to raise greater awareness of the limitations of both empirical and modelled data.

6.8 The need for better data

As older populations grow in number, they also become more diverse. For example, while average life expectancy at birth is rising in almost all countries, there is evidence that the health of the poorest quintile is not improving at the same rate as that of the richest quintile.[123] There is thus a pressing need for data to be collected across the life course and then disaggregated by age, but also by social group, gender, disability, ethnicity and location, to draw attention to the differentials in health and life expectancy within ageing populations, and to enable effective planning to meet their needs.

Official data sources such as censuses, longitudinal ageing studies and administrative data remain important sources of regular population statistics. Nevertheless, there are a number of challenges. While most countries conduct censuses, there are 10 years between the surveys used and they collect information on a limited number of health indicators. The mapping of ageing-related statistics in the Asia Pacific region has shown that the majority of countries (21) collect information on disability, but with a lack of consistency in the types of disability covered. Some countries asked about five types of impairment – mobility, vision, hearing, speech and cognition – while others included only two or three types.[124]

Civil registration and vital statistics (CRVS) are one type of administrative data that provides continuous demographic and health data on births, mortality and causes of death. This data informs national policies and priorities for health. However, only 9 per cent of deaths are registered in LMICs and 1 per cent in low-income countries. More than half (56 per cent) of countries with no death registration are in Africa, followed by western Pacific countries (16 per cent). For the 12 profile countries in this report, death registration coverage was not available in three countries (Pakistan, Vietnam and Zimbabwe) and data with at least 90 per cent coverage was available in just four countries (Argentina, Lebanon, Moldova and Serbia). In addition to the issue of low coverage, the low quality of CRVS records remains a challenge. A review conducted by WHO shows that among 119 countries that registered deaths, data from nearly one-third of countries was estimated to be of low quality.[125] There is a clear need to improve the coverage and quality of CRVS across LMICs. As noted earlier, the approach is often to use statistical modelling to reach an estimate, but investment in CRVS is another important and sustainable part of the solution within the global data ecosystem.

Gaps in CRVS systems have a significant impact on the lives of older people who were born when birth registration was less advanced. Lack of a legal identity, and erroneous information such as incorrect date of birth, can restrict an older person's access to services, their civic participation,

and their ability to claim their rights. In 2016 in Zanzibar, 30 per cent of interviewed older people did not have a birth certificate and 25 per cent had an incorrect birth date on their ID card. These were the two main reasons given by older people for not receiving a universal pension at the time.[126]

Large-scale longitudinal studies conducted in multiple settings also have an important role to play in improving the data environment. These have the potential to capture data on the distribution of health and disability among older populations as well as on morbidity trajectories. A 2010 review of 51 longitudinal studies found that they provide unique opportunities to better understand the relationship of morbidity and mortality with other factors such as behaviour, environment and genetics, and to address the question of why some people cope with chronic disease and others succumb rapidly.[127] However, most such studies are concentrated in HICs and only very few are conducted in LMIC settings.

6.9 New sources of data and new technology

Given the challenges in relation to official statistics, one solution could be to look to other sources and to better understand how new technology can help address knowledge and evidence gaps on ageing. A key feature of the global conversation on a data revolution discussed earlier is the recognition that the use of new data sources and technologies can help us to monitor progress, often much more quickly than official statistics, which take time to collect, compile and analyse. New sources of data (for example, mobile phones, Internet usage and social media, credit and debit cards, satellite imagery) generate real-time data faster, in a greater amount and on a wider range of topics than ever before.

However, it is not clear to what extent new sources of data can close the evidence gaps on the current population of older people in relation to health or other domains. Nor is it clear whether reliance on technology will help us to reach the furthest behind, or instead further entrench the exclusion of highly marginalised people from data and statistics. Less than half of older people aged 75 and over own a mobile phone, significantly lower than the proportion in younger cohorts. Only 10 per cent of people aged 75 and over use the internet. Additionally, there are gender and rural-urban divides, and income level is also likely to play a part in terms of access to mobile technology.[128] As some of the socioeconomic inequalities (for example, education and income) continue to reduce, greater proportions of future generations of older men and women stand to benefit from greater access to and use of mobile and internet technologies.

6.10 Towards a conceptual framework for ageing statistics

The policy implications of data systems that are not fit for purpose are profound. The gaps and issues described earlier result in the production of statistics on health and ageing that provide only a narrow and partial understanding of ageing, and cannot, therefore, adequately inform policy at national levels. The limited and inadequate granular data that is available itself becomes a further barrier to the inclusion of older men and women in policy and programme responses.

This presents a double challenge. First, the limitations of available data and existing tools means that we cannot adequately measure the situation of older people across frameworks such as the SDGs. Second, such frameworks do not provide an adequate way for measuring the rights and wellbeing of older people. The gaps inherent in the SDG framework mean that it reflects and perpetuates a view of ageing that is too narrow to guide the development of national policies and action plans.

In the case of the SDGs, concepts are missing that have particular importance in older age. These include autonomy and independence, and access to long-term and palliative care. Critical factors for understanding the barriers faced by older people accessing health services are absent from the targets and indicators, barriers such as

physical access to health facilities, the skills, knowledge and attitudes of staff, costs and out-of-pocket expenditure on health.

One solution is working through a conceptual and analytical framework for ageing-related statistics collected over the life course, enabling an understanding of ageing and of later life as part of a continuum affecting people of all ages. Older people's participation in the development of such frameworks is critical to ensuring that conceptual development is anchored in older people's preferences and perspectives.

Models for such frameworks are available. Statistics Canada, for example, has developed an ageing framework that guides the review of all data and analysis of ageing produced in recent years internally and externally. This helps to identify emerging ageing issues and, in addition to meeting current data needs, helps to establish future ones. The framework helps to identify data gaps and ways to address them, guides the review of international and national frameworks and identifies improvements in data collection and analysis.[129] Statistical leaders need to respond to the data challenges proactively. One very positive response has been the establishment of the Titchfield City Group on ageing-related statistics and age-disaggregated data. With the support of the UN Statistical Commission, the Titchfield City group will address existing issues and deficits in data on ageing (see Box 3).

Box 3. The Titchfield City Group on ageing-related statistics and age-disaggregated data

The Titchfield City Group was established at the UN Statistical Commission in March 2018. City groups address specific thematic challenges in the development and implementation of statistical methodologies. Representatives from statistical offices participate voluntarily and each group agrees its terms of reference, which are then approved by the UN Statistical Commission.

The overall objective of the Titchfield City Group is to develop standardised tools and methods for producing ageing-related data and data disaggregated by age, and to encourage countries to do so, by playing a leading role in the development and communication of new standards and methodologies. The Titchfield City Group will also address the existing issues and deficits in data on ageing. Specifically, it plans to:

- identify policy priorities, related statistical requirements, new data sources and gaps in statistical measurement
- develop a conceptual framework for ageing-related statistics, to promote a common understanding of the core concept of ageing
- produce guidelines and case studies on age-related statistics and harmonised standards and methods for collection, processing and analysis of ageing-related data
- identify and promote good practice in relation to administrative and civil registration and vital statistics data related to ageing
- contribute to the review and analysis of SDG implementation and monitoring.

The Titchfield City Group is led by the United Kingdom's Office for National Statistics. HelpAge was a founder member with the UK's Department for International Development (DFID), and the Titchfield City Group's development has been steered by a core group comprising statistical offices from Brazil, Cameroon, Canada, Chile, China, Colombia, Denmark, Hungary, the Netherlands, the Philippines and South Africa, with leadership from the UK. Other participants in the core group include Caricom, UN Department of Economic and Social Affairs, United Nations Development Programme, United Nations Population Fund, UN Women and WHO.

7. What the data tells us about the health of older people

7.1 Health and data – some parameters

Having examined some of the challenges associated with current data systems and the potential influence of these on health policy and the design and delivery of health services and support, this section explores the data that is available in relation to ageing and health, and how it could inform the much-needed health systems transition. Linked to the issues highlighted earlier, specific data on older people's health, particularly in relation to access to services and universal health coverage (UHC), is scarce.

The data reviewed for this report is largely sourced from global-level estimates and projections, rather than from national-level surveys or clinical data, both of which are less frequently collected and less readily accessible. This report focuses on data on healthy life expectancy and the burden of disease across the life course, with a focus on older age and older people's health status. It uses data on a number of specific diseases and explores whether any data is available on the broader wellbeing of older people, and on older people's access to health, including the efforts towards UHC. Given the challenges with data outlined earlier, the data accessed and used across these areas differs, so the analysis unavoidably has limitations.

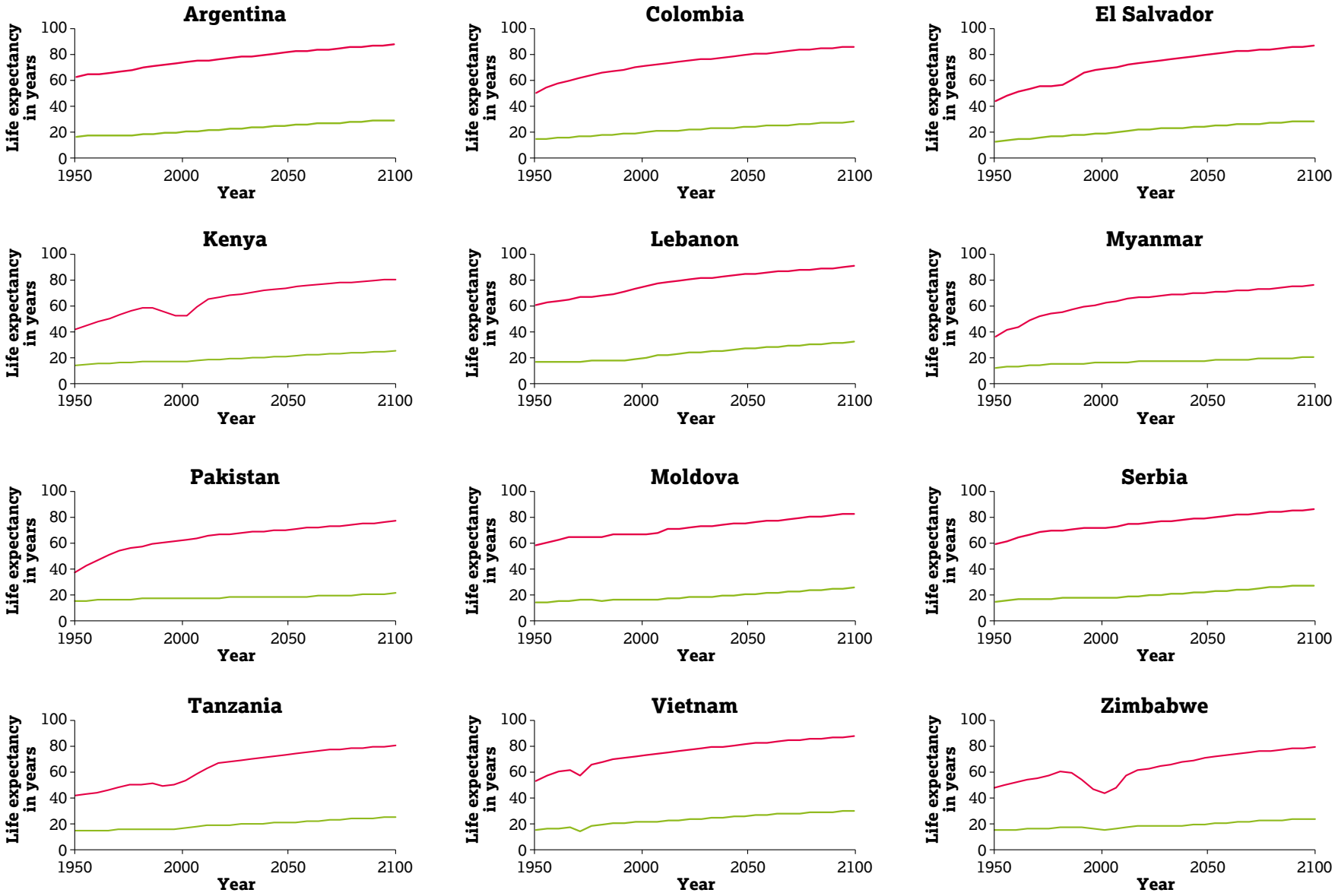
7.2 Data on the demographic transition

As we have seen, the world's population is ageing rapidly. Data from the 12 profile countries included in this report shows that life expectancy for both men and women has been rising in all 12, and is projected to continue to increase through to 2100 (Figure 8). Ageing is happening at different rates across the countries, with somewhat slower projected increases in life expectancy at birth in Lebanon, Myanmar and Argentina, and relatively faster projected increases in Kenya, Tanzania and Zimbabwe. Rates of increase in life expectancy at age 60 also differ, with faster rates in Moldova, Lebanon and Serbia. These differences show that countries are at different stages of their demographic transition, and therefore likely also their epidemiological transition. They also indicate significant inequity in health and wellbeing between countries. Notably, for example, the African countries, Myanmar and Pakistan are projected to reach an average life expectancy of 75 at birth between now and 2100, compared with Vietnam and countries in the Latin America, Middle East and European regions that have already reached this milestone.

While increasing life expectancy and the population ageing associated with it is a major triumph, what is arguably more important is not just extending years of life, but ensuring those extra years are lived in the best possible health and with a good quality of life. Data on healthy life expectancy (HALE) gives an indication of the extent to which this is happening. HALE takes into account mortality and morbidity and is described as the average number of years a person can expect to live in full health. The ratio of HALE to life expectancy (HALE:LE) gives an indication of the proportion of a person's life that can be expected to be lived in good health.

Globally, HALE is increasing, but detailed data paints a mixed picture about what this means for health throughout people's lives. Even in countries where HALE is rising, it may not be doing so at the same rate as life expectancy. This means that the proportion of life spent in

Figure 8: Life expectancy, both sexes



Source: United Nations, Department of Economic and Social Affairs, Population Division[130]

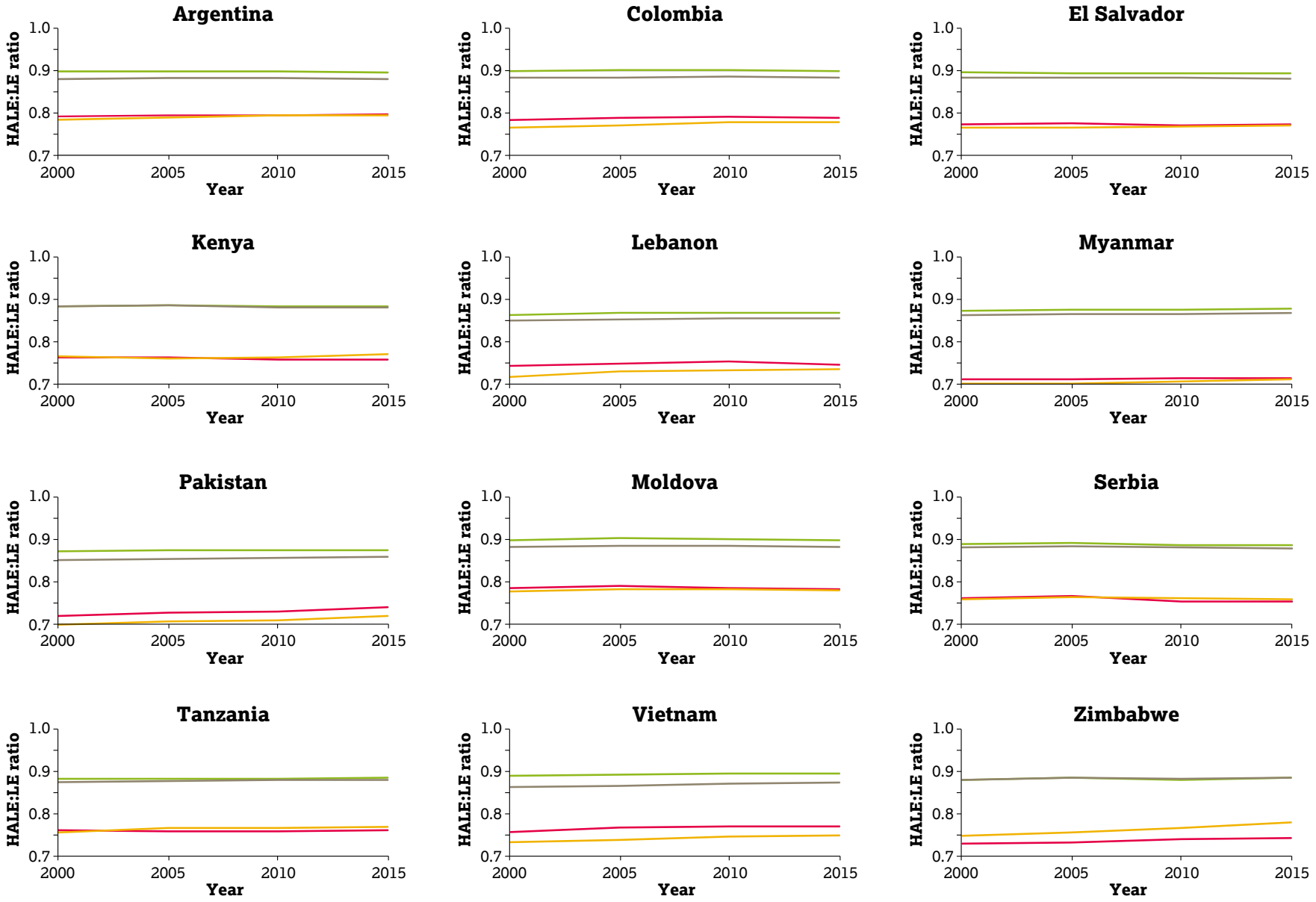
poor health is likely to be increasing. To achieve an increase in the proportion of life being spent in good health, gains in HALE will need to outpace gains in broader life expectancy.

Across the 12 profile countries, differences are seen in the pace of change in HALE. The individual graphs for the 12 countries, which can be seen in more detail in the country profiles (Appendix 1), give an indication of where gains are being made and where there is less progress. Looking at HALE at age 60, clear increases can be seen in Colombia, El Salvador and Kenya. Change over time is less pronounced in other countries. The ratio of HALE and life expectancy in the 12 countries has remained relatively stable during the 2000 to 2015 period with only small changes seen (Figure 9). Even though HALE has increased in absolute terms, the graphs indicate that the rise has not kept pace with life expectancy gains and so has not been sufficient to increase the proportion of life spent in good health. To see significant changes in both life expectancy and HALE, data for a longer time period would need to be available.

A gender analysis of data on life expectancy and HALE tells an interesting story about the longevity, health and wellbeing of women compared with men. As outlined earlier, global data shows that women's life expectancy outstrips men's, both at birth and at age 60. The same is true for HALE. Both at the global level and in all regions of the world, women's HALE both at birth and at age 60 is higher than men's – an ongoing trend seen with the data presented in the five-year intervals from 2000 to 2015 (Table 2). An analysis of the HALE:LE ratio changes this picture though. Women fare less well here. Data

Older person, 90, in Kibondo, Tanzania

Figure 9: Healthy life expectancy to life expectancy (HALE:LE) ratio



Source: World Health Organization[131]

Table 2: Healthy life expectancy (HALE)

WHO region	HALE at birth (years)								HALE at 60 (years)							
	Male				Female				Male				Female			
	2000	2005	2010	2015	2000	2005	2010	2015	2000	2005	2010	2015	2000	2005	2010	2015
Africa	43.5	46.0	49.6	52.1	45.3	47.4	51.3	54.4	10.5	10.9	11.5	11.8	11.4	11.8	12.4	13.0
Americas	62.6	63.8	64.1	65.3	67.1	68.1	68.4	69.5	14.8	15.3	15.8	16.2	17.4	17.8	18.2	18.6
South-East Asia	54.5	56.3	57.9	59.2	55.1	56.9	59.0	60.9	11.4	11.8	12.2	12.6	12.4	12.7	13.2	13.7
Europe	61.2	62.2	64.3	65.7	67.3	68.2	69.5	70.5	13.5	14.2	15.1	15.7	16.7	17.3	18.0	18.5
Eastern Mediterranean	55.8	56.4	58.1	58.8	56.8	57.6	59.2	60.1	12.1	12.3	12.7	12.9	12.7	12.9	13.3	13.5
Western Pacific	64.0	65.7	66.7	67.5	66.5	68.1	69.1	69.8	14.2	14.8	15.1	15.5	16.3	16.9	17.3	17.5
Global	57.2	58.7	60.4	61.7	59.9	61.3	63.1	64.5	13.2	13.7	14.3	14.7	15.4	15.8	16.2	16.6

Source: World Health Organization[132]

on life expectancy and HALE at birth shows that women, despite being better off in both, can expect to live a greater proportion of their lives in poorer health than men (Table 3). This is the case at the global level and in all regions of the world, and for each interval for which data has been analysed between 2000 and 2015.

A more detailed analysis of the data for the 12 profile countries shows variations between countries. Looking at the gap between HALE and life expectancy, the way this is changing over time, and the difference in the rate of change between women and men, gives an indication of improvements to health in the different countries and the potential gender inequities. Data for Pakistan and Vietnam shows that men are faring better than women in terms of the years they can expect to live in good health. The gap between HALE and life expectancy at birth was 8.1 years for men and 9.5 years for women in Pakistan in 2015. In Vietnam the figures were even starker, 7.5 years for men and 10.2 years for women (Figure 10). So, men will live fewer years than women overall, but a smaller number of those years will be spent in poor health.

It is also interesting to consider changes over time. Across most of the 12 profile countries the data indicates that the gap between HALE and life expectancy is growing over time for both women and men. The rate of change differs between countries, however. While the global trend of women expecting to live a greater proportion of their lives in poorer health is mirrored at the national level, the data in some countries does indicate there may be some progress in closing this gap. In Colombia, the gap between HALE and life expectancy at both birth and age 60 has grown less quickly for women than for men over the last 15 years. The same is true for Argentina and Serbia. In Lebanon and Zimbabwe, this gap at age 60 has closed for women while it has continued to grow for men (Figure 11).

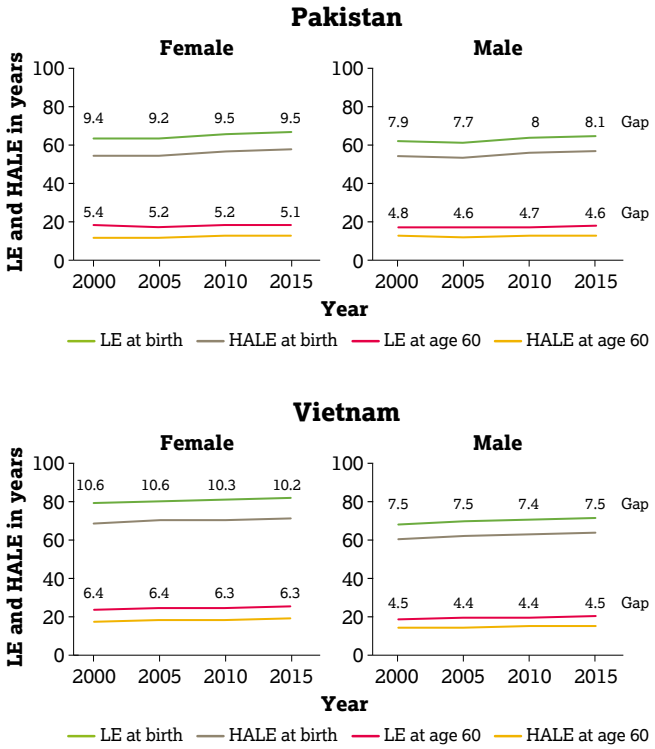
Data on life expectancy and HALE demonstrates some of the challenges to be addressed in terms of the health of older women and men. Higher mortality levels in men need to be addressed through a range of interventions to tackle poor access to services and to promote

Table 3: Proportion of life expected to be lived in good health

WHO region	Year	Life expectancy (LE) at birth (years)	Healthy life expectancy (HALE) at birth (years)	% of life in good health*	LE at birth (years)	HALE at birth (years)	% of life in good health*
		Male			Female		
Africa	2000	49.6	43.5	87.7	52.1	45.3	87.0
	2005	52.3	46.0	88.0	54.4	47.4	87.1
	2010	56.4	49.6	87.9	58.8	51.3	87.3
	2015	59.1	52.1	88.2	62.2	54.4	87.5
Americas	2000	70.4	62.6	89.0	76.8	67.1	87.4
	2005	71.9	63.8	88.7	77.9	68.1	87.4
	2010	72.3	64.1	88.7	78.4	68.4	87.3
	2015	73.7	65.3	88.6	79.6	69.5	87.3
South-East Asia	2000	62.5	54.5	87.2	64.4	55.1	85.6
	2005	64.4	56.3	87.4	66.4	56.9	85.7
	2010	66.1	57.9	87.6	68.7	59.0	85.9
	2015	67.6	59.2	87.6	70.9	60.9	85.9
Europe	2000	68.4	61.2	89.5	76.7	67.3	87.7
	2005	69.5	62.2	89.5	77.6	68.2	87.9
	2010	72.0	64.3	89.3	79.3	69.5	87.6
	2015	73.8	65.7	89.0	80.5	70.5	87.6
Eastern Mediterranean	2000	64.2	55.8	86.9	66.9	56.8	84.9
	2005	64.8	56.4	87.0	67.8	57.6	85.0
	2010	66.7	58.1	87.1	69.5	59.2	85.2
	2015	67.4	58.8	87.2	70.4	60.1	85.4
Western Pacific	2000	70.8	64.0	90.4	75.0	66.5	88.7
	2005	72.7	65.7	90.4	76.8	68.1	88.7
	2010	73.8	66.7	90.4	77.9	69.1	88.7
	2015	74.8	67.5	90.2	78.8	69.8	88.6
Global	2000	64.4	57.2	88.8	68.7	59.9	87.2
	2005	66.1	58.7	88.8	70.3	61.3	87.2
	2010	68.0	60.4	88.8	72.3	63.1	87.3
	2015	69.5	61.7	88.8	73.9	64.5	87.3

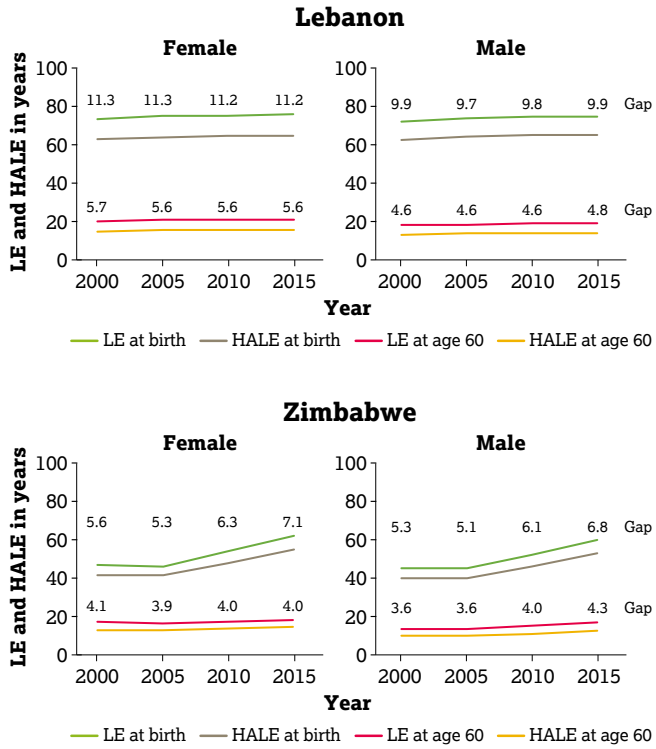
* Calculations for this percentage are based on the HALE:LE ratio
Source: World Health Organization[133]

Figure 10: The gap between life expectancy (LE) and healthy life expectancy (HALE), Pakistan and Vietnam



Source: World Health Organization[134]

Figure 11: The gap between life expectancy (LE) and healthy life expectancy (HALE), Lebanon and Zimbabwe



Source: World Health Organization[135]

prevention, diagnosis and treatment of disease. In women, who are living longer, interventions need to focus on reducing higher levels of morbidity. For both older women and men, ensuring the achievement of the right to health will be vital, through the provision of person-centred, integrated care that addresses holistic needs and promotes wellbeing and functional ability alongside health status.

7.3 Data on the epidemiological transition and the need for health system change

To better understand the challenges of higher mortality in men and higher morbidity in women, and the complexities of health in older age, data is needed that demonstrates the epidemiological transition and patterns of disease at different stages of the life course. As outlined

in Section 3.3 (The epidemiological transition driving the need for systemic change), the burden of disease is shifting. The majority of the burden that diminishes healthy life expectancy is now created by NCDs. While communicable diseases remain a concern for people of all ages in many LMICs, NCDs and injuries are the major contributors to poor health and death in most. The prevalence of NCDs typically rises with age. The leading contributors to disease burden in the older population globally are cardiovascular disease (accounting for 30.3 per cent of the total disease burden), cancers (15.1 per cent), chronic respiratory diseases (9.5 per cent), musculoskeletal diseases (7.5 per cent), and neurological and mental disorders (6.6 per cent).[136]

Figures 3 to 7 in Section 3.3 demonstrate how the burden of disease has been shifting over time, including in the 12 profile countries. Figure 3 shows a clear shift towards the greater burden of NCDs on both mortality and years lived with disability (YLDs), across the different country income groups between 2000 and 2016.

Figures 5 to 8 show the causes of death and YLDs by main disease grouping (communicable, non-communicable, and injuries and violence) for people aged between 50 and 69, and 70 and over for the 12 profile countries. This data clearly demonstrates the different stages of epidemiological transition in the different countries. The African countries, for example, still experience a far greater impact of communicable diseases than the other countries included in this report.

Cause-of-death data in Figures 4 and 5 shows that eight of the profile countries (El Salvador, Kenya, Lebanon, Moldova, Myanmar, Pakistan, Tanzania and Vietnam) have an increasing proportion of deaths attributable to NCDs, and declining proportions from communicable diseases. Again, the markedly different stages of transition are notable between the Asian and African countries. Colombia and Serbia have generally stable proportions of deaths from the three major disease categories. The data shows a relative increase in the proportion of deaths caused by communicable diseases in Argentina for cohorts aged 50-69 and 70 and over, and Zimbabwe for 70 and over.

Figures 6 and 7 focus on causes of YLDs in the 12 profile countries. Data on YLDs, and also disability-adjusted life years (DALYs, a combination of YLDs and years of life lost) provides crucial information on the diseases people are living with, and the impact these are having on their ability to function. While mortality statistics provide an overall picture of disease burden in the population, with declining death rates in all age groups, non-fatal health information such as YLDs is of increasing importance and will play a key role in guiding health system transitions. Declining death rates, and people dying at older ages, are leading to an increase in YLDs, including in LMICs. In 2016, DALYs in people aged 60 and over accounted for 33 per cent of all DALYs globally, an increase from 22 per cent in 2000.[137]

Worldwide, total DALYs due to NCDs increased between 1990 and 2015, decreased for communicable diseases and were relatively unchanged for injuries.[138] In older people globally, Alzheimer's and other dementias, chronic kidney disease, diabetes, hearing loss and ischaemic heart disease were among the leading contributors to DALYs in 2015, and caused more years of healthy life lost than in 2005.

In examining the 12 countries, the report explores more detailed data on the impact of specific diseases, as well as the broad disease categories. Data on the burden of disease across the life course reflected in mortality and YLDs is included in the country profiles (Appendix 1). Within the context of a general shift towards NCDs, the cause-of-death and YLD data for older people in the profiles indicates some more specific trends. Cardiovascular disease (CVD) is a leading cause of death among older people across the 12 countries, but differences are seen in changes to the rate of CVD over time. In seven of the 12 countries (Argentina, Colombia, El Salvador, Lebanon, Serbia, Vietnam and Zimbabwe), the contribution of CVD to mortality declined between 1990 and 2015. In Kenya and Pakistan, the contribution of CVD has increased.

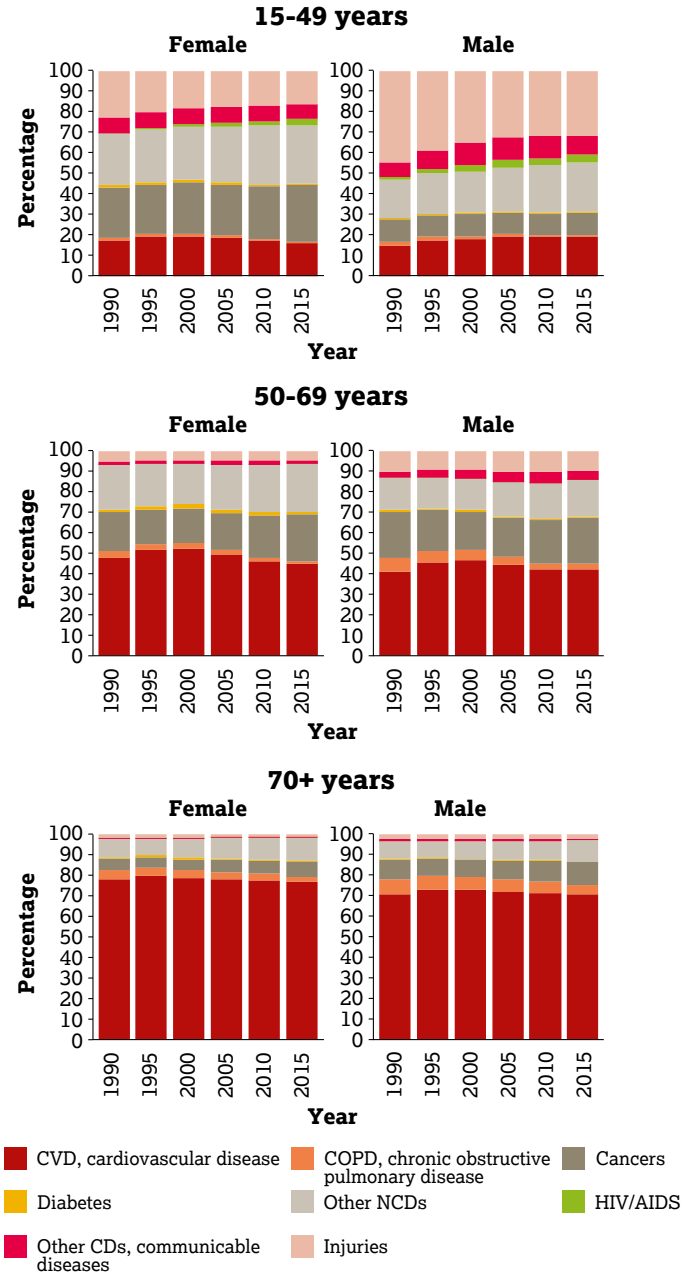
Data from a number of the profile countries shows interesting gender patterns. In both Myanmar and Moldova, the contribution of CVD to

mortality declined in older women between 1990 and 2015, but increased in older men. Despite this decline in older women in Moldova, overall levels remain high, particularly for the group aged 70 and over, in whom CVD causes over 70 per cent of deaths (Figure 12).

While CVD is declining as a cause of death among older people in many of the profile countries, the data suggests that cancer is increasing in 11 of the 12. There is also a general trend towards an increased contribution from diabetes as a cause of death among older people. In 9 of the 12 countries the level of diabetes has increased for both men and women aged between 50 and 69 and 70 and over. In the remaining three countries some slight declines were seen. The more detailed country graphs also demonstrate the specific impact of HIV, particularly in the African countries. HIV remains a significant cause of death in the group aged between 15 and 49, but also contributes to deaths at older ages, albeit to a lesser extent (Figure 13). In the country profiles for Africa (Appendix 1), the graphs in Figure 13 and in the corresponding graphs on causes of YLDs, the different stages of the epidemiological transition are revealed compared with the other countries included in this report. The contribution of HIV and other communicable diseases to both mortality and YLDs remains more significant for people of all ages in Africa, including older people, and clearly demonstrates the double burden of communicable and non-communicable disease that needs response in these countries.

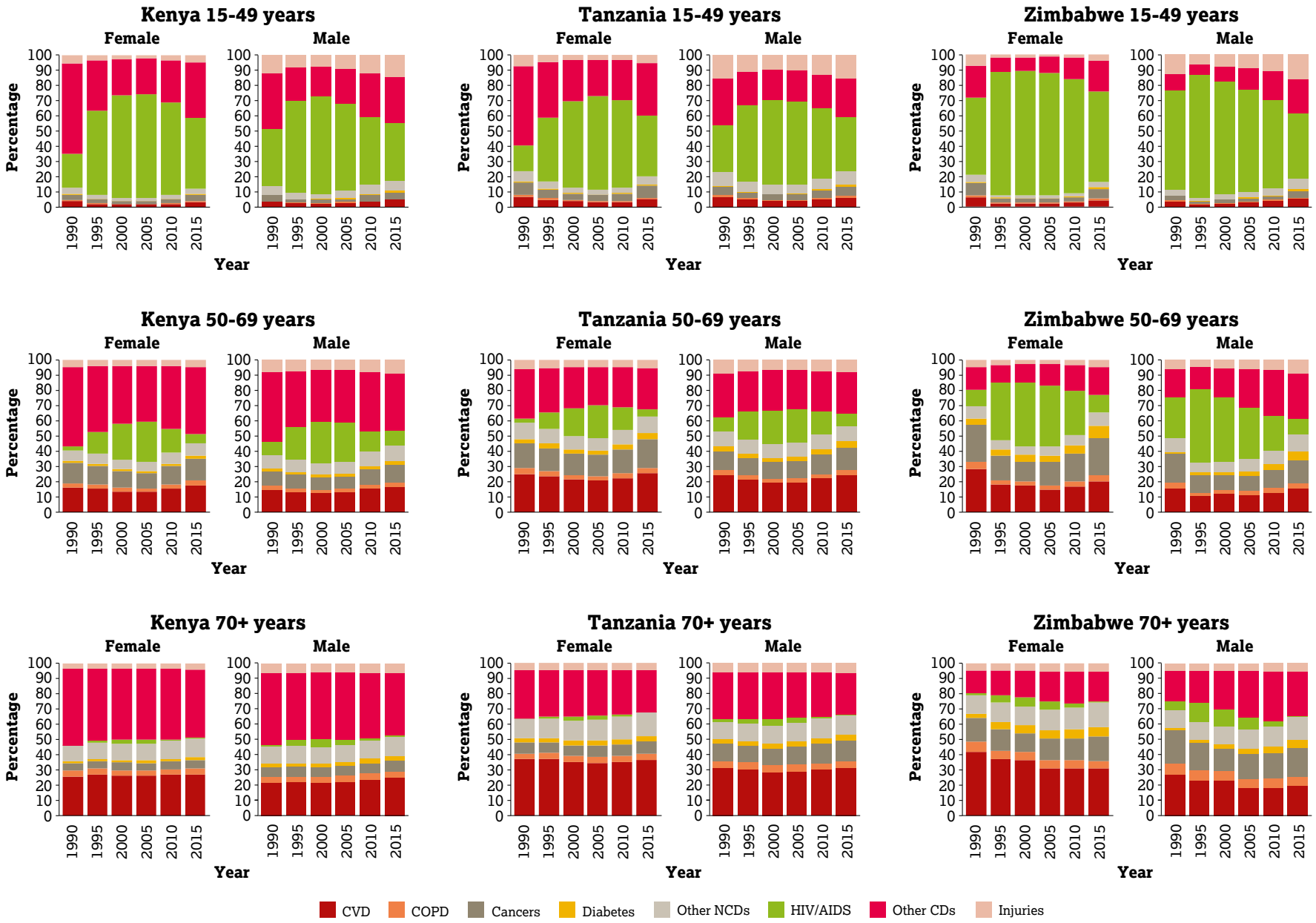
The graphs presented in the country profiles (Appendix 1) are disaggregated by age and gender. For both cause of death and YLDs, the data shows similar patterns for older women and men. While some diseases may be somewhat more significant for either women or men (for example, chronic obstructive pulmonary disorder for men in Myanmar, Pakistan and Vietnam, and diabetes for women in Pakistan and Vietnam), in general the disease burden is relatively consistent, with largely the same order of causes of death and YLDs. One difference by gender in several of the countries is the greater role of injuries and, to a lesser extent, communicable diseases as contributors to mortality and YLDs in older men. This trend, particularly apparent in the group aged 50 to 69 (Figure 14), warrants further investigation.

Figure 12: Causes of death in Moldova



Source: Institute for Health Metrics and Evaluation[139]

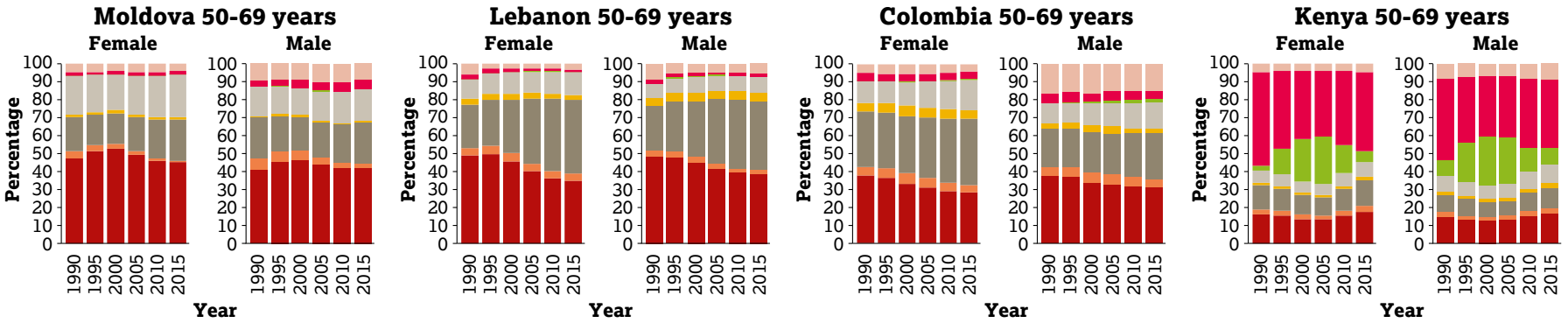
Figure 13: Causes of death in three African countries



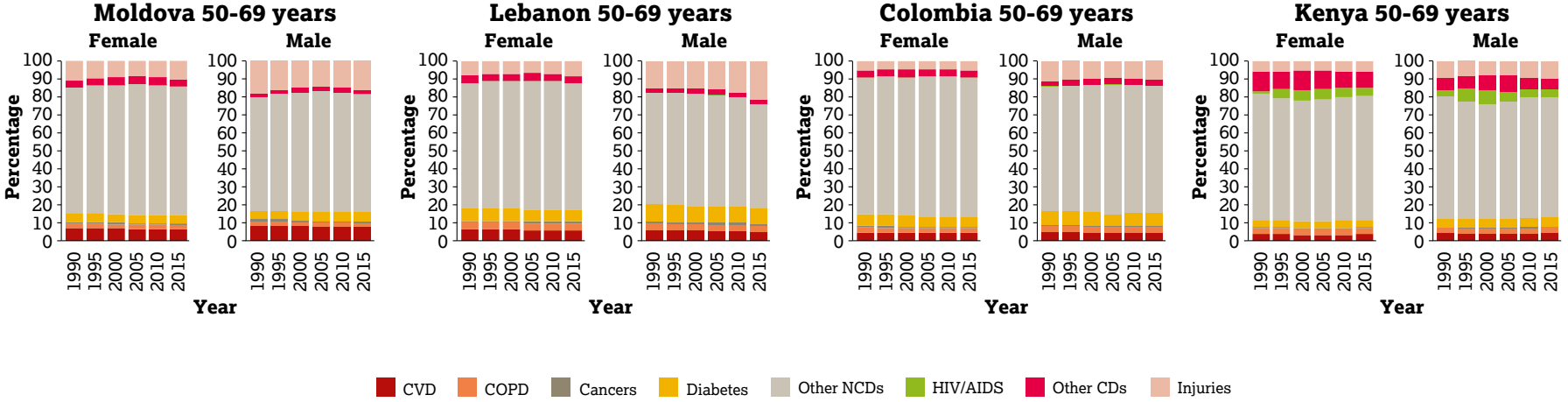
Source: Institute for Health Metrics and Evaluation[140]

Figure 14: Causes of death and YLD in Moldova, Lebanon, Colombia and Kenya

Cause of death



Cause of YLDs



Source: Institute for Health Metrics and Evaluation[141]

7.4 Older people's health status: the impact of specific diseases

To better understand some of the specific health challenges faced in older age, this report also presents data on the prevalence of a number of specific physical and mental health conditions common among older women and men.

Cardiovascular disease

With CVD shown as a major cause of death among both sexes, this report analyses data on the prevalence of heart attacks due to ischaemic heart disease in people aged 50 and over. Data from the global health data exchange (GHDx) of the Institute of Health Metrics and Evaluation for the 12 profile countries shows that prevalence of heart attacks increases with age.[142] The increase tends to be more gradual in younger old age, with a more rapid rise from around ages 70 to 80 seen in Argentina, Colombia, El Salvador, Lebanon, Moldova, Serbia and Vietnam. After this age, the data shows a continued increasing prevalence with age, with the exceptions of Moldova, and men in Serbia, where a decline in prevalence is seen from around age 90 (Figures 15 and 16).

For the African countries and for older men in Myanmar, the increase in prevalence is more gradual and linear with increasing age. In many of the profile countries, data shows that the prevalence of heart attacks tends to be lower in women than men in younger old age, but rates rise more quickly as women get older. A notable exception is Kenya, where the prevalence of heart attacks is higher in men than women at all stages across older age (Figure 16).

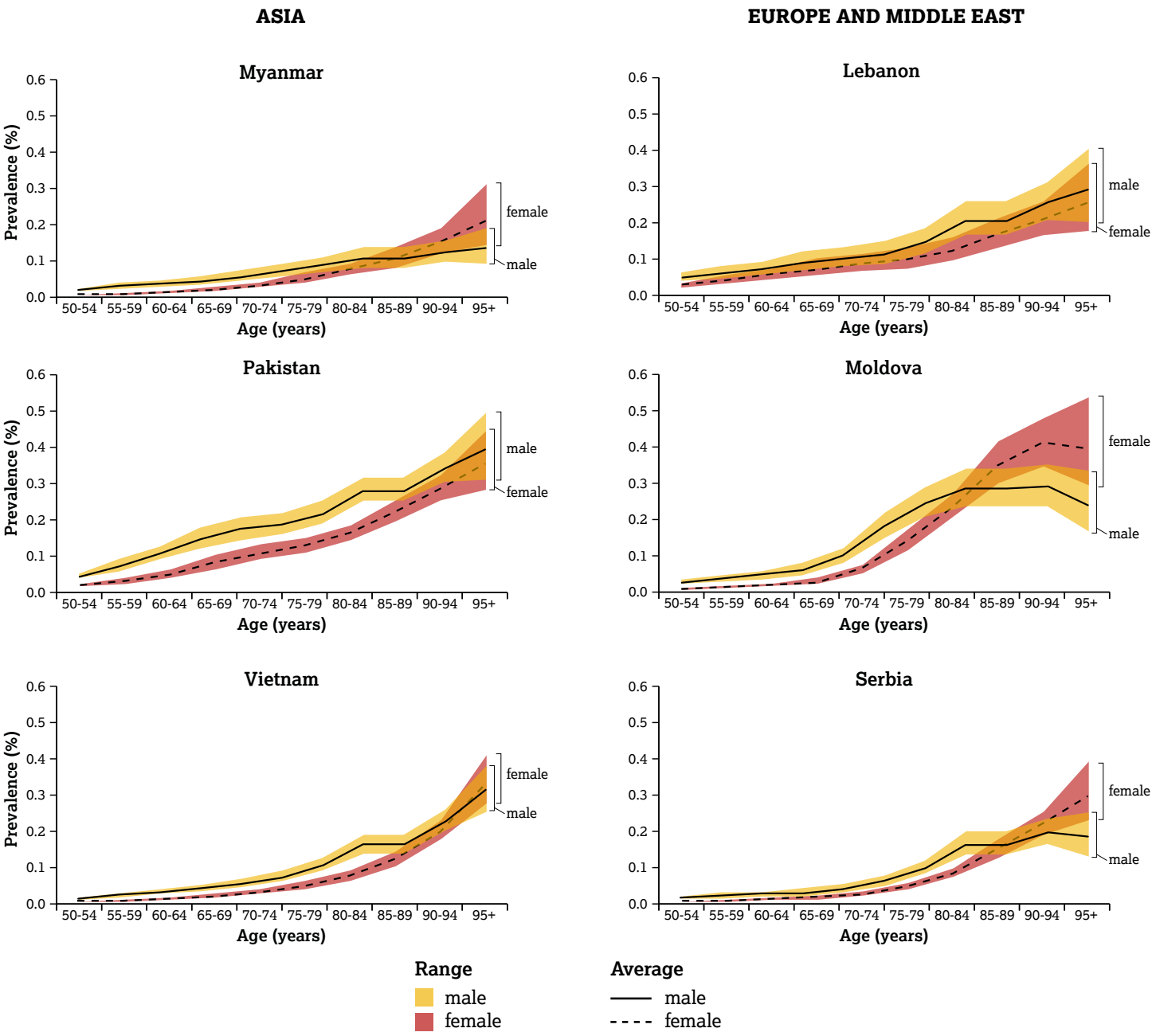
Diabetes

While global data suggests a potential decline in CVD as a cause of death, diabetes is becoming an increasingly significant contributor to poor health. The age-standardised prevalence of diabetes is estimated to have quadrupled since 1980 and has increased or remained constant in countries across the world.[143] The burden of diabetes, both in terms of prevalence and the number of people affected, has increased faster in LMICs than in HICs. Increasing age is associated with increased risk of diabetes. With ageing and obesity being key risk factors for the condition, the combination of the demographic transition towards an increasingly older population with the global obesity epidemic presents major challenges in tackling the growing prevalence of diabetes worldwide and its impact on healthy life expectancy.

Figures 17 and 18 show the prevalence of diabetes in older people between the ages of 50 and 100 in the 12 profile countries. The data represents both people who experienced the onset of diabetes at younger ages (typically type 1 diabetes) and have survived into older age, and people who have acquired diabetes in later life (typically type 2). The graphs show a common trend across the countries, with prevalence generally increasing with age, peaking around age 70 and then starting to decline. Increasing prevalence with age could be related to a host of both individual and systemic factors, including levels of insulin resistance and secretion in older age, higher levels of abdominal obesity, higher prevalence of other conditions that increase the risk of diabetes, and inadequate screening and poor access to treatment and support for older people. The pattern of diabetes prevalence peaking in mid-older age before starting to decline could be associated with decreased longevity and higher mortality in mid-older age in people who had an onset of diabetes at a younger age, and potential late diagnosis of type 2 diabetes in older people, leading to poor prognosis and higher mortality in mid-older age.

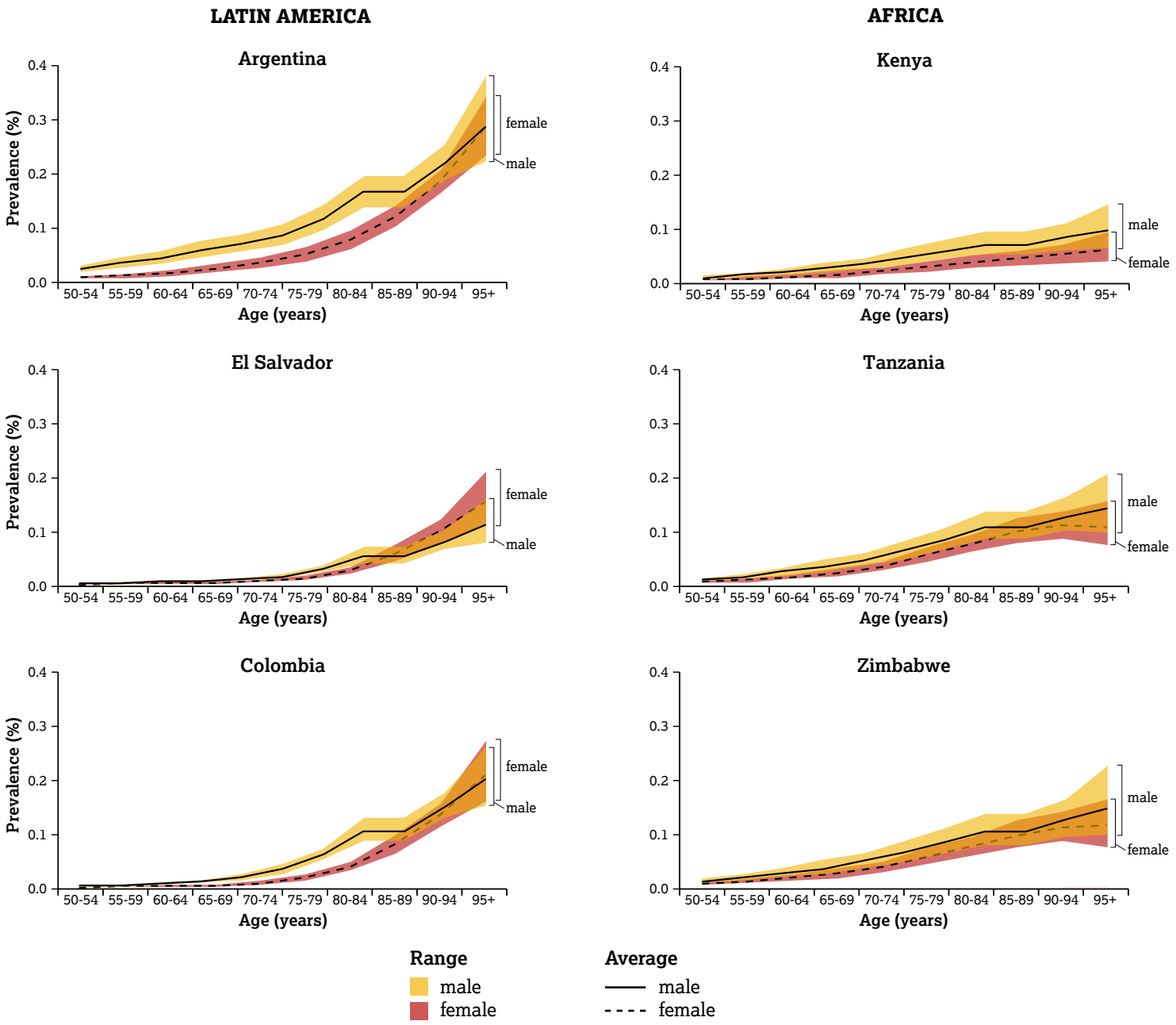
Differences are seen across the 12 countries in the prevalence of diabetes by gender. In Argentina, Moldova, Serbia and Zimbabwe, prevalence is higher in older men than older women in all age cohorts, with the opposite being the case in Myanmar (with the exception of the 50-54 year age group), Pakistan and Vietnam. For both older women and men, the impacts of diabetes are high and increase with age. The impact is demonstrated by data exploring the complications associated

Figure 15: Prevalence of heart attack in older age in selected countries in Asia, Europe and the Middle East



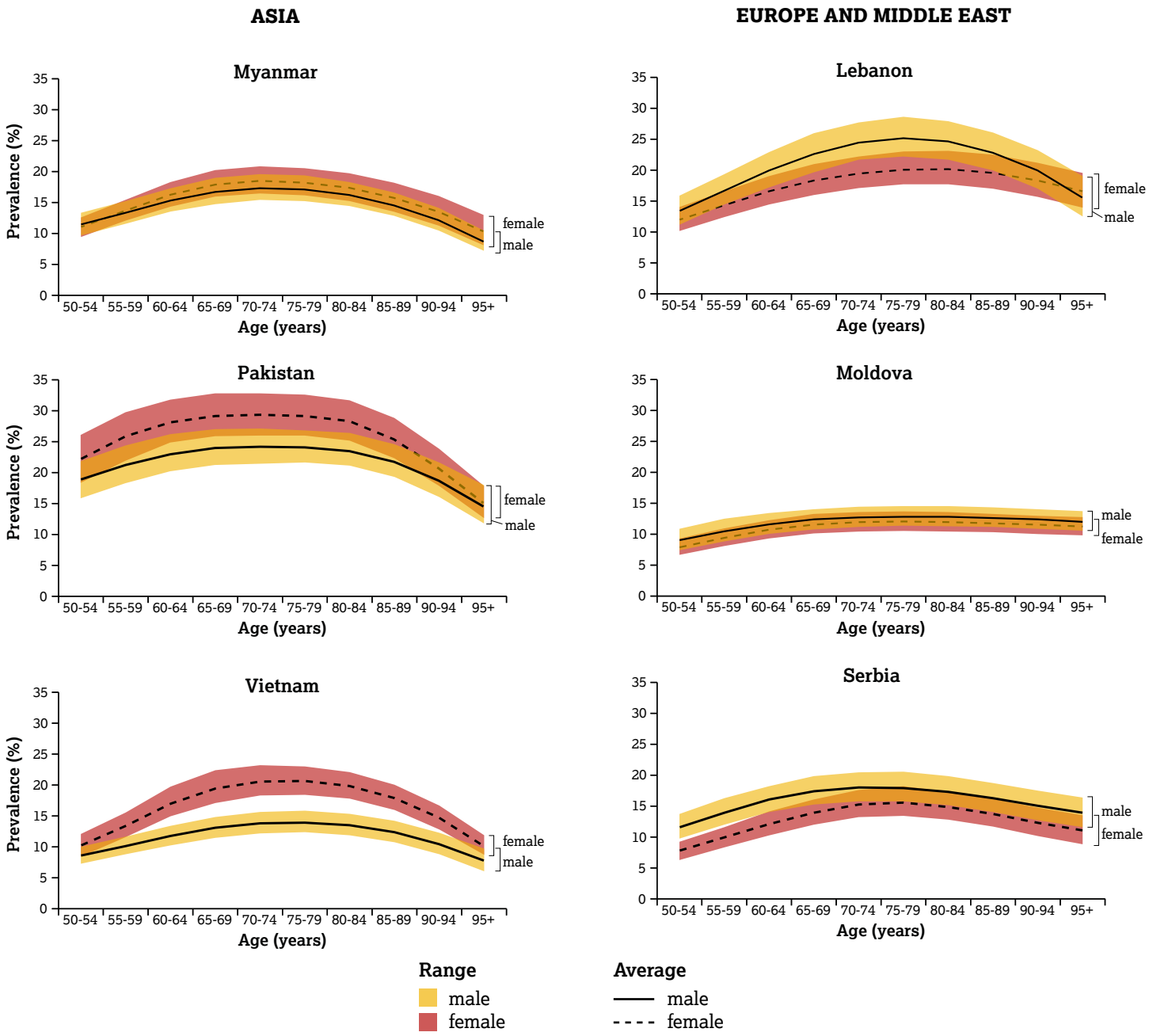
Source: Institute for Health Metrics and Evaluation (original values converted into percentages)[144]

Figure 16: Prevalence of heart attack in older age in selected countries in Latin America and Africa



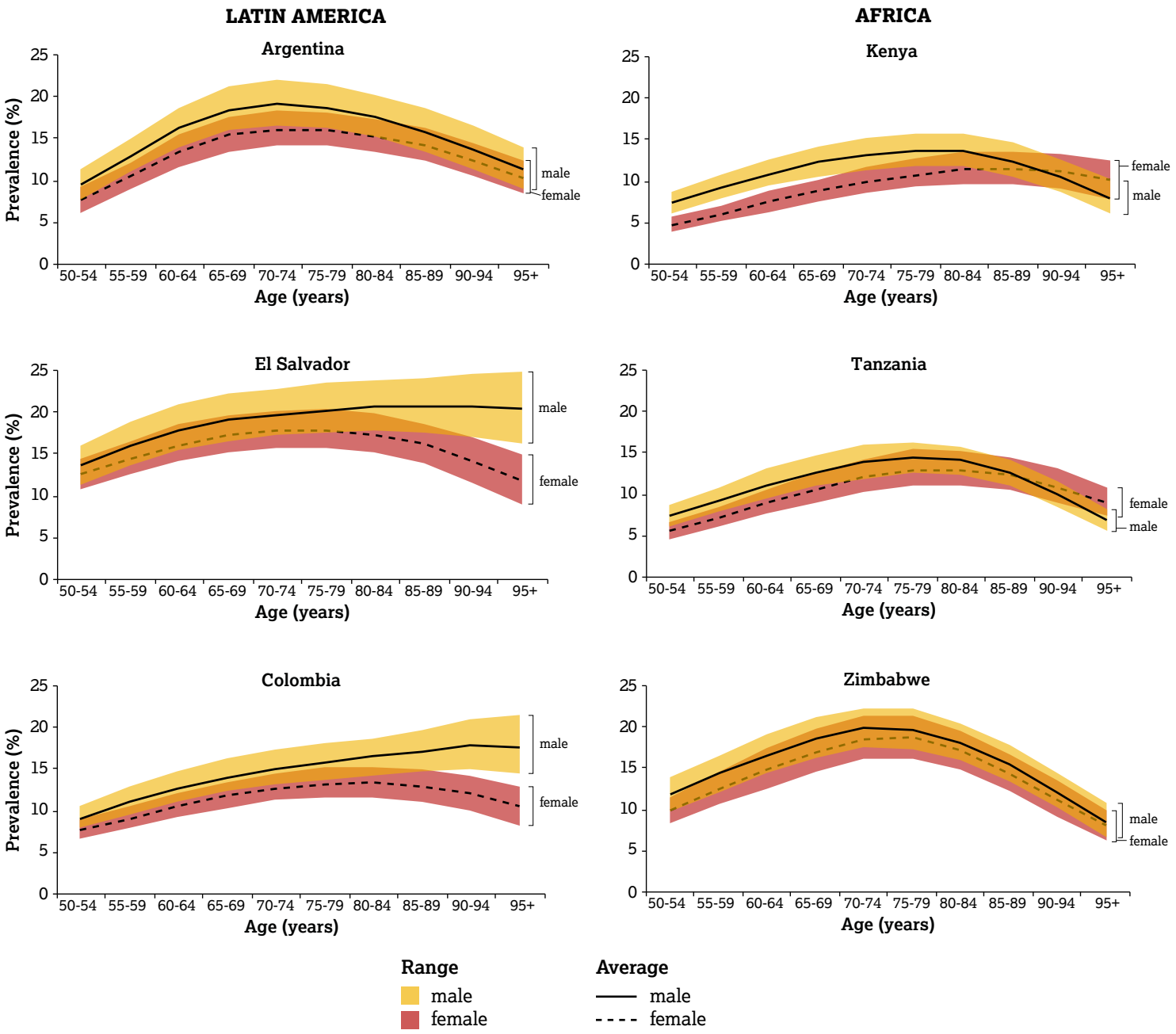
Source: Institute for Health Metrics and Evaluation (original values converted into percentages)[145]

Figure 17: Prevalence of diabetes in older age in selected countries in Asia, Europe and the Middle East



Source: Institute for Health Metrics and Evaluation[146]

Figure 18: Prevalence of diabetes in older age in selected countries in Latin America and Africa



Source: Institute for Health Metrics and Evaluation[147]

with diabetes. People with diabetes are at higher risk of developing a range of health conditions and complications that contribute to poor health and survival. Undiagnosed or poorly managed diabetes is a strong contributor to mortality and YLDs from secondary causes, including heart disease, stroke and chronic kidney disease.

One common complication of diabetes is eye disease. A number of ophthalmic conditions commonly associated with diabetes can endanger vision and cause visual impairment. Data on the prevalence of this provides clear evidence of the impact of diabetes, and how it increases with age (Figures 19 and 20).

Visual impairment increases with age in both older women and men in all 12 countries included in this report, and points to the impact of diabetes on older people's functional ability. In many if not most cases, complications associated with diabetes, including visual impairment, can be managed and the consequences prevented, including in older age. Interventions to reduce the risk of acquiring diabetes are also well understood, and their effectiveness is known, including for older people. To reduce risks and manage complications, health and other systems need to provide information and integrated care that includes health promotion and prevention services and screening to support changes in behaviour and ensure early diagnosis. For older people who have been unable to access care early enough to prevent consequences such as visual impairment, tailored services are needed, including rehabilitation and broader care and support.

Congnitive and mental health

WHO states that more than 20 per cent of people aged 60 and over have a mental or neurological disorder, and 6.6 per cent of all disability among older people is attributed to these disorders. Of YLDs, these disorders account for 17.4 per cent in older people. The most common mental and neurological disorders experienced by older people are dementia and depression, which affect about 5 per cent and 7 per cent of the world's older population, respectively.[148] The next section looks at the data on these two most common mental health issues for older people. It also explores data on suicide mortality rates in older people, one of the indicators to measure progress against SDG3.

Dementia

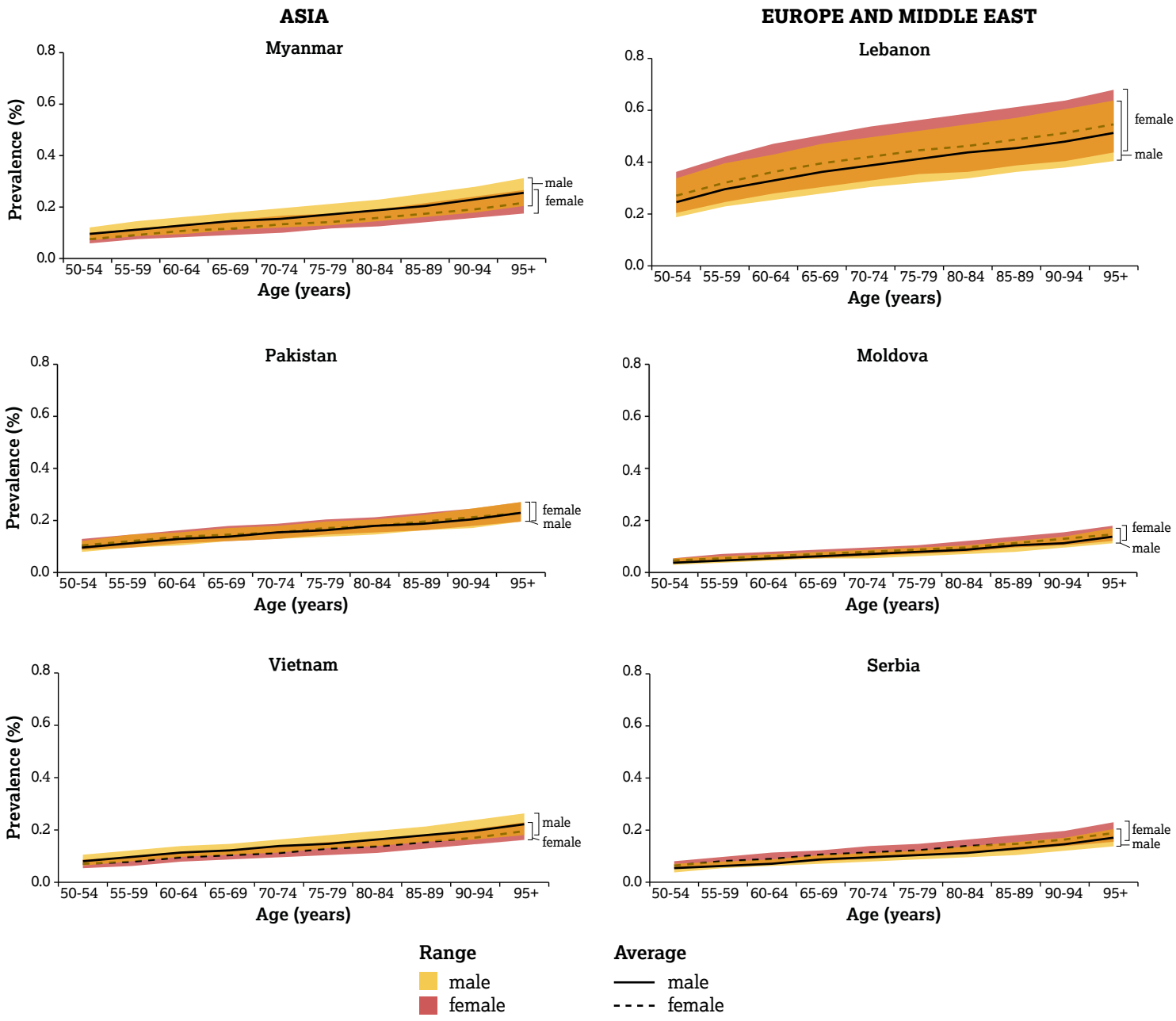
As with diabetes, the contribution of dementia to mortality and YLDs is increasing. There are currently around 50 million people living with dementia worldwide, the majority in LMICs. This figure is projected to increase to 82 million by 2030 and 152 million by 2050.[149] The understanding of dementia remains limited and care inadequate. Estimates suggest that diagnostic coverage is low, even in most HICs, where less than half of people living with dementia have received a diagnosis. In LMICs, there are few available estimates, but diagnostic coverage is unlikely to exceed 5-10 per cent in most settings.[150,151] Specialist continuing care for people with dementia is also very limited, particularly in LMICs.

Ageing is the strongest known risk factor for dementia, and the vast majority of cases of dementia occur in older age.[152] As the global population ages, and rates of dementia increase, so do deaths and YLDs as a result of dementia. Dementia accounted for 4.3 per cent of deaths globally in 2016, and 8.6 per cent in the group aged 70 and over. This was an increase from 2.6 per cent and 6.3 per cent, respectively, in 2000.[153] Dementia also caused 5 per cent of all YLDs in 2016 in the group aged 70 and over.

Clear gender patterns are seen in the global data on dementia: 6.2 per cent of deaths among women globally in 2016 were caused by dementia, compared with 2.8 per cent among men. The difference is also seen at older ages, with 10.9 per cent of deaths in women aged 70 and over caused by dementia, compared with 6.2 per cent in men.[154]

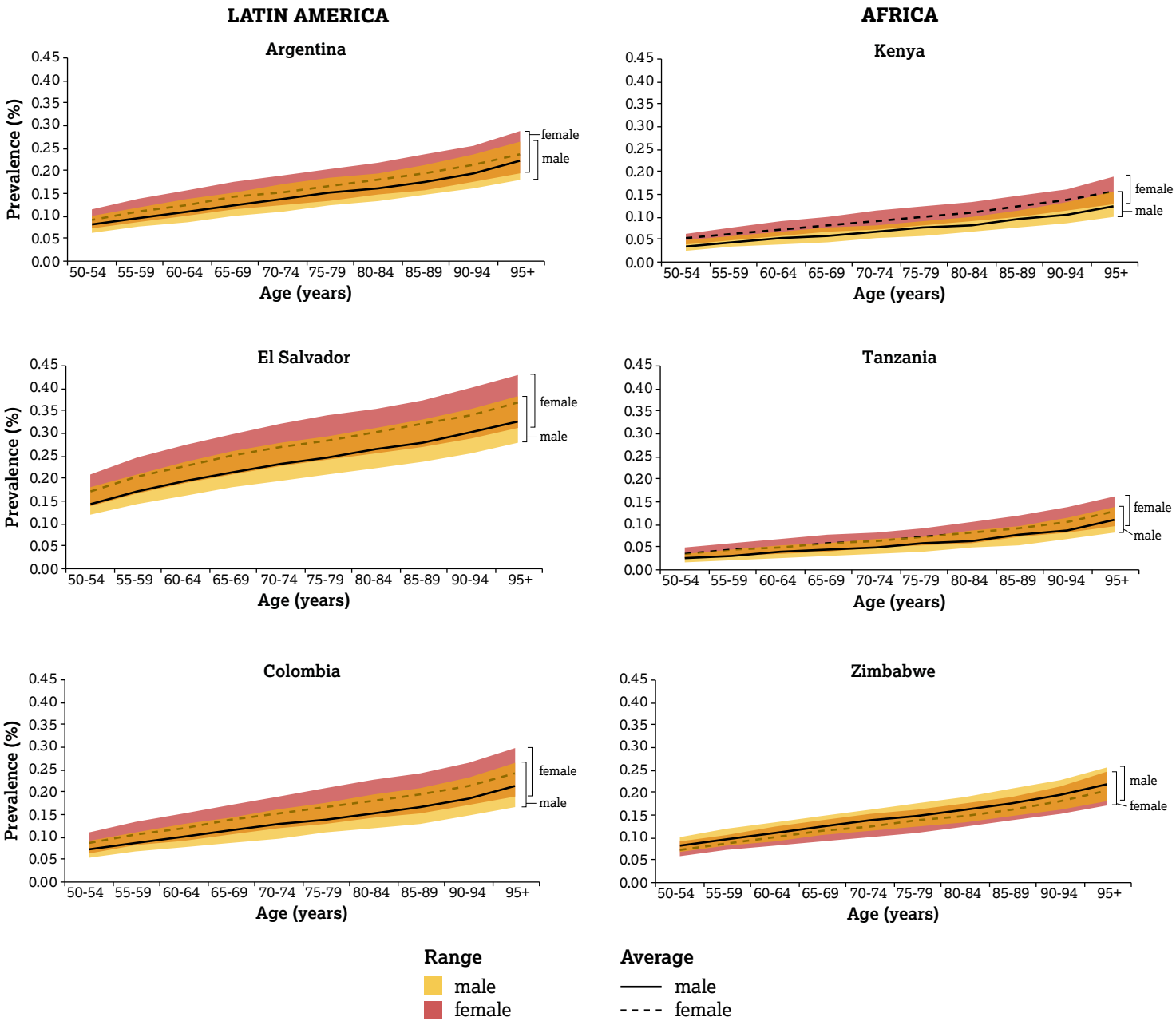
National-level data for the 12 profile countries presented in the country profiles (Appendix 1) reinforces the trends seen in the global-level data. Prevalence of dementia increases with age in all 12 countries. In a

Figure 19: Prevalence of visual impairment in older age due to diabetes in selected countries in Asia, Europe and the Middle East



Source: Institute for Health Metrics and Evaluation (original values converted into percentages)[155]

Figure 20: Prevalence of visual impairment in older age due to diabetes in selected countries in Latin America and Africa



Source: Institute for Health Metrics and Evaluation (original values converted into percentages)[156]

similar pattern to that of the data on heart attacks, prevalence increases gradually with age until mid-older age, at around 70, and then rises more rapidly. In all 12 countries, prevalence rates level off in the oldest old, aged over 90. Data for the 12 profile countries also highlights a higher prevalence of dementia in older women than in men, a trend seen in the age group 70 and over in all 12 countries.

The 2016 *World Alzheimer report* highlights the impact of dementia in older age and also the structural barriers older people face in accessing health services and support.[157] Alongside the lack of diagnostic and specialist continuing care, the report makes clear that a major challenge is a lack of awareness and understanding across all sections of society, including among the health workforce. Dementia remains poorly understood, and the symptoms are often disregarded as a normal part of ageing, not only by the individuals who may be experiencing those symptoms and their family members, but also most worryingly by the health workers being relied on for support. This is a major obstacle that needs to be overcome if older people, including those with dementia, are to enjoy their right to health.

Depression and self-harm mortality

Seven per cent of older people worldwide suffer from depression, and it accounts for 5.7 per cent of YLDs among people aged 60 and over.[158] This contribution of depression to YLDs is most marked in people aged 50 to 69, with lower rates seen in people aged 70 and over – 5.8 per cent and 3.8 per cent, respectively.[159] Rates have remained relatively stable over time, with little change in the contribution of depression to YLDs between 2000 and 2016.

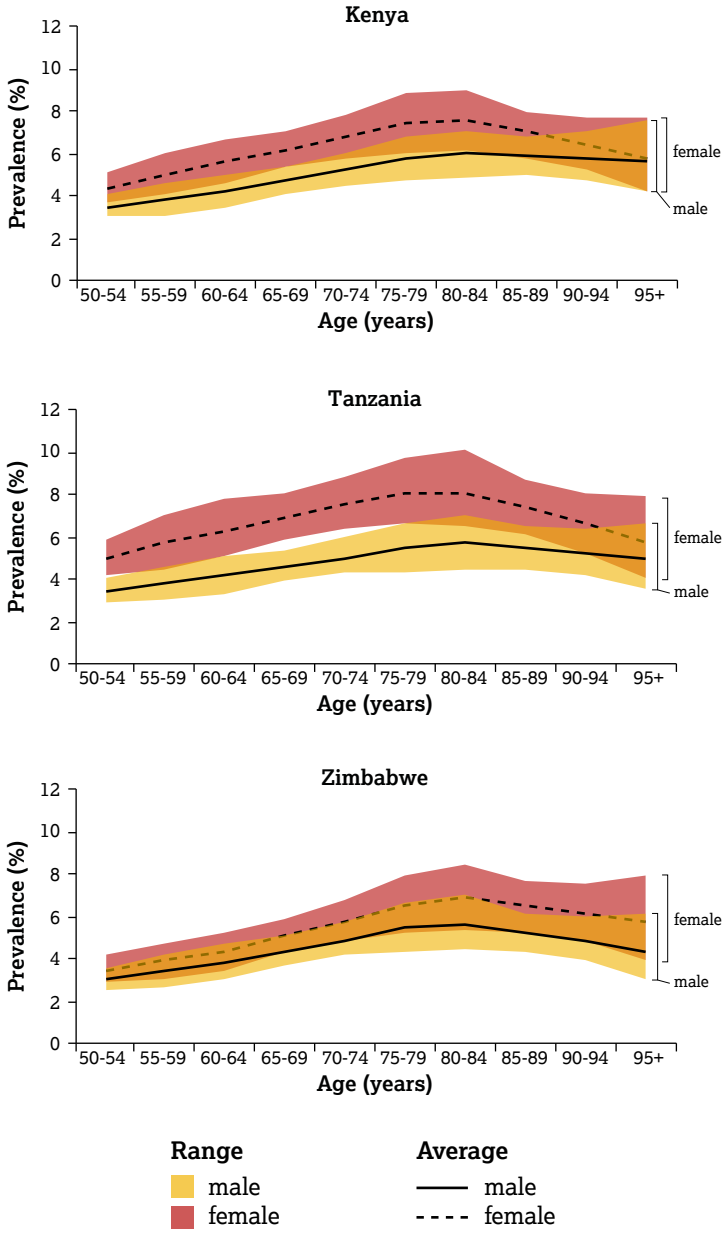
Depression is both under-diagnosed and undertreated, particularly in LMICs. This is a key issue for older people as symptoms of depression are often overlooked when other health challenges experienced by older people may be prioritised, or may mask the symptoms of depression. Older people with depressive symptoms have been found to have poorer functioning compared with those with chronic physical health conditions such as hypertension or diabetes.[160]

Data for the 12 profile countries shows a somewhat less consistent trend across the countries than was seen with the other physical and mental health conditions explored in this report. In the three African countries and Pakistan, the prevalence of depression increases with age until around 80, after which it declines (Figure 21). In contrast, in Lebanon (Figure 22), and in older women in Vietnam and Argentina, prevalence declines from age 50 until around 80, from when a gradual increase is then seen. In older women in Vietnam, prevalence increases between ages 50 and 60 and then declines until around age 80, after which prevalence starts to increase again.

Despite the differences seen in prevalence by age across the countries, a gender analysis does present a more consistent finding. In all countries, prevalence of depression is higher in older women than men (with the exception of Myanmar, where the difference is very small, but the prevalence is higher for men). This finding is consistent with global data on YLDs caused by depression, which shows depression as a more significant contributor to YLDs in older women than older men. In the group aged 50 to 69, depression accounts for 6.8 per cent of YLDs among women, compared with 4.7 per cent for men. The same trend is seen in the group aged 70 and over, with figures of 4.4 per cent and 3 per cent, respectively.[161]

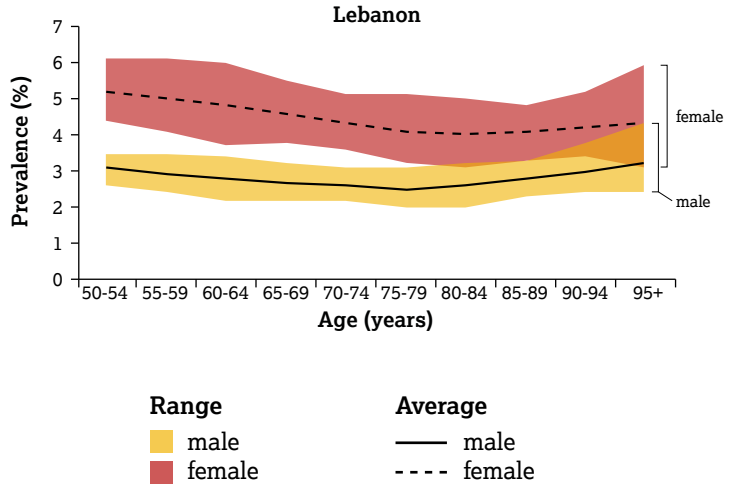
Linked to the analysis of data on depression in older age, this report also explores the rate of mortality due to self-harm[162] among older people. Recognising the importance of tackling the rates and causes of mortality due to self-harm globally, an indicator on suicide mortality was included in the SDG indicator set to monitor progress against SDG target 3.4, which is focused on NCDs and mental health. In low-income countries, the mortality rate due to self-harm is highest among people aged 70 and over, nearly six times higher than among those aged 15-49.[163] An analysis of data on self-harm mortality rate for the 12

Figure 21: Prevalence of major depressive disorders in selected countries in Africa



Source: Institute for Health Metrics and Evaluation[164]

Figure 22: Prevalence of major depressive disorders in Lebanon



Source: Institute for Health Metrics and Evaluation[165]

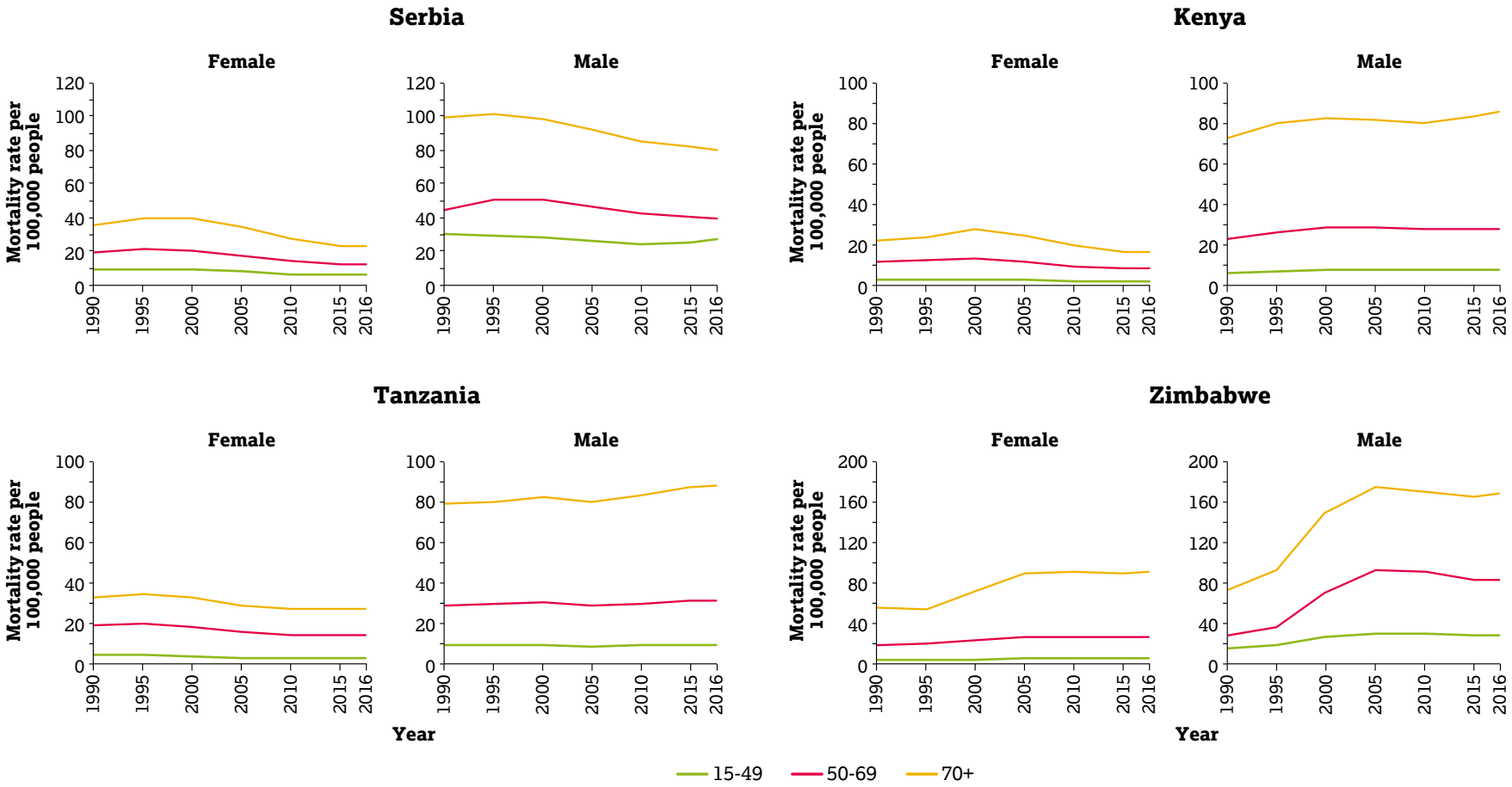
profile countries shows some key trends related to age and gender. In seven of the 12 countries, mortality rates due to self-harm are highest in the group aged 70 and over, followed by the group aged 50 to 69, and lowest in the youngest age group analysed, the 15- to 49-year-olds. In Moldova, rates are higher in older than in younger people, but with the highest rates in men seen in the group aged 50 to 69, followed by those aged 70 and over. In the remaining countries, there is little difference in mortality as a result of self-harm by age.

A gender analysis also demonstrates important trends. Self-harm mortality rates are higher in men across the 12 countries, including older men, than in women, with the exception of Myanmar and Pakistan. In these two countries, prevalence was higher in older women than men throughout the 1990s into the 2000s, but rates have since declined in women, leading to more similar rates between older women and men, or slightly higher rates in men, in more recent years.

While declines have been seen between 1990 and 2015 for both women and men across the older age range in Argentina and Serbia, different trends are seen in the remaining countries on self-harm. In El Salvador, the general trend has been one of declining mortality across the generations since 1990, but for men in the groups aged 50 to 69, and 70 and over, rates started to increase again from around 2006. In Moldova, there has been a general trend of declining rates across the generations, but male mortality for the age cohort between 50 and 69 is more volatile than in any other population group.

Data from the three African countries and Serbia show the highest rates of mortality due to self-harm in older age in comparison with younger groups, and the most pronounced differences between women and men (Figure 23).

Figure 23: Self-harm mortality rate in Serbia, Kenya, United Republic of Tanzania and Zimbabwe



Source: Institute for Health Metrics and Evaluation[166]

Data on depression and on mortality due to self-harm demonstrates the importance of ensuring older people's access to mental health services and support as part of efforts to ensure their right to the highest attainable standard of physical and mental health. The age- and gender-related trends emerging from the data analysis point to the importance of targeted interventions that are sensitive to the specific needs of population groups and individuals, and of ensuring the acceptability of health services and support.

7.5 The complexity of health in older age: what do we measure?

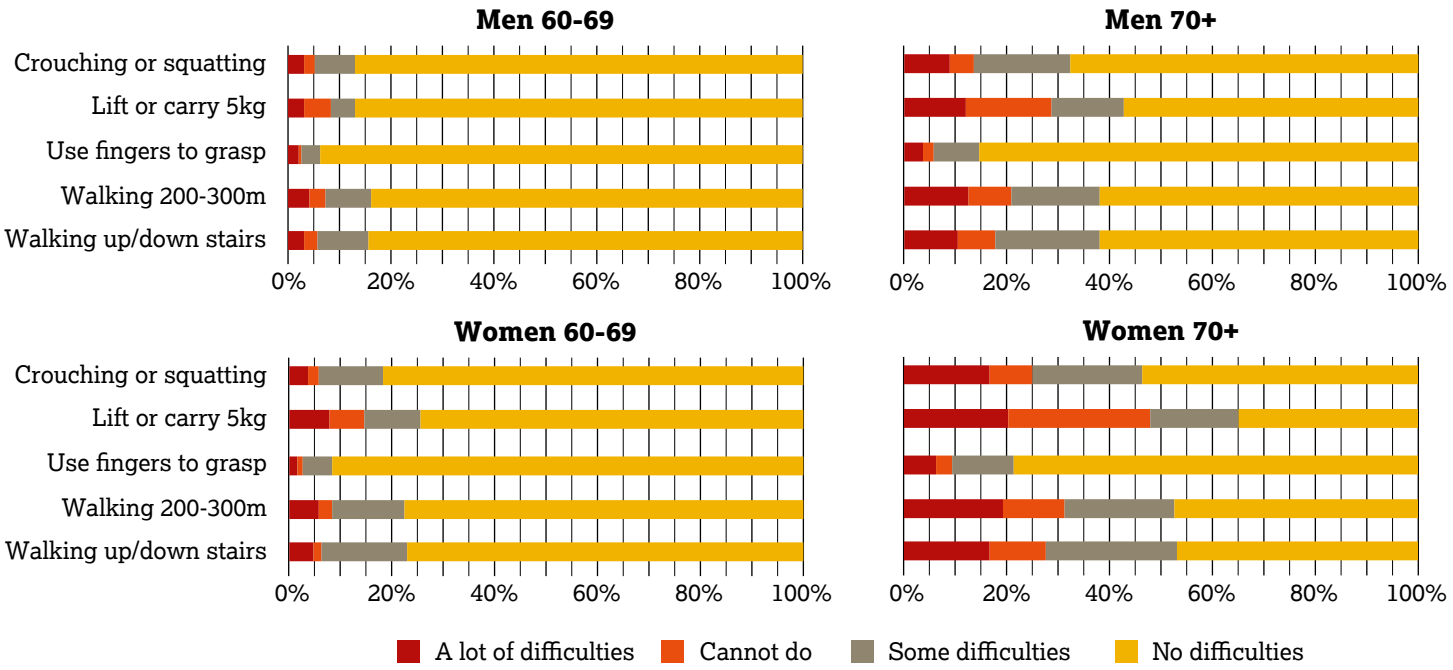
Health and care issues tend to become increasingly complex as people age. With high rates of multimorbidity, older people experience a range of conditions and challenges across the disease categories, including injuries. They often have a simultaneous need for increasing levels of support with tasks of daily living, which is the clearest indication for a transition to a more person-centred, integrated and holistic care. Yet, as we have seen, health systems still tend to focus more on diagnosing and curing acute, time-bound, episodic illness. The vertical, disease-specific nature of health systems and the services they provide is mirrored in the data collected on health. The vast majority of data available, particularly through the larger-scale global, regional and national level comparable data sets, tends to focus on the impact of specific diseases and ignores the complexity of multimorbidity and broader wellbeing and functional ability.

The data analysed and presented in this report and accompanying country profiles (Appendix 1), reflects data availability, and not what is considered to be the most important or useful in terms of guiding necessary health systems transitions. For health systems to be adapted to respond to the changing contexts of the demographic and epidemiological transitions, far more specific and nuanced data is required. This should highlight the complexities of health in older age, and how health challenges are accompanied by declining functional ability that requires integrated health and social care. Data on activities of daily living (ADLs) and instrumental activities of daily living (IADLs) could provide more useful data, particularly to guide more targeted services and support for older people. While ADL and IADL data is collected, and often in relation to older people, large-scale, comparable data is not available.

To give an indication of the type of data that could be used to inform health systems transitions, and accompanying efforts to ensure the development and strengthening of systems for the provision of care and support – both of which will be crucial in ensuring older people's right to health – this section explores an example of ADL and IADL data collected through the 2012 Myanmar ageing survey.[167] This survey included an analysis of older people's mobility, a key element in an assessment of ADLs. Higher levels of difficulty with mobility are consistently associated with poorer quality of life, poorer health outcomes and increased health service use.[168,169] Mobility is also an important factor in maintaining independence in older age. The Myanmar survey assessed mobility through a set of questions on walking, muscle strength, coordination and grip strength. The results show that challenges with mobility increase with age across the range of questions asked (Figure 24). For example, 16 per cent of men and 22 per cent of women between the ages of 60 and 69 reported some degree of difficulty with walking 200-300m. These figures increased to 38 per cent for men aged 70 and over, and 53 per cent for women of that age. For both women and men in the older age group, lifting or carrying 5kg presented the biggest challenge in terms of mobility.

The Myanmar ageing survey also included other ADLs focused on older people's ability to take care of themselves without daily assistance from others. Respondents were asked about their ability to feed and dress themselves, to bathe and use the toilet, and to get up from a lying position. Similar to the patterns of challenges seen in the mobility assessment, challenges associated with these daily activities increased with age for both women and men. The data shows older people in the 60- to 69-year group have minimal challenges with these types of

Figure 24: Difficulties with mobility and physical tasks in Myanmar



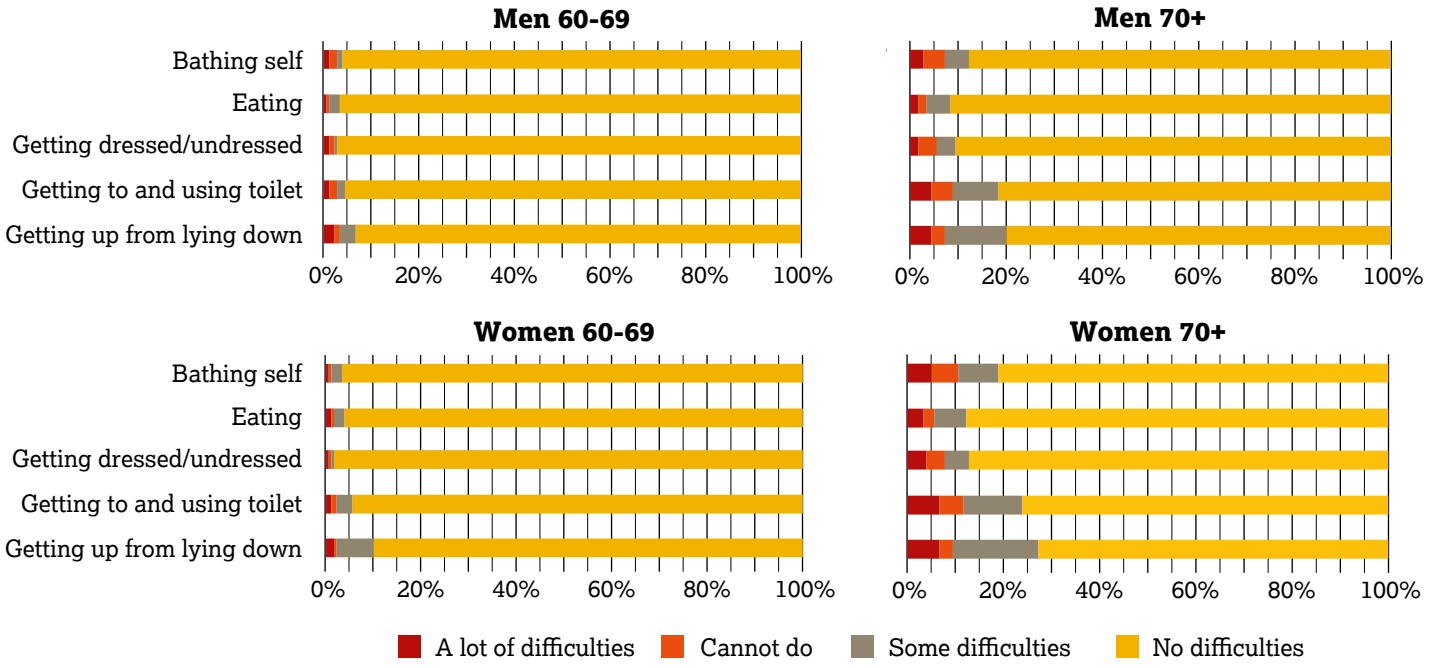
Source: Knodel[170]

activities but begin to struggle more as they get older (Figure 25). Women aged 70 and over reported greater levels of difficulty than men of the same age, but the same activities presented the greatest challenge for both women and men. Getting up from lying down and using the toilet were the personal care activities reported as most difficult, with 12 per cent of women and 9 per cent of men aged 70 and over reporting either a lot of difficulty with the latter or not being able to use the toilet at all.

IADLs were also included in the Myanmar survey, with older people asked about their ability to do household chores, manage money, use transport, make phone calls and remember to take medication. Ability to conduct all of these tasks is often affected by memory issues in older age, and difficulties with IADLs may be an early indicator of cognitive decline, including mild cognitive impairment through to the more severe impairment related to dementias.[171,172] The survey also included a question specifically on memory itself. These questions and the data they generate can be useful in providing estimates of potential levels of dementia and other cognitive impairment, particularly in contexts where little reliable research or diagnostic data is available on these conditions.

In a similar way to those seen in the assessments of ADLs, difficulties with IADLs increased with age and were typically more pronounced in older women than in men (Figure 26). Both older women and men had most difficulty with using transport and doing household chores. Alongside these findings, responses to the question about memory

Figure 25: Difficulties with self-care in Myanmar



Source: Knodel[173]

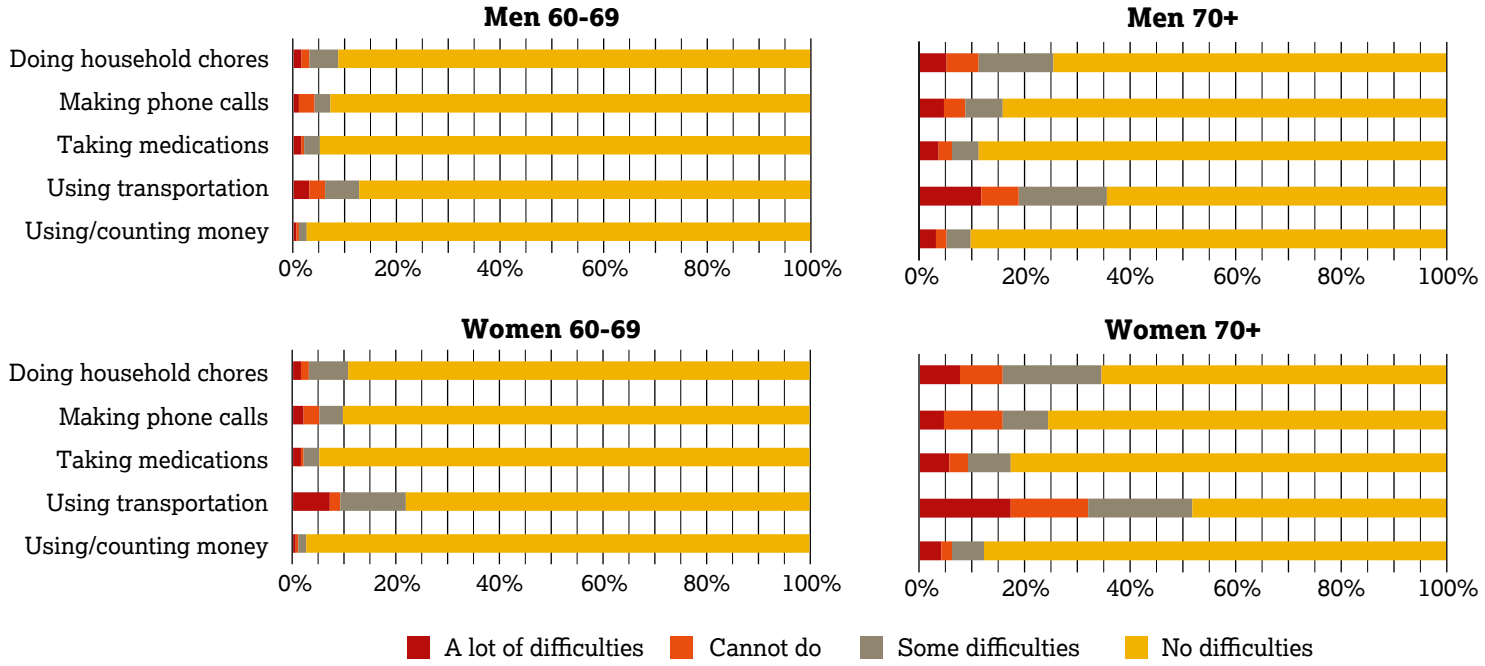
issues highlighted significant challenges for both older women and men. The data from Myanmar shows increasing levels of difficulty with taking medication as both women and men age. There is a clear impact of not being able to adhere to treatment regimens on older people's health.

The type of data collected through the Myanmar ageing survey, including on ADLs and IADLs, shows the importance of this broader data focus to inform service provision. The interrelation between health issues commonly faced in older age and challenges associated with tasks of daily living requires data on both, to ensure an evidence base that properly informs the transition of systems towards the more effective provision of person-centred and integrated services and support.

7.6 Older people's right to health, and universal health coverage: what do we measure?

To adequately monitor whether older people's right to health is being met, including through efforts to achieve UHC, the core components of the right to health and of UHC would need to be measured. This would mean the collection and analysis of data on the availability, accessibility, acceptability and quality of services, on the social determinants of health and their specific impacts for older people, and on whether older people were being protected from financial risk associated with accessing health services and support. The sourcing of data for this report has highlighted the almost complete absence of this type of data. Very little data is collected specifically on older people

Figure 26: Difficulties with instrumental activities of daily living in Myanmar



Source: Knodel[174]

in relation to these components. Data that is collected within a broader population group is rarely disaggregated by age, making an age-based analysis impossible.

Data has not been found that specifically covers the issues faced by older people in relation to the right-to-health components of availability, accessibility, acceptability and quality. On older people's access to health services and support more broadly, large-scale, representative, comparable data is again not available. Instead, there is a reliance on smaller-scale data sets or individual pieces of research. Where these have been found, they have shown that older people's right to health is not being met, and challenges with inequity, including by age and gender, persist in many countries. A 2014 study in Serbia, with over 20,000 respondents, included a question on self-reported access to health services, asking: "Was there any time during the past 12 months that you should have visited a doctor but did not?" While the data collected showed that the majority of respondents were accessing health services when they needed them, the proportion with unmet health needs increased with age. Among 45- to 64-year-olds, over 20 per cent of respondents did not access services. This figure was 15.5 per cent in the group aged 65 and over, compared with 12.5 per cent for those aged between 27 and 44, and 5.1 per cent for people aged between 16 and 26.[175]

Meanwhile, a small-scale study in Kenya found that poor women living with disability, the majority of whom were aged 50 and over, often opted to forgo health services, even when they were free at the point of access. The women cited the opportunity costs of accessing care – lost

days of work and family caregiving – as the major barrier to access, combined with a lack of acceptable disability-friendly facilities and the perceived negative attitudes of the health workforce.[176] An HIV-focused study in Zimbabwe had similar findings. While the majority of those aged 50 and over reported seeking care when they were unwell, they were more likely to face mobility issues, and challenges with paying for transport to get to health facilities.[177] The 2011 Vietnam national ageing study found that 95 per cent of older people who were sick or injured in the previous year were able to access treatment,[178] but the study did not explore quality of services or health outcomes.

These findings highlight the need for more nuanced data that addresses the core components of the right to health, and clearly demonstrate that even when older people seek services, they may well be faced with issues of acceptability, quality and financial access.

Looking at the social determinants of health and linking with the SDG indicators, the Global AgeWatch Insights project attempted to explore data on violence (linked to SDG indicator 5.2.1), water and sanitation (6.1.1 and 6.2.1) and poverty (1.1.1 and 1.2.1). The only issue for which data was found specifically for older people was violence. Data on the prevalence of physical, sexual and psychological violence was available across all 12 countries for people aged 50 and over, with further age disaggregation.

Attempts to source data on water and sanitation, and poverty for older people were less successful. Data on the proportion of people with access to adequate water, sanitation and hygiene services was available at the population level with disaggregation by location (urban and rural) but no disaggregation by age. Similarly, various indicators of poverty – for example, different measures of the poverty headcount ratio – were also available at the population level for the 12 countries, but without any age disaggregation. The lack of data on the social determinants of health disaggregated by age means very little is known about the specific impacts of these different issues on older people and whether their right to health is being met.

Attempts to source data on the components of UHC were equally challenging. Each of the two SDG indicators on UHC have specific limitations in relation to older people. SDG indicator 3.8.1 on the coverage of essential health services is measured using a service coverage index – a single indicator calculated from tracer indicators of the coverage of essential services. These include services for hypertension and diabetes, two conditions that are common in older age. The source of data for these is WHO-managed NCD data. In most instances, this data excludes people over a certain age, often over 64 or 69, meaning at least a proportion of the older population is not being counted in these indicators within the UHC service coverage index. For the index as a whole, age disaggregation is not possible. WHO and the World Bank recognise the lack of disaggregation, not just by age, but across the range of characteristics outlined in the 2030 Agenda, as a limitation and a key area for future work.[179] This, alongside potential additions to the indicator emerging through the work by WHO to develop an impact framework for its new *Thirteenth general programme of work* (GPW13, 2019-2023),[180] will be crucial to enable an analysis of equity – fundamental to the measurement and achievement of UHC.

Indicator 3.8.2, which monitors the financial risk-protection element of UHC by tracking catastrophic health expenditure, is measured at the household rather than the individual level. As a result, the data collected for this indicator does not provide any evidence on the financial impact of older people's access to health services and support. Broader measures of the financial element of UHC have similar limitations. Data on out-of-pocket expenditure, for example, is not available for older people or with age disaggregation.

If efforts towards the achievement of UHC are to be monitored effectively, significant work will be needed to ensure appropriate disaggregation is possible. Being able to measure progress for all people, irrespective of age and including the most disadvantaged, is fundamental to the achievement of both UHC and the wider SDGs, and their commitment to leave no one behind.

8. Conclusions – realising the right to health of older people

8.1 Unnecessary deficits in health and wellbeing in older age

Growing old is part of the natural life course for everyone. It is not a new human experience; nor is the presence of older people in our societies. What is new is the way people are ageing. People are living longer and in larger numbers, and, globally, later life has become a less predictable and more fluid part of the life course. The older people of today are in the vanguard of this shift as societies are challenged to adapt to the demographic and epidemiological transitions described in this report.

Across different societies, many long-established norms, practices and systems regarding ageing and older people are no longer fit for purpose.

Older person from Lebanon

Nowhere is this truer than in relation to our health systems, with the result that older people are not enjoying their right to health. The data reviewed for this report shows that older people in LMICs are living longer but, for many, their extra years are marred by unnecessary ill health, disability and loss of wellbeing. Across the majority of the 12 profile countries surveyed, the data indicates that the gap between healthy life expectancy and life expectancy is growing over time for both women and men. A gender analysis of this gap has also shown that women, despite having both a higher overall life expectancy and healthy life expectancy, can expect to live a greater proportion of their lives in poorer health than men. This is the case at the global level and in all regions of the world, and for each year that data has been analysed between 2000 and 2015.

Clear variations are evident in national patterns of life expectancy, healthy life expectancy, trajectories of disease and causes of death. These highlight the inequities in people's experience of health and wellbeing in older age and the potential, with sufficient political and popular will, to modify these inequities through societal adaptation, including the adaptation of health systems at the national level.

With declining mortality rates and longer life expectancy, older people are facing complex health and care issues in the context of high rates of morbidity, multimorbidity and disability from both communicable diseases and NCDs. In the case of men, the pattern is of higher mortality and for women, it is of higher morbidity. For both sexes, health-related issues are often accompanied by a need for increasing levels of support with tasks of daily living to sustain independence and autonomy. This results in the health and social care

elements of older people's lives becoming increasingly complex and interdependent.

It is this complexity, including the gendered dimensions of ageing, that health systems, and systems for the provision of care and support, have so far failed to address. The result is that, with regard to each of the core components of the right to health – availability, accessibility, acceptability and quality – older people encounter multiple barriers in accessing appropriate health services and support, and access is inequitable. Older people will continue to experience those barriers unless health systems adapt to ensure their rights are met.

8.2 Adapting health systems to support the right to health

Opportunities have emerged through the 2030 Agenda and the global effort towards universal health coverage (UHC), with the potential to deliver the change that is required to enable older people's right to health. Whether they will do so remains a moot point. While the promise of the 2030 Agenda is to include people of all ages and the pledge is to leave no one behind, in reality the framework of targets and indicators defining the SDGs, including the goal of health for all, is flawed regarding ageing and older people, being too narrow to guide the development of national policy and action plans. Problematic issues for older people's right to health are the exclusion of people aged 70 and over from the target on "premature" mortality, their exclusion from the measurement of key dimensions of UHC, and the generic nature of the target on the expansion and training of the health workforce in developing countries.[181]

While communicable diseases remain a concern for people of all ages in many LMICs, NCDs and injuries have become the major contributors to poor health and death in the majority of countries. As shown earlier in this report, the prevalence of NCDs typically rises with age, with cardiovascular disease, cancers, chronic respiratory diseases, musculoskeletal diseases, and neurological and mental disorders identified as major contributors to ill health.

Some examples from this report illustrate the imperative for health systems to change in response to the epidemiological transition now in progress. For both older women and men, the prevalence of diabetes has increased across the focus countries, with negative impacts in later life. In most cases, complications associated with diabetes can be managed and consequences prevented, including in older age. Interventions to reduce the risk of acquiring diabetes are well understood, and their effectiveness is known, including for older people. To reduce risks and manage complications, health and other systems need to provide information and integrated care that includes health promotion and prevention services and screening to support changes in behaviour and to ensure early diagnosis.

Ageing is the strongest known risk factor for dementia. Globally in 2016, dementia was responsible for 5 per cent of years lived with disability for people aged 70 and over, with higher levels among women than men and among the oldest old. In most high-income countries, under half of people living with dementia have received a diagnosis. From the limited data available, it is estimated that diagnostic coverage is unlikely to exceed 5-10 per cent in most LMIC settings, and specialist continuing care for people with dementia is extremely limited. Dementia remains poorly understood and the symptoms are often regarded as a normal part of ageing, both by the individuals affected but most worryingly also by health workers. These gaps provide a stark example of the need to equip health workers with geriatric and gerontological competencies if older people, including older people with dementia, are to realise their right to health.

Such competencies to support older people's health must include an understanding of mental health in later life. Depression, accounting for 5.7 per cent of years lived with disability globally, also remains

largely underdiagnosed and untreated in LMICs. Equally, mortality due to self-harm cannot be ignored, with the highest rates in seven of the 12 profile countries being among people aged 70 and over, and with a clear gender pattern of higher rates among older men than older women.

If the challenges facing health systems in LMICs are immense, so too are the possibilities in settings where health and care systems have not become as institutionalised and entrenched as they are in high-income countries. There is an opportunity to shape holistic and integrated responses to the health needs of older populations, and to provide people-centred care. The clearest indications of the importance of a transition towards more person-centred, integrated and holistic care are the high rates of multimorbidity, older people experiencing a range of conditions and challenges across the disease categories, including injuries, and the often simultaneous need for high levels of support with tasks of daily living. Achieving this transition is crucial to older people, who themselves consistently highlight the desire to sustain independence and autonomy as they age.

UHC offers an opportunity for countries to strengthen their health systems and to adapt, leading with a focus away from vertical, disease-specific programmes towards more integrated and coordinated services. There are significant blind spots, however, that threaten older people's inclusion in UHC-led policy, planning and implementation. The actions needed to address these gaps include:

- recognition of the requirement for person-centred rather than disease-centred healthcare
- integration of health systems with care and support responses
- inclusion of geriatric and gerontological competency in the training of health workforces
- an understanding of the impact of multimorbidity on health and care systems
- a focus on older people's mental and cognitive health and wellbeing equalling that on physical health.

8.3 Ending the exclusion of older people and ageing from data systems

The international data system has failed to keep step with the shifts in our understanding of health as we age, in the reality of population dynamics, and in trends and patterns of disease. Failures are evident at each of the critical points of conceptualisation, collection, analysis, dissemination and utilisation of data. The result is that our understanding of older people's health at the national, regional and global levels is disproportionately informed by data that is limited in its scope.

Specifically, the data analysed and presented in this report and the accompanying country profiles (Appendix 1) reflects data availability rather than the range of data that would be most useful in guiding the necessary health systems transitions. Far more precise and nuanced data is required that highlights the complexities of health in older age and the challenges associated with declining functional ability that require integrated health and social care responses committed to sustaining independence and autonomy as people age.

Data on ADLs and IADLs could inform the development of more targeted services and support for older people. While ADL and IADL data is collected, and often in relation to older people, large-scale comparable data is not available.

In relation to availability, accessibility, acceptability and quality – the components of the right to health – almost no data specific to the issues faced by older people has been found. On older people's access to health services and support more broadly, large-scale, representative, comparable data is again not available. Instead, there is a reliance on smaller-scale data sets or individual pieces of research. Where these have been found, they show that older people's right to health is not

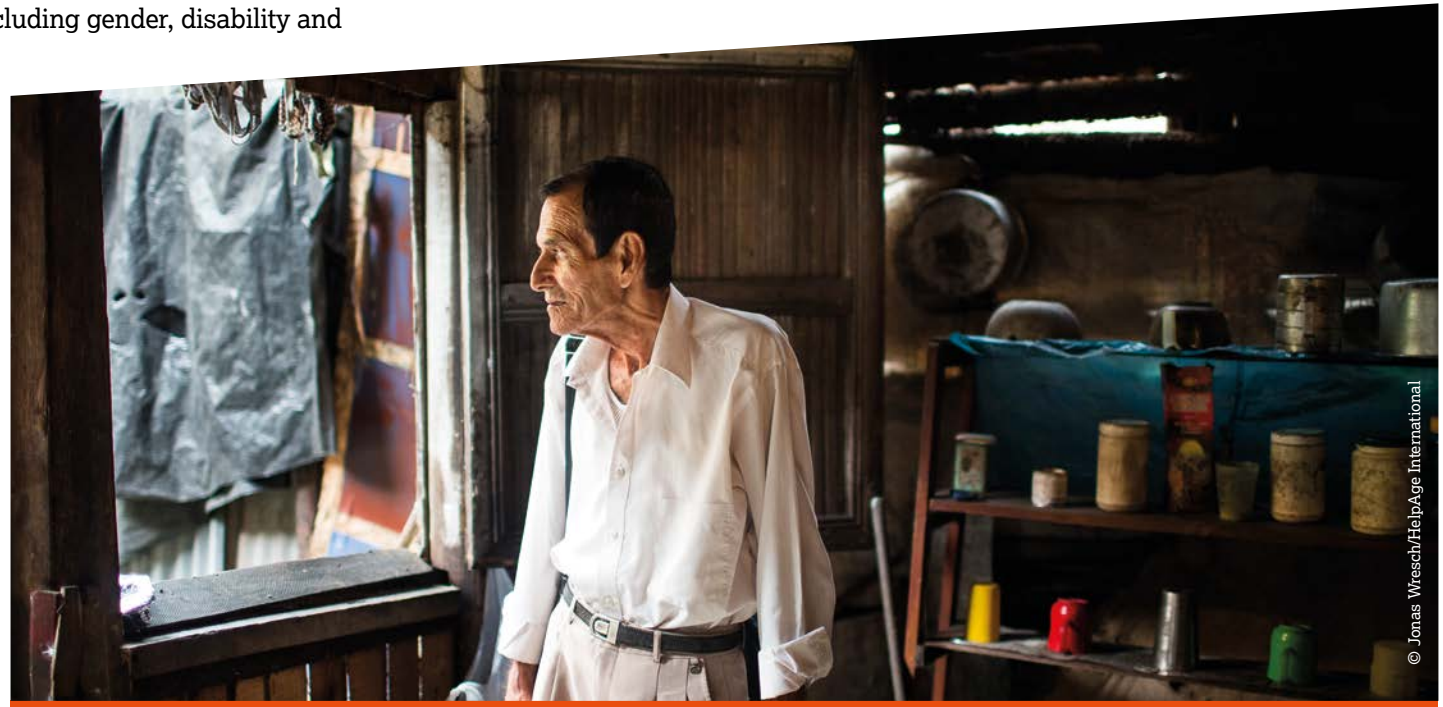
being met, and challenges with inequity, including by age and gender, persist in many countries.

Both the focus of health data collection on younger age groups and the way data is collected results in the exclusion of older people from international surveys. Barriers include an over-reliance on household surveys, which do not adequately reflect older people's experiences and issues, and the failure to gather data on key groups of older people. These people include older women, particularly those living in poverty, people in need of humanitarian assistance and protection, adults living outside households (for example, those in institutions, the homeless), and people whose sexual orientation or gender identity is lesbian, gay, bisexual, transgender or queer or questioning. In addition, the value of much of the data collected through surveys is lost as a result of the failure to analyse and publish the results disaggregated by age as well as by other key variables, including gender, disability and location.

The obstacles encountered in the preparation of this report, and in the conduct of secondary research to establish the physical and mental health status and wellbeing of older people in 12 profile LMICs, have been enormous. Where data on health and ageing had been collected at a national level, there were frequently issues of restricted access, limited comparability and limited quality of the data sets. If the richest sources of data on ageing and older people's health are not available, accessible and comparable, this has implications for the reliability of the data informing national policy and comparative studies, and being reported in the global system.

The findings of the mapping of data systems provide further concrete evidence of the gaps at national levels in the data available for planning for ageing and older people. The gaps are such that it is simply not yet possible to systematically measure those SDG indicators that are relevant to older people. This means that any measurement of UHC will be deficient in relation to issues of access, quality and affordability from the perspectives of older people.

Notwithstanding the data gaps, the review of data for this report has clearly shown that, as



Older person from Buenaventura, Columbia

populations grow older, the transition from communicable disease to NCDs presents a huge challenge. Mental and cognitive health in older age is another critical area of neglect. We have seen how the prevalence of both depression and dementia increases in the group of people aged 70 and older. These findings are not new, yet they have long been ignored by policy-makers and decision-makers, who are failing to keep step with the broader health needs of ageing populations.

The data that already exists clearly shows that guidance on the design of UHC services must be refined to ensure the inclusion of age-specific services and support. To achieve all this, fundamental changes are needed to the ways data is collected on ageing and on health in older age, to what is collected and to how the data is used to inform the necessary changes to health systems. These changes must incorporate:

- the improvement of existing national surveys and other instruments for the inclusion of ageing and older people
- the development of linkages between statistical and administrative systems to generate timely data for planning, and to do so more efficiently
- the conduct of bespoke cross-sectional surveys on ageing, as well as the extension of longitudinal studies on ageing, enabling both national planning and international comparability of ageing phenomena.

8.4 The action we can take together

Following the 70th anniversary of the Universal Declaration of Human Rights and of the establishment of the World Health Organization, it is time to take action to end the denial of older people's right to health. There are solutions to the issues identified in this report, and everyone has a part to play in implementing them. The following actions are needed.

Participation of older people

Stakeholders must work in partnership with older people, recognising the following three principles.

- Older people live the experience of ageing. It follows that older people's voices, knowledge and perspectives should inform and guide our collaborative action to design and implement health systems that are integrated with care and support responses and that are shaped around the priorities and concerns of older people themselves, including that of maintaining autonomy and independence in later life.
- The articulation, measurement and policy implementation of the core concepts identified in this report – notably person-centred care – require co-creation and are fundamental to the achievement of the right to health.
- Supporting the development of high levels of health literacy and of data literacy among older people, when required, will enhance the effectiveness of older people's engagement with governments, civil society organisations and multilateral societies, and contribute to the achievement of essential transitions in health systems.

Achieving health systems transition

In response to the current demographic and epidemiological transitions, governments must do the following.

- Include ageing and older people in national health policy, planning and implementation.
- Establish the right to health in legislation at the national level.
- Close the gap in the recognition of dementia, depression and other mental and cognitive health conditions in older age.

- Implement gendered and inclusive health responses, taking account of the needs of specific groups of older people, including those with disabilities.
- Recognise and respond to the violence, abuse and neglect experienced by older people, particularly women, as an issue of health and wellbeing.
- Develop models of UHC that are holistic, person-centred and integrated across health and care and support systems.
- Define services for inclusion in UHC that are age-specific and responsive to the needs of older people.
- Support the development of geriatric and gerontological competence among all sectors of the health workforce.

Addressing data issues and gaps

Multilateral agencies, governments and national statistical offices must act, as appropriate to their mandates, to ensure the following.

- Older people are counted and included in statistical systems and at all stages of the data cycle from conceptualisation, collection and analysis of data through to dissemination and utilisation.
- Age caps are removed from international surveys.
- High-quality guidance is developed and disseminated against a conceptual and analytical framework on ageing-related statistics, incorporating a life-course approach, to inform the collection, analysis and utilisation of more nuanced and useful data on ageing, health and functional ability at global, regional and national levels.
- The range of methods of gathering data with, from and about older people is extended to include cross-sectional and longitudinal surveys on ageing.
- Survey and other statistical and data findings are disaggregated by age, gender, disability and location, and age-specific results are published.
- The use of the ageist concept of "premature mortality" (which suggests that death after a certain age is acceptable) is discontinued in strategic and policy frameworks at all levels and is not operationalised in global, regional or national data systems.
- LMICs are adequately supported in the development of civil registration and vital statistics (CVRS) as one type of administrative data that provides continuous demographic and health data on births, mortality and causes of death.
- Investment is made in statistical capacity-building on ageing, health and older people for staff of national statistical offices, especially in LMICs, and in strengthening routine and periodic data collection efforts at the national level.
- Measurements of UHC are extended to include indicators on older people's access to services, on the training of staff working with older people, distance to health centres, disaggregation of data about out-of-pocket payments, and on the affordability and availability of appropriate medicines, including for NCDs.
- Data is collected to enable a better understanding of the relationship between poverty and health across the life course and, specifically, in later life.
- The deliberations and outputs of the Titchfield Group on ageing-related statistics and age-disaggregated data are proactively supported, disseminated and utilised at global and national levels as they become available.

Glossary

Activities of daily living

Activities of daily living (ADLs) are basic activities that are necessary for independent living, including eating, bathing and ability to go to the toilet.[182] There are several assessment tools available to determine an individual's ability to perform an activity with or without assistance.

Catastrophic health expenditure

Many families worldwide suffer undue financial hardship as a result of receiving the healthcare that they need. One of the issues UHC focuses on in this area is: "catastrophic spending on health", which is out-of-pocket spending (without reimbursement by a third party) exceeding a household's ability to pay.[183]

The incidence of catastrophic spending on health is reported on the basis of out-of-pocket expenditures exceeding 10 per cent and 25 per cent of household total income or consumption. This is the approach adopted for the SDG monitoring framework. Across countries, the mean incidence of catastrophic out-of-pocket payments at the 10 per cent threshold is 9.2 per cent. Incidence rates are inevitably lower at the 25 per cent threshold with a mean of 1.8 per cent.

Disability-adjusted life years

One disability-adjusted life year (DALY) equals the sum of years of life lost (YLLs) and years lived with disability (YLDs).[184] One DALY equals one lost year of healthy life. DALYs allow us to estimate the total number of years lost due to specific causes and risk factors at the country, regional and global levels. The sum of these DALYs across the population – the burden of disease – can be thought of as a measurement of the gap between the current health status and an ideal health status in which the entire population lives to an advanced age, free of disease and disability.

Functional ability

Functional ability refers to the health-related attributes that enable people to be and to do what they have reason to value; it is made up of the intrinsic capacity of the individual, relevant environmental characteristics, and the interactions between the individual and these characteristics.[185]

Geriatrics

Geriatrics is the branch of medicine specialising in the health and illnesses of older age and their appropriate care and services.[186]

Gerontology

Gerontology is the study of the social, psychological and biological aspects of ageing.[187]

Healthy life expectancy

Healthy life expectancy (HALE) at birth is the average number of years that people can expect to live in full health by taking into account years lived in less than full health due to disease and/or injury.[188]

Instrumental activities of daily living

Instrumental activities of daily living (IADLs) are activities that involve aspects of cognitive and social functioning, including shopping, cooking, doing housework, managing money and using a telephone.[189]

Intrinsic capacity

Intrinsic capacity is the composite of all the physical and mental capacities that an individual can draw on.[190]

Life expectancy

Life expectancy (LE) at birth reflects the overall mortality level of a population.[191] It summarises the mortality pattern that prevails across all age groups in a given year – children and adolescents, adults and older people.

It is calculated as the average number of years that a newborn would be expected to live if he or she is subject to the age-specific mortality rate during a given period.[192]

Long-term care and support

Long-term care and support refers to the activities undertaken by others to ensure that people with, or at risk, of a significant loss of intrinsic capacity can maintain a level of functional ability consistent with their basic rights, fundamental freedoms and human dignity.[193]

Older people have the right to care and support services for independent living. These should be adapted to their individual needs, promote their wellbeing and maintain their autonomy and independence, without discrimination of any kind.[194]

Older person

Older person is a term used to describe someone in later life.[195] It is common in all societies and cultures to divide our lives into different stages, with older age being the latter stage and an older person being someone in that stage.

For statistical purposes, age 60 and over is frequently used to describe older people, although the age ranges chosen depend on regional or national contexts and on the purpose of the surveys in question.[196]

People aged between 60 and 79 are sometimes referred to as the younger old, and people aged 80 and over are sometimes referred to as the older old.

Universal health coverage

Universal health coverage (UHC) is defined as ensuring that all people have access to needed health services (including prevention, promotion, treatment, rehabilitation and palliation) of sufficient quality to be effective while also ensuring that the use of these services does not expose the user to financial hardship.[197]

Years lived with disability

Years of life lived with any short- or long-term health loss. Years lived with disability (YLDs) are calculated by multiplying the prevalence of a disorder by the short- or long-term loss of health associated with that disability (the disability weight).[198]

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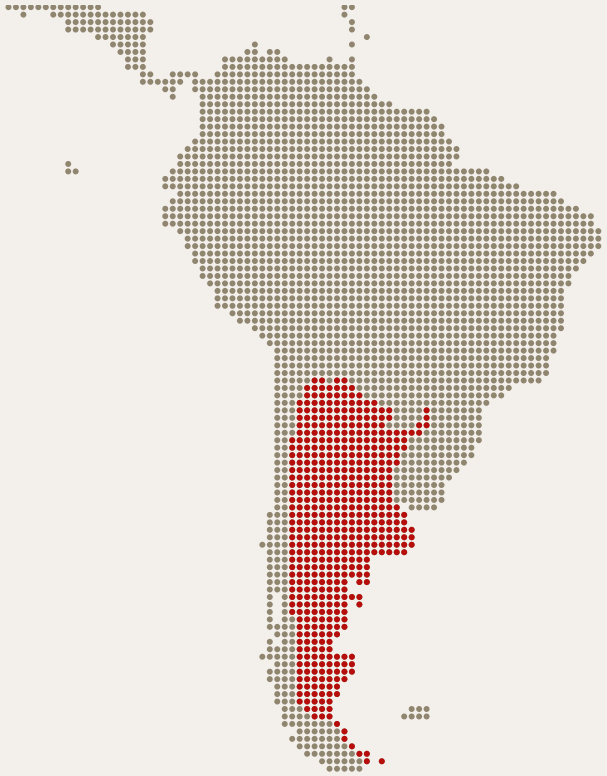
Appendix 1: Country profiles

Argentina

Key points

- Non-communicable diseases (NCDs) accounted for 88.2 per cent of the total years lived with disability in 2015.
- The burden of disability from injuries increased for older women and men between 1990 and 2015.
- The rates of dementia in women and men are similar until around the age of 70; beyond this, prevalence in both sexes increases rapidly but there is a steeper rise in the rates for women than for men.
- Ten per cent of women between ages 50 and 54 reported experiencing violence during 2016, compared with about 5 per cent of men in the same age range.



Ageing and longevity in Argentina

Argentina's population is expected to surpass 49 million by 2030.[A] The population aged 60 and above will continue to increase, while the youngest population (aged 0-14) will continue to decrease through to the end of the century[B] (Figure A1).

Both men and women are living longer. While women are expected to outlive men by 6.8 years, the number of years spent in poor health – the gap between life expectancy and healthy life expectancy – is greater for women (9.6 years) than for men (7.6 years) (Figure A2).

Ageing and shifting patterns of disease and disability

As the population ages, the pattern of disease in Argentina is also shifting. NCDs accounted for 88.2 per cent of the total years lived with disability in Argentina in 2015. While NCDs contribute the vast majority of years lived with disability at all ages, the burden of disability from injuries also increased for older women and men between 1990 and 2015 (Figure A3). By contrast, burdens related to communicable, maternal, neonatal and nutritional diseases all decreased.

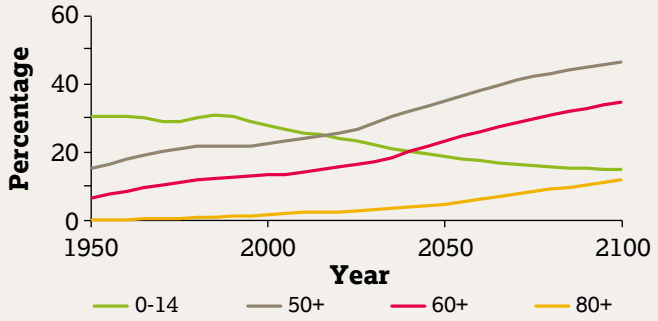
Even though the number of deaths related to NCDs has decreased in the last 25 years (1990-2015), in 2015, NCDs still accounted for about 86 per cent of all deaths among men and women in the age groups of between 50 and 69 and 70 and over in Argentina (Figure A4).

Ageing, mental health and cognitive impairment

The prevalence of major depressive disorders is decreasing among women in Argentina between ages 50 and 80, after which it increases (Figure A5).[C]

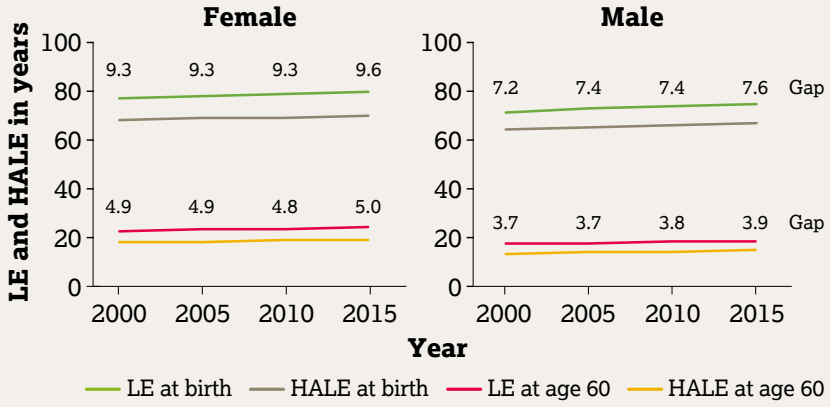
On average, women have higher rates of depressive disorders than men at every age.

Figure A1: Population structure in Argentina



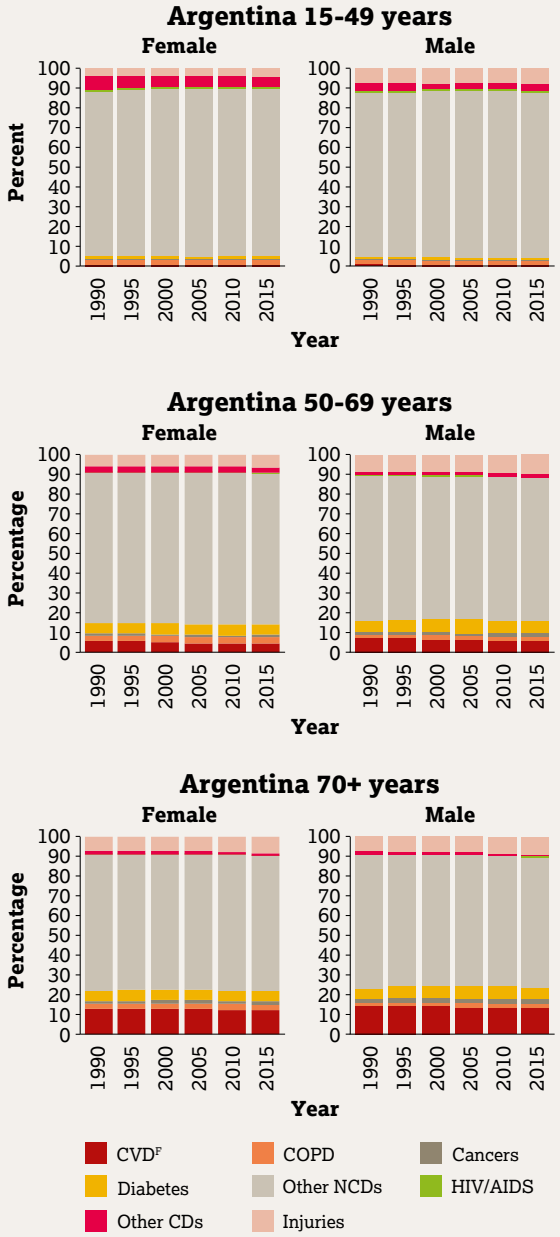
Source: United Nations, Department of Economic and Social Affairs, Population Division[D]

Figure A2: The gap between life expectancy (LE) and healthy life expectancy (HALE) in Argentina



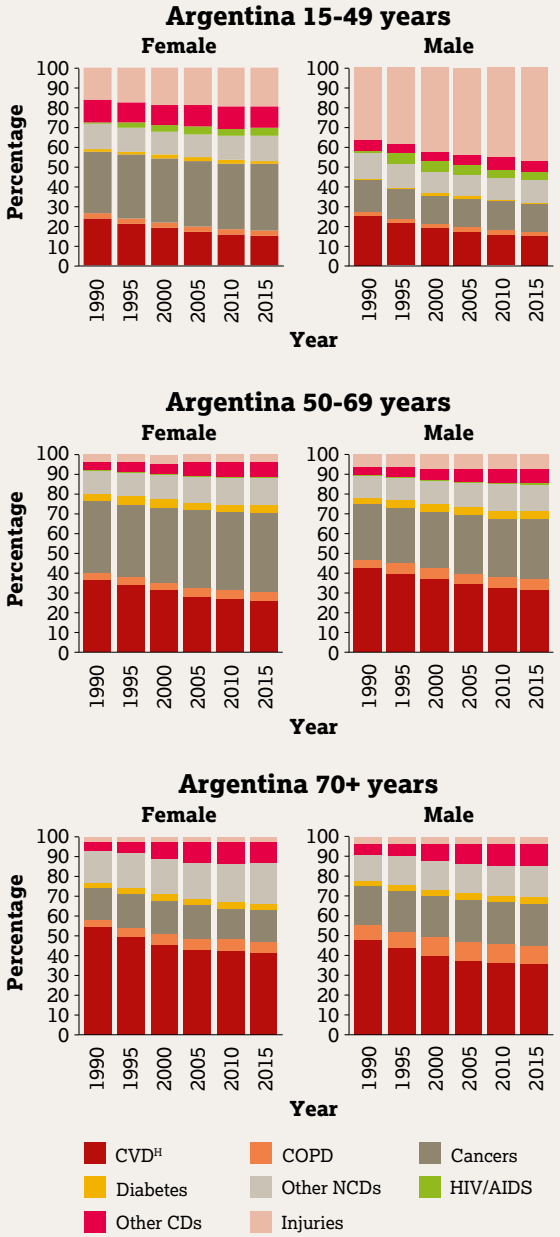
Source: World Health Organization[E]

Figure A3: Years lived with disability in Argentina



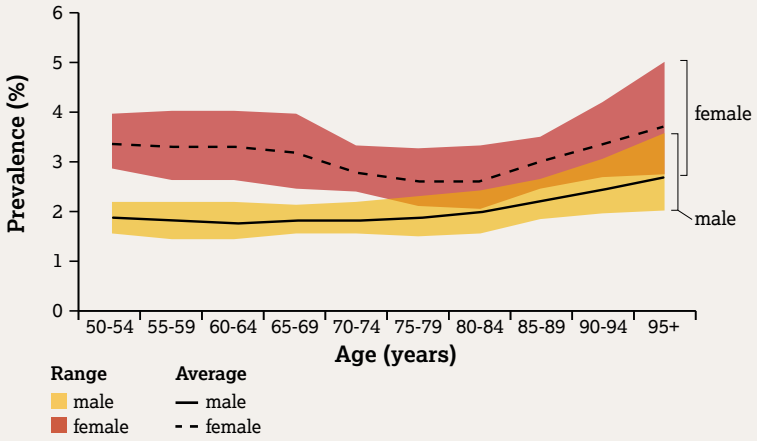
Source: Institute for Health Metrics and Evaluation[G]

Figure A4: Causes of death in Argentina



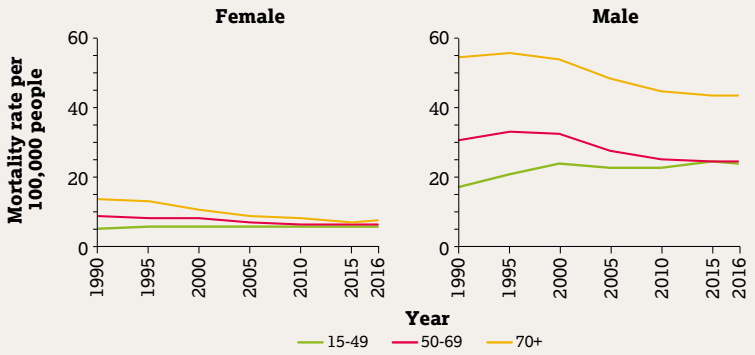
Source: Institute for Health Metrics and Evaluation[I]

Figure A5: Prevalence of major depressive disorders in Argentina, 2016



Source: Institute for Health Metrics and Evaluation[J]

Figure A6: Self-harm mortality rate in Argentina



Source: Institute for Health Metrics and Evaluation[K]

Looking at the burden of deaths resulting from injuries, specifically self-harm, there are higher rates in men than women over the period 1990-2016. By contrast, there are declining rates in women and men between ages 50 and 69, and age 70 and over from 1995 onwards (Figure A6).

The rates of dementia (for example, Alzheimer's disease) in men and women are similar until around age 70, after which prevalence in both sexes increases rapidly, but with a steeper rise for women than for men (Figure A7).

Prevalence of violence towards older people

The prevalence of physical, sexual and psychological violence in Argentina was higher among older women than men, particularly among women aged between 50 and 70 (data for 1990-2016). About 10 per cent of women between ages 50 and 54 reported experiencing violence during 2016, compared with 5 per cent of men in the same age group (Figure A8).

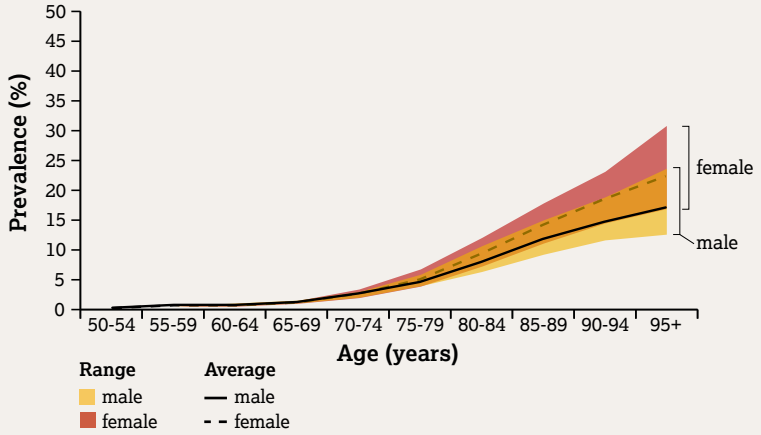
Poverty and health financing

In 2015, Argentina spent 6.8 per cent of its gross domestic product on healthcare.[L] This is close to the Latin American and the Caribbean regional average of 7.4 per cent.

While older adults access Argentina's Programa de Atención Médica Integral, there are gaps in universal health coverage (UHC)[M] and most Argentinians also have social health or private insurance.[N]

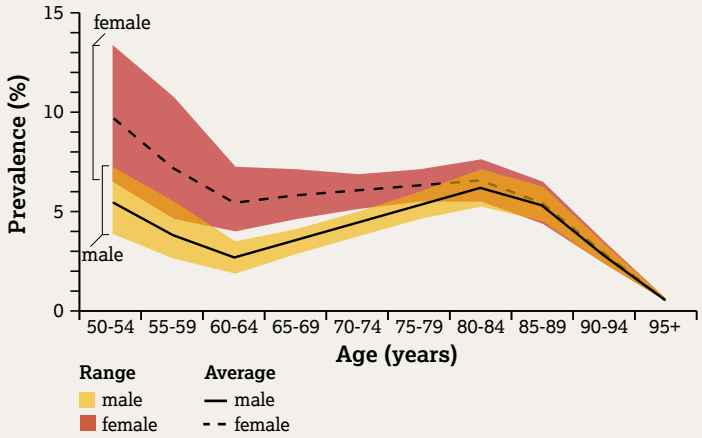
Estimated out-of-pocket health expenditure – that is, the amount paid for by a household – in Argentina decreased from 31.4 per cent of current health expenditure in 2008 to 17.6 per cent in 2015.[O] In 2015, 55.4 per cent of the population reported being satisfied with public hospitals compared with 52.7 per cent in 2010.[R]

Figure A7: Alzheimer's and other dementias in Argentina, 2016



Source: Institute for Health Metrics and Evaluation[P]

Figure A8: Physical, sexual and psychological violence in Argentina, 2016



Source: Institute for Health Metrics and Evaluation[Q]

It is not possible to analyse expenditure or access to health insurance, mandatory or voluntary, by age group due to lack of age disaggregation in the relevant international datasets.

Older people remain largely invisible within the monitoring of UHC. The UHC Index (Table A1) measures coverage of a range of essential services. Currently, these include two of particular concern to older people: access to treatment for diabetes and for hypertension. However, gaps in the data sources used to track UHC mean that we do not have systematic findings on older people's access to these treatments.

Table A1. Selected health and care indicators for Argentina

Indicator	Definition	
UHC Index 2015[S]	Coverage of essential services under universal health coverage[T]	76
Financial protection (%)	Incidence of catastrophic health expenditure[U]	16.9
Long-term care and support (%)	Gap in universal coverage of long-term care[V]	100

Endnotes

A Up from 44.27 million in 2017. United Nations, Department of Economic and Social Affairs, Population Division, *Profiles of ageing 2017*, https://population.un.org/ProfilesOfAgeing2017/index.html (22 October 2018)

B The estimates cover the period 1950-2100. The decline in the population aged 0-14 started around 1985 and is projected to decline until 2100. The share of older people increased during the estimated period 1950-2100

C Data around this issue needs to be interpreted carefully, however, taking into account the uncertainty intervals around the estimates

D United Nations, Department of Economic and Social Affairs, Population Division (2017). *World population prospects: the 2017 revision*, DVD edition

E World Health Organization, *Life expectancy and healthy life expectancy: data by country*, http://apps.who.int/gho/data/node.main.688?lang=en (18 October 2018)

F CVD, cardiovascular disease; COPD, chronic obstructive pulmonary disease; CDs, communicable diseases

G Institute for Health Metrics and Evaluation, *GBD compare | viz hub*, 2016, https://vizhub.healthdata.org/gbd-compare (18 October 2018)

H CVD, cardiovascular disease; COPD, chronic obstructive pulmonary disease; CDs, communicable diseases

I Institute for Health Metrics and Evaluation, *GBD compare*

J Institute for Health Metrics and Evaluation, *GBD results tool*, http://ghdx.healthdata.org/gbd-results-tool (18 October 2018)

K Institute for Health Metrics and Evaluation, *GBD results tool*

L World Health Organization, *Current health expenditure (% of GDP)*, https://data.worldbank.org/indicator/SH.XPD.CHEX.GD.ZS?locations=AR-ZJ (23 September 2018)

M Rubenstein A, *Building more effective health care coverage in Argentina*, 22 May 2018, https://blogs.bmj.com/bmj/2018/05/22/adolfo-rubinstein-building-more-effective-health-care-coverage-in-argentina (2 November 2018)

N Two-thirds of Argentina's population of 45 million also have social health or private insurance. This leaves another third (an estimated 16.5 million people) with no explicit coverage

O World Health Organization, *Out-of-pocket expenditure (% of current health expenditure)*, https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS?locations=AR (23 September 2018)

P Institute for Health Metrics and Evaluation, *GBD results tool*

Q Institute for Health Metrics and Evaluation, *Epi visualization | viz hub*, 2017, https://vizhub.healthdata.org/epi (18 October 2018 (original values converted into percentages)

R OECD, *Latin American economic outlook 2018: rethinking institutions for development.* Paris, OECD Publishing, 2018, http://dx.doi.org/10.1787/leo-2018-en

S The UHC Index measures coverage of essential health services, defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and most disadvantaged populations. It is presented on a scale of 0 to 100. The median national value for service coverage is 65 out of 100 (Hogan DR et al., *Lance*t, 6(2), 2018, pp.E152-E168, doi: 10.1016/S2214-109X(17)30472-2)

T World Health Organization, *Global Health Observatory: universal health covera*ge, http://apps.who.int/gho/portal/uhc-cabinet-wrapper-v2.jsp?id=1010501 (23 September 2018)

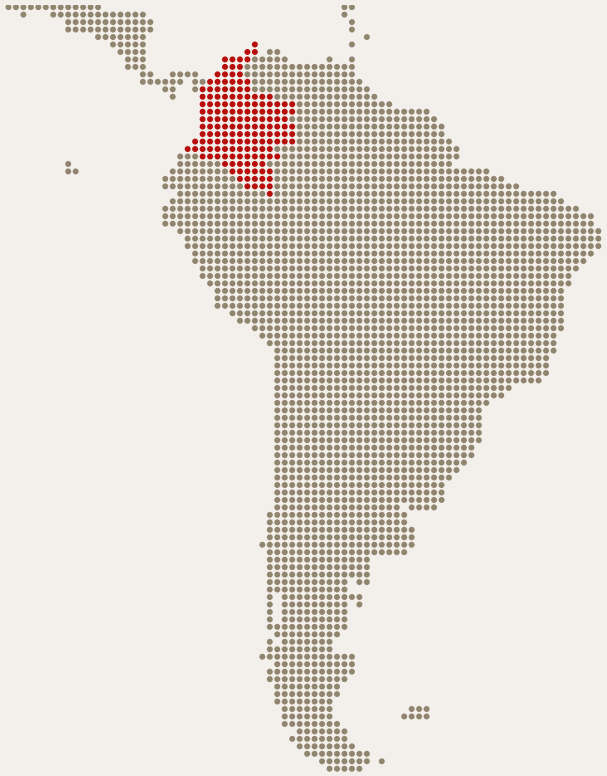
U Expressed as a percentage of the population with a household expenditure on health greater than 10 per cent of the total household expenditure or income. World Health Organization, *Global Health Observatory: universal health coverage*

V Expressed as a percentage, based on achieving a median number of 4.2 formal long-term care staff per 100 people aged 65 and older. International Labour Organization, *World social protection report 2017-19: universal social protection to achieve the sustainable development goa*ls, Geneva, International Labour Organization, 2017, table B.14, p.376

Colombia

Key points

- Non-communicable diseases (NCDs) accounted for 86.6 per cent of the total years lived with disability in Colombia in 2015.
- NCDs accounted for 93 per cent of deaths among men and women aged 70 and over in 2015.
- Older women were found to have higher rates of poor mental health than older men.
- Healthcare insurance coverage increased from 24 per cent of the total population (in 1993) to nearly universal coverage (96 per cent) in 2015.



Ageing and longevity in Colombia

Colombia's population will surpass 53 million by 2030.[A] The share of the older population (those aged 60 and over) will continue to increase, while the youngest population (those between ages 0 and 14) will continue to decrease through to the end of the century (Figure B1). The population aged 60 and over is predicted to grow by 3 per cent annually between 2015 and 2050, to reach 27.5 per cent of the total population.[B]

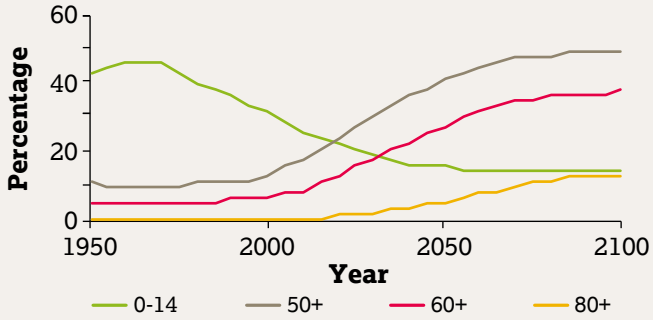
Both men and women are living longer in Colombia. While women are expected to outlive men by 7.3 years, the number of years spent in poor health – the gap between life expectancy and healthy life expectancy – is greater for women (9.0 years) than for men (7.2 years) (Figure B2).

Ageing and shifting patterns of disease and disability

As Colombia's population ages, the pattern of disease is also shifting. NCDs accounted for 86.6 per cent of the total years lived with disability in 2015. NCDs are the predominant driver of disability across all age groups, with rates highest among older people (70 and over) (Figure B3). For example, the impact of cardiovascular disease (CVD) is highest in the 70 and over age group, with patterns similar for both women and men.

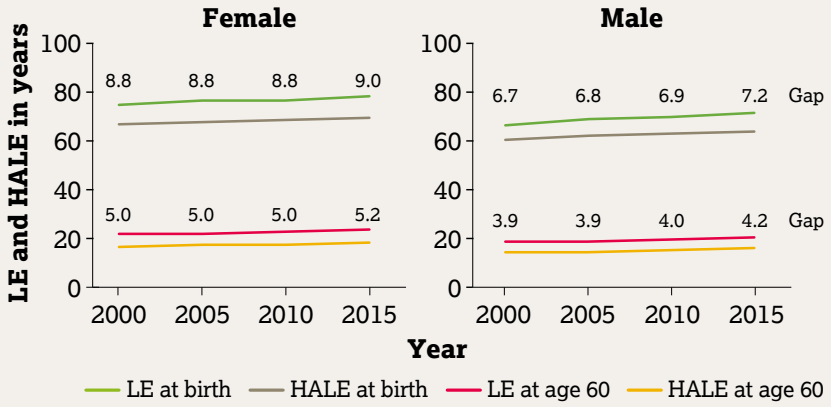
The number of deaths related to NCDs has increased in all age groups. In 2015, NCDs accounted for 85 per cent and 93 per cent of all deaths in Colombia among older people aged between 50 and 69, and 70 and over, respectively. However, while CVD declined as a cause of death among older people between 1990 and 2015, cancer increased as a cause of death (Figure B4).

Figure B1: Population structure in Colombia



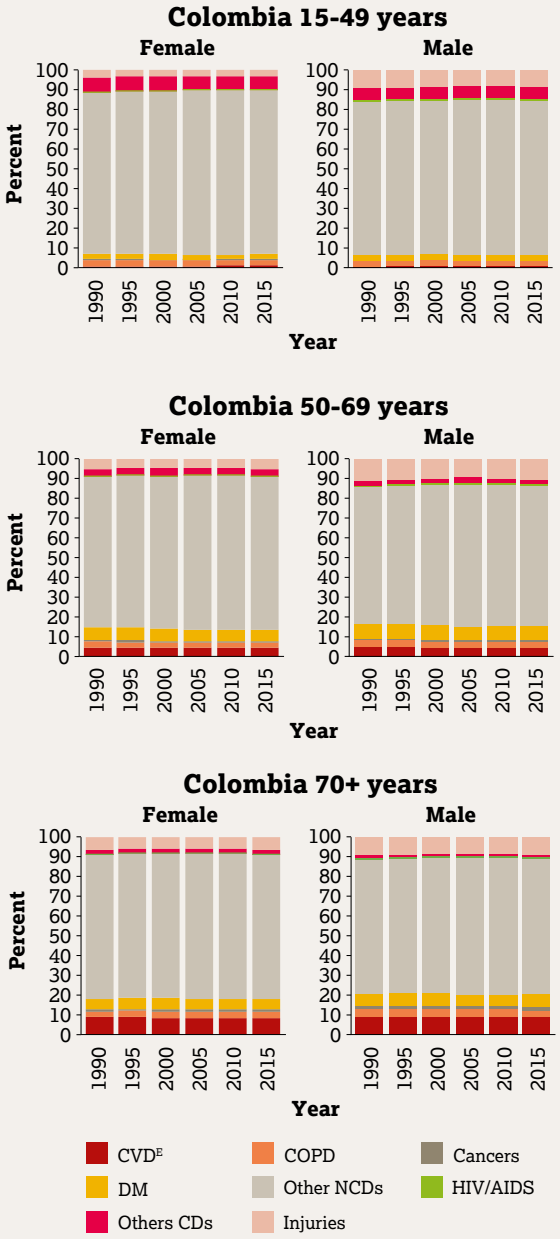
Source: United Nations, Department of Economic and Social Affairs, Population Division[C]

Figure B2: The gap between life expectancy (LE) and healthy life expectancy (HALE) in Colombia



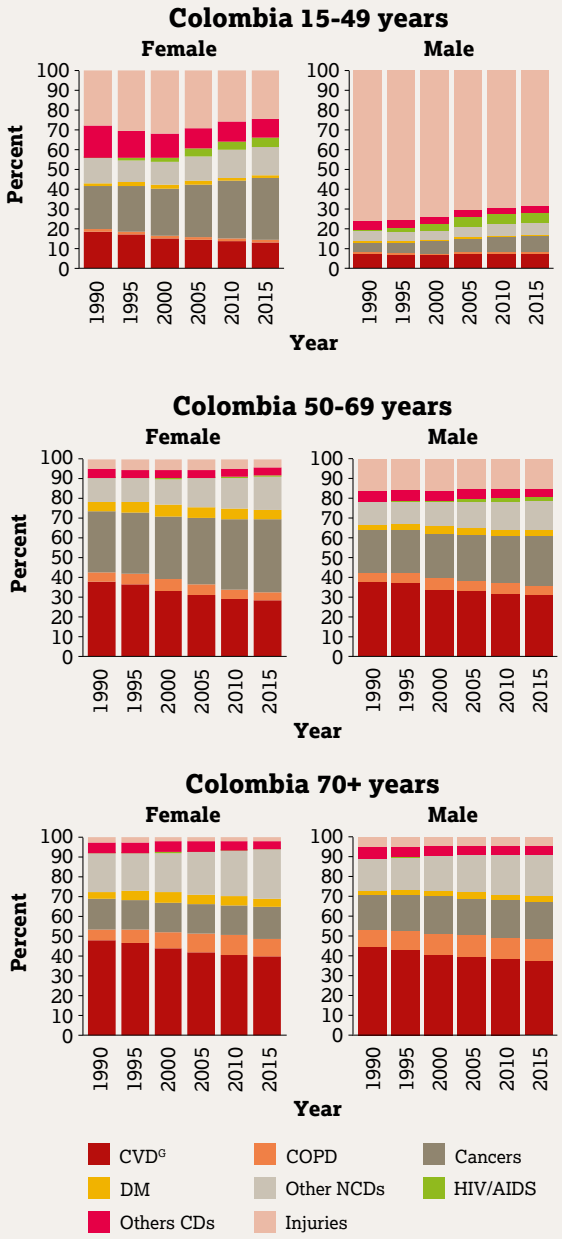
Source: World Health Organization[D]

Figure B3: Years lived with disability in Colombia



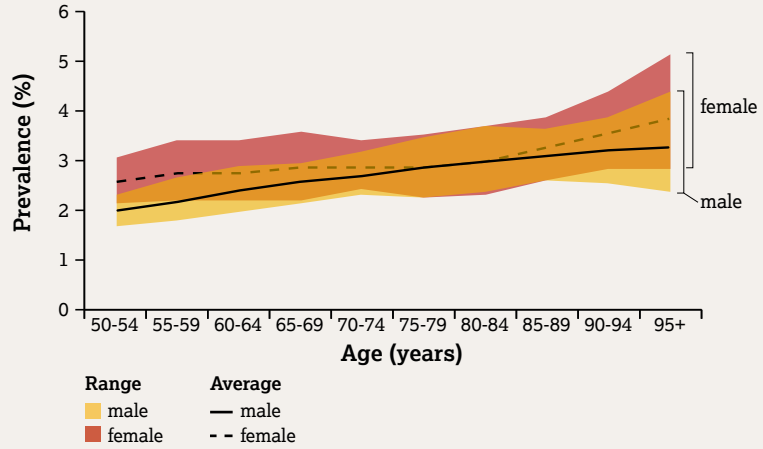
Source: Institute for Health Metrics and Evaluation[F]

Figure B4: Causes of death in Colombia



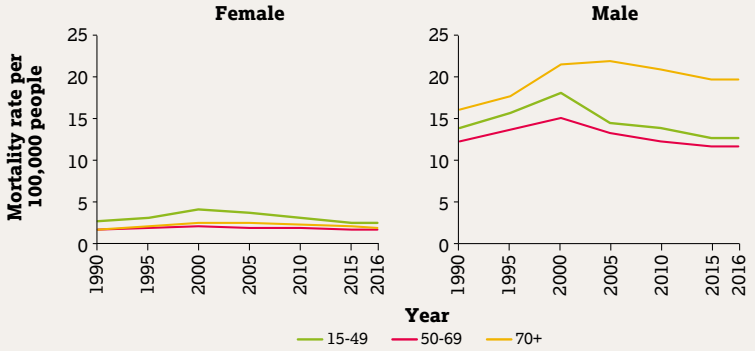
Source: Institute for Health Metrics and Evaluation[H]

Figure B5: Prevalence of major depressive disorders in Colombia, 2016



Source: Institute for Health Metrics and Evaluation[I]

Figure B6: Self-harm mortality rate in Colombia



Source: Institute for Health Metrics and Evaluation[J]

Ageing, mental health and cognitive impairment

The prevalence of major depressive disorders increases with age in both men and women (Figure B5), and is higher among women across all age groups, except 75-79 and 80-84 cohorts.[K]

Looking at the burden of deaths resulting from injuries, specifically self-harm, there are higher rates in men aged 70 and over compared both with younger men and with women across all age cohorts (Figure B6).

In Colombia, the rates of dementia in men and women are similar up to age 70, after which the prevalence in both sexes increases rapidly, with higher rates of increase for women (Figure B7).

Prevalence of violence towards older people

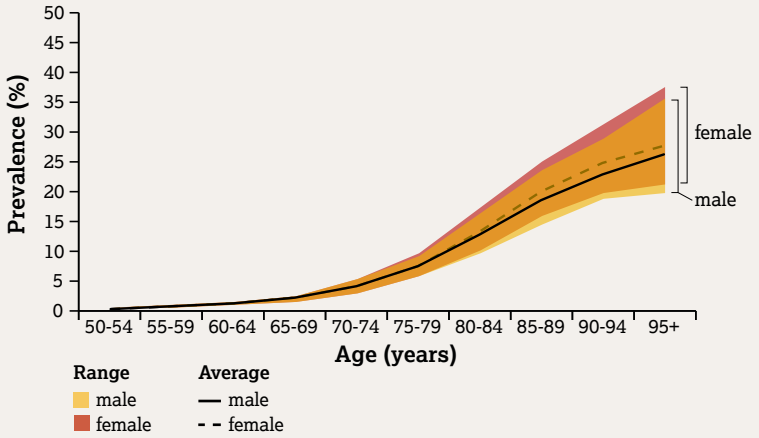
The prevalence of physical, sexual and psychological violence was higher among older Colombian women than men across all age groups. About 9 per cent of women between ages 50 and 54 experienced violence during 2016 compared with about 5 per cent of men between ages 50 and 54 (Figure B8).

Poverty and health financing

Colombia's health system underwent a significant reform in 1993 (Law 100) that increased health insurance coverage from 24 per cent of the population (1993) to 96 per cent in 2015.[L] Out-of-pocket health expenditure – the amount paid for by a household – declined from 23.5 per cent in 2008 to 18.3 per cent in 2015.[M] Per capita out-of-pocket health expenditure increased from $143 in 2008 to $156 in 2015.[N]

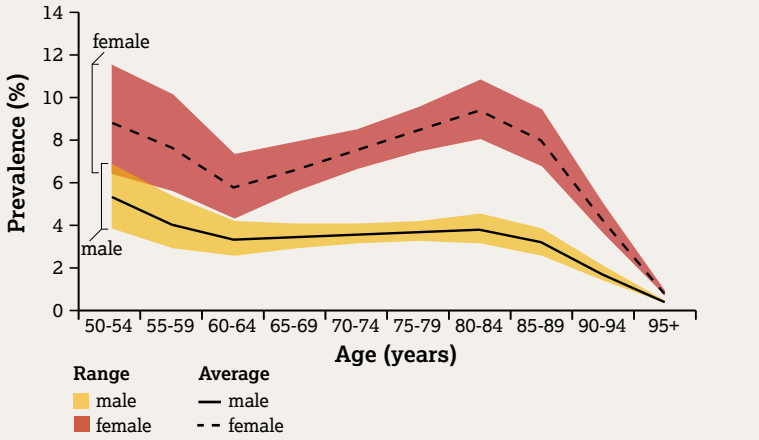
It is not possible to analyse expenditure or access to health insurance, mandatory or voluntary, by age group due to lack of age disaggregation in the relevant international datasets.

Figure B7: Alzheimer's and other dementias in Colombia, 2016



Source: Institute for Health Metrics and Evaluation[O]

Figure B8: Physical, sexual and psychological violence in Colombia, 2016



Source: Institute for Health Metrics and Evaluation[P]

Overall, older people remain largely invisible within the monitoring of universal health coverage (UHC). The UHC Index (Table B1) measures the coverage of a range of essential services. Currently, these include two of particular concern to older people: access to treatment for diabetes and for hypertension. However, gaps in the data sources used to track UHC mean that we do not have systematic findings on older people's access to these treatments.

Table B1. Selected health and care indicators

Indicator	Definition	
UHC Index 2015 (median value)[Q]	Coverage of essential services under universal health coverage[R]	76
Financial protection (%)	Incidence of catastrophic health expenditure[S]	16.9
Long-term care and support (%)	Gap in universal coverage of long-term care[T]	100

Endnotes

A Up from 49.07 million in 2017. United Nations, Department of Economic and Social Affairs, Population Division, *Profiles of ageing 2017*, https://population.un.org/ProfilesOfAgeing2017/index.html (22 October 2018)

B Author calculation based on data from United Nations, Department of Economic and Social Affairs, Population Division, World population prospects: rhe 2017 revision, DVD Edition, 2017

C United Nations, Department of Economic and Social Affairs, Population Division, *Probabilistic population projections based on the world population prospects: the 2017 revision*, http://esa.un.org/unpd/wpp (18 October 2018)

D World Health Organization, *Life expectancy and healthy life expectancy: data by country*, http://apps.who.int/gho/data/view.main.SDG2016LEXv (18 October 2018)

E CVD, cardiovascular disease; COPD, chronic obstructive pulmonary disease; CDs, communicable diseases

F Institute for Health Metrics and Evaluation, *GBD compare | viz hub*, 2016, https://vizhub.healthdata.org/gbd-compare (18 October 2018)

G CVD, cardiovascular disease; COPD, chronic obstructive pulmonary disease; CDs, communicable diseases

H Institute for Health Metrics and Evaluation, *GBD compare*

I Institute for Health Metrics and Evaluation, *Epi visualization | viz hub*, 2017, https://vizhub.healthdata.org/epi (18 October 2018)

J Institute for Health Metrics and Evaluation, *GBD compare*

K However, these results need to be interpreted carefully, taking into account the uncertainty intervals around the estimates

L Organisation for Economic Co-operation and Development, *OECD reviews of health systems: Colombia 2016*, 2015, https://read.oecd-ilibrary.org/social-issues-migration-health/oecd-reviews-of-health-systems-colombia-2015_9789264248908-en (1 November 2018)

M World Health Organization, *Out-of-pocket expenditure (% of current health expenditure)*, https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS?locations=CO (23 September 2018)

N World Health Organization, *Out-of-pocket expenditure per capita, PPP (current international $)*, https://data.worldbank.org/indicator/SH.XPD.OOPC.PP.CD?locations=CO (23 September 2018)

O Institute for Health Metrics and Evaluation, *Epi visualization*

P Institute for Health Metrics and Evaluation, *Epi visualization* (original values converted into percentages)

Q The UHC Index measures coverage of essential health services, defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, NCDs and service capacity and access, among the general and most disadvantaged populations. It is presented on a scale of 0 to 100. The median national value for service coverage is 65 out of 100 (Hogan DR et al., *Lancet*, 6:2, 2018, pp.E152-E168, doi: 10.1016/S2214-109X(17)30472-2)

R World Health Organization, *Global Health Observatory: universal health coverage*, http://apps.who.int/gho/portal/uhc-cabinet-wrapper-v2.jsp?id=1010501 (23 September 2018)

S Expressed as a percentage of the population with a household expenditure on health greater than 10 per cent of the total household expenditure or income. World Health Organization, *Global Health Observatory: universal health coverage*

T Expressed as a percentage, based on achieving a median number of 4.2 formal long-term care staff per 100 people aged 65 and older. International Labour Organization, *World social protection report 2017-19: universal social protection to achieve the sustainable development goals*, Geneva, International Labour Organization, 2017, table B.14, p.376

El Salvador

Key points

- Non-communicable diseases (NCDs) accounted for 86.5 per cent of the total years lived with disability in El Salvador in 2015.
- NCDs accounted for 87 per cent of deaths among women and men aged 70 and over in 2015.
- Older women experience higher rates of violence than men across all 5-year cohorts aged 50 and over.

Ageing and longevity in El Salvador

El Salvador's population will exceed 6.7 million by 2030.[A] The older population (those aged 60 and over) will continue to increase, while the youngest population (aged 0-14 years) will continue to decrease through to 2050 (Figure C1).

By 2045, the proportion of the population aged 60 and over is expected to exceed those aged between 0 and 14. The proportion of people aged 60 and over in the total population is predicted to increase to 22.10 per cent in 2050, compared with 11.6 per cent in 2017.

Both men and women are living longer. While women are expected to outlive men by 9.2 years, the number of years spent in poor health – the gap between life expectancy and healthy life expectancy – is greater for women (9.2 years) than for men (7.3 years) (Figure C2).

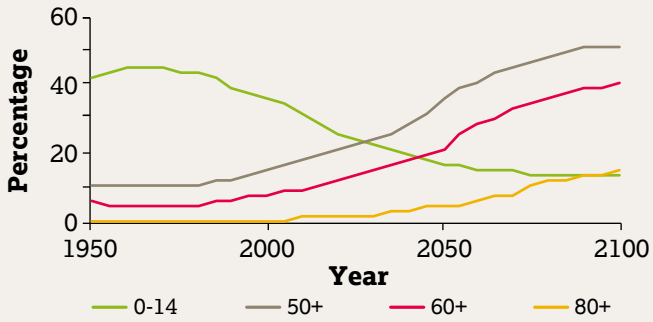
Ageing and shifting patterns of disease and disability

As the population ages, the burden of disease in El Salvador is also shifting. In 2016, NCDs accounted for 86.5 per cent of the total years lived with disability, with diabetes becoming an increasing burden across generations. NCDs are the predominant driver of disability across all age groups, with rates highest for older people (Figure C3).

The burden of disability from injuries increased for older women and men between 1990 and 2015, while burdens related to communicable, maternal, neonatal and nutritional diseases all decreased.

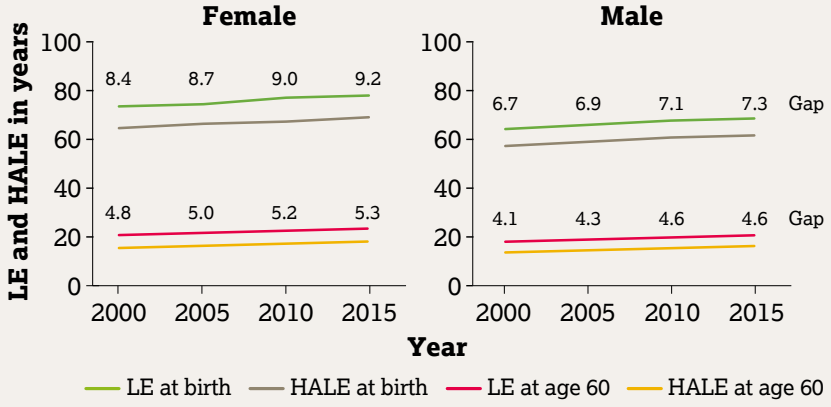
The number of deaths related to NCDs has increased over the last 25 years. In 2015, NCDs accounted for over 73 per cent of all deaths among men and women in El Salvador; this figure was as high as 82 per cent among people between ages 50 and 69, and 87 per cent among people aged 70 and over. Generally, cardiovascular disease has declined among older people as a cause of death, while cancer and diabetes have increased (Figure C4).

Figure C1: Population structure in El Salvador



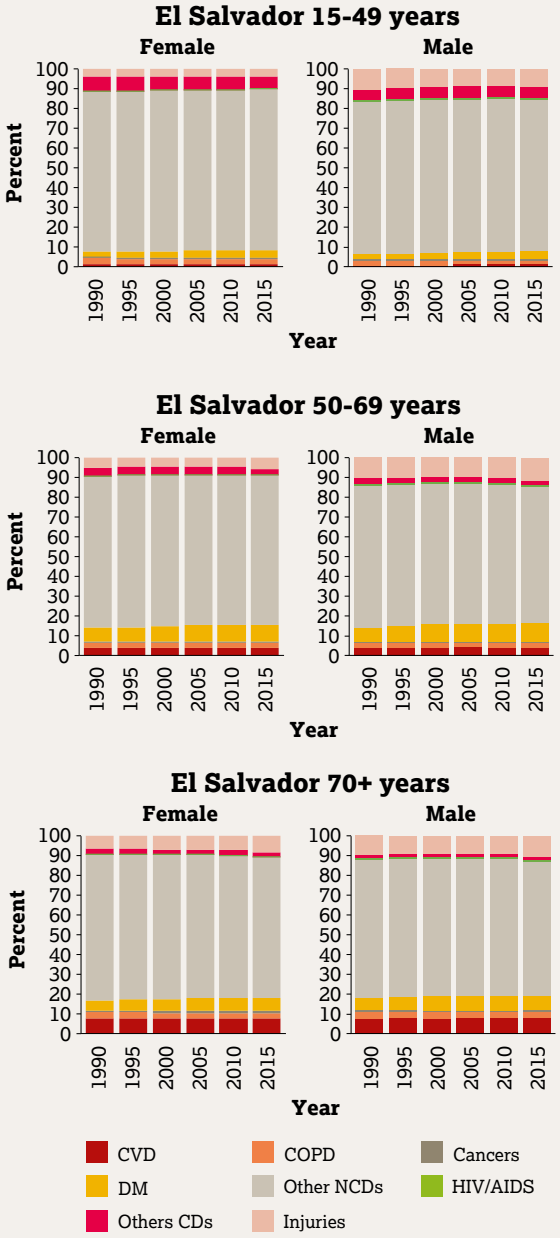
Source: United Nations, Department of Economic and Social Affairs, Population Division[B]

Figure C2: The gap between life expectancy (LE) and healthy life expectancy (HALE) in El Salvador



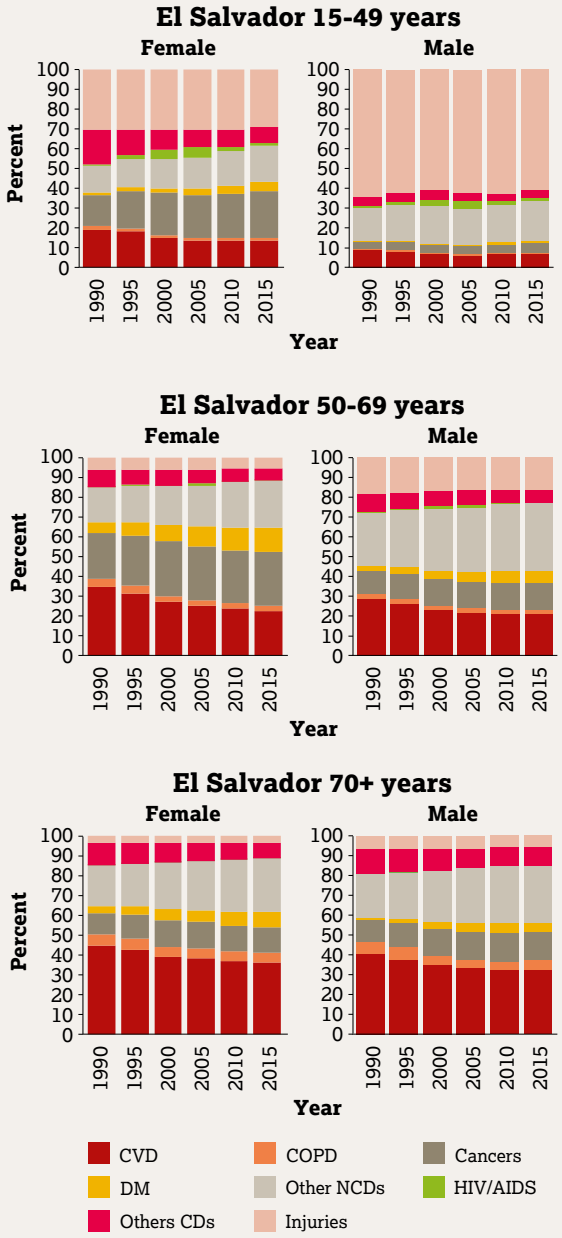
Source: World Health Organization[C]

Figure C3: Years lived with disability in El Salvador



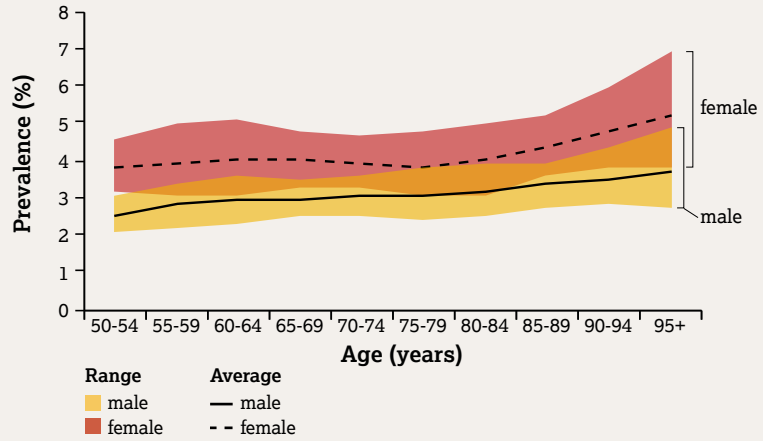
Source: Institute for Health Metrics and Evaluation[E]

Figure C4: Causes of death in El Salvador



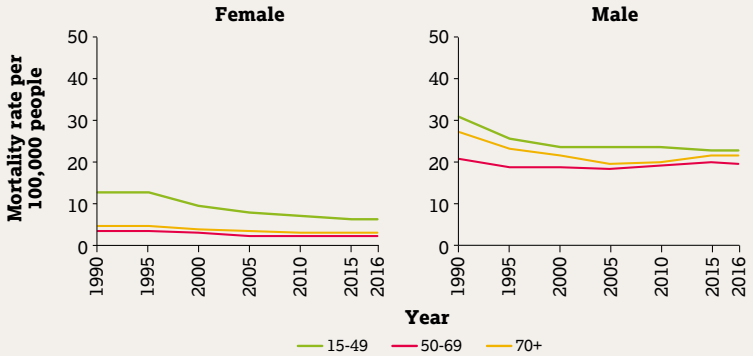
Source: Institute for Health Metrics and Evaluation[G]

Figure C5: Prevalence of major depressive disorders in El Salvador, 2016



Source: Institute for Health Metrics and Evaluation[H]

Figure C6: Self-harm mortality rates in El Salvador



Source: Institute for Health Metrics and Evaluation[I]

Ageing, mental health and cognitive impairment

The prevalence of major depressive disorders is increasing with age among both men and women (Figure C5). Women have higher rates than men across all age groups.[J]

Looking at the burden of deaths resulting from injuries, specifically self-harm, men show higher rates than women across all age groups (Figure C6). Younger cohorts have higher mortality rates than older people across both sexes.

Rates of dementia in El Salvador are similar for men and women, with a greater increase in prevalence around age 70 (Figure C7).

Prevalence of violence towards older people

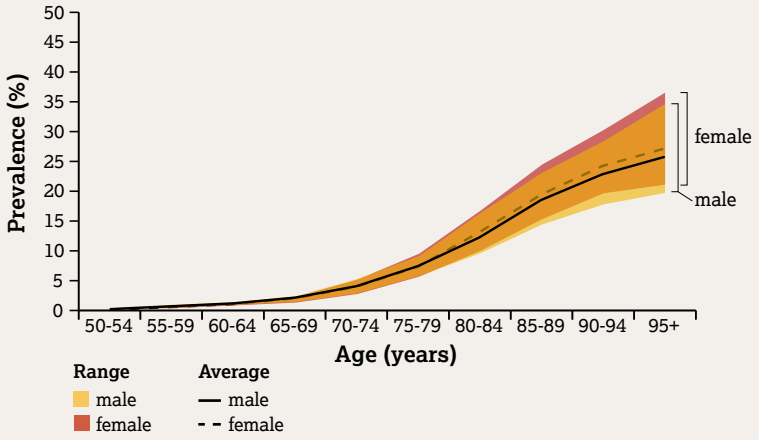
The prevalence of physical, sexual and psychological violence was higher among El Salvadorean women than men, across all age groups. About 6 per cent of women between ages 50 and 54 experienced violence in 2016, compared with about 4 per cent of men in the same age group (Figure C8).

Poverty and health financing

The proportion of the population living below the national poverty line decreased from 40 per cent in 2008 to 29 per cent in 2017.[K] The estimated out-of-pocket health expenditure – the amount paid by a household – in El Salvador decreased from 36 per cent in 2008 to 28 per cent in 2015.[L]

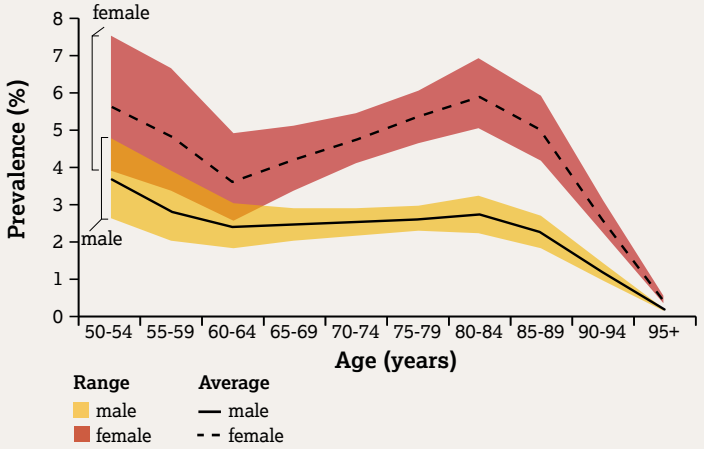
It is not possible to analyse expenditure or access to health insurance, mandatory or voluntary, by age group due to lack of age disaggregation in the relevant international datasets.

Figure C7: Alzheimer's and other dementias in El Salvador, 2016



Source: Institute for Health Metrics and Evaluation[M]

Figure C8: Physical, sexual and psychological violence in El Salvador, 2016



Source: Institute for Health Metrics and Evaluation[N]

Older people remain largely invisible within the monitoring of universal health coverage (UHC). The UHC Index (Table C1) measures coverage of a range of essential services. Currently, these include two of particular concern to older people: access to treatment for diabetes and for hypertension. However, gaps in the data sources used to track UHC mean that we do not have systematic findings on older people's access to these treatments in El Salvador.

Table C1. Selected health and care indicators

Indicator	Definition	
UHC Index 2015 (median value)[O]	Coverage of essential services under universal health coverage[P]	77
Financial protection (%)	Incidence of catastrophic health expenditure[Q]	no data
Long-term care and support (%)	Gap in universal coverage of long-term care[R]	no data

Endnotes

A Rising from 6.38 million in 2017. United Nations, Department of Economic and Social Affairs, Population Division, *Profiles of ageing 2017*, https://population.un.org/ProfilesOfAgeing2017/index.html (22 October 2018)

B United Nations, Department of Economic and Social Affairs, Population Division, *Probabilistic population projections based on the world population prospects: the 2017 revision*, http://esa.un.org/unpd/wpp (18 October 2018)

C World Health Organization, *Life expectancy and healthy life expectancy: data by country*, http://apps.who.int/gho/data/view.main.SDG2016LEXv (18 October 2018)

D CVD, cardiovascular disease; COPD, chronic obstructive pulmonary disease; CDs, communicable diseases

E Institute for Health Metrics and Evaluation, *GBD compare | viz hub*, 2016, https://vizhub.healthdata.org/gbd-compare (18 October 2018)

F CVD, cardiovascular disease; COPD, chronic obstructive pulmonary disease; CDs, communicable diseases

G Institute for Health Metrics and Evaluation, *GBD compare*

H Institute for Health Metrics and Evaluation, *Epi visualization | viz hub*, 2017, https://vizhub.healthdata.org/epi (18 October 2018)

I Institute for Health Metrics and Evaluation, *GBD compare*

J However, these results need to be interpreted carefully, taking into account the uncertainty intervals around the estimates

K World Bank, Global Poverty Working Group, *Poverty headcount ratio at national poverty lines (% of population)*, https://data.worldbank.org/indicator/SI.POV.NAHC?locations=SV (23 September 2018)

L World Health Organization, *Out-of-pocket expenditure (% of current health expenditure)*, https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS?locations=SV (23 September 2018)

M Institute for Health Metrics and Evaluation, *Epi visualization*

N Institute for Health Metrics and Evaluation, *Epi visualization* (original values converted into percentages)

O The UHC Index measures coverage of essential health services, defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, NCDs and service capacity and access, among the general and most disadvantaged populations. It is presented on a scale of 0 to 100. The median national value for service coverage is 65 out of 100 (Hogan DR et al., *Lancet*, 6:2, 2018, pp.E152-E168, doi: 10.1016/S2214-109X(17)30472-2)

P World Health Organization, *Global Health Observatory: universal health coverage*, http://apps.who.int/gho/portal/uhc-cabinet-wrapper-v2.jsp?id=1010501 (23 September 2018)

Q Expressed as a percentage of the population with a household expenditure on health greater than 10 per cent of the total household expenditure or income. World Health Organization, *Global Health Observatory: universal health coverage*

R Expressed as a percentage, based on achieving a median number of 4.2 formal long-term care staff per 100 people aged 65 and older. International Labour Organization, *World social protection report 2017-19: universal social protection to achieve the Sustainable Development Goals*, Geneva, International Labour Organization, 2017, table B.14, p.376

Kenya

Key points

- Kenya has seen an increase in both the prevalence of non-communicable diseases (NCDs) and the number of deaths caused by NCDs.
- NCDs accounted for 74.8 per cent of the total years lived with disability in Kenya in 2015.
- Much higher rates of self-harm are found among men aged 70 and over than among younger men; male rates are also higher than those among women aged 70 and over.
- The prevalence of violence against women is higher than that against men across all age groups.

Ageing and longevity in Kenya

Kenya's population is expected to reach 66.9 million by 2030.[A] The older population (aged 60 and over) will continue to increase, while the youngest population (aged between 0 and 14) will continue to decrease as a proportion through to the end of the century (Figure D1). The proportion of people aged 60 and over in the total population is expected to increase by 4.7 per cent annually between 2015 and 2050, reaching 10.6 per cent of the total.[B]

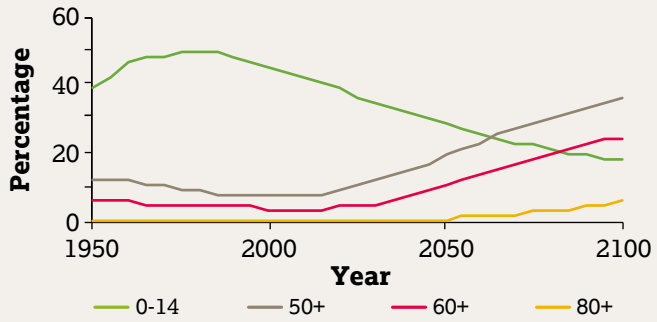
Both men and women are living longer. While women are expected to outlive men by 4.8 years, the number of years spent in poor health – the gap between life expectancy and healthy life expectancy – is greater for women (8.1 years) than for men (7.3 years) (Figure D2).

Ageing and shifting patterns of disease and disability

NCDs accounted for 74.8 per cent of the total years lived with disability in Kenya in 2015 with similar patterns for men and women.

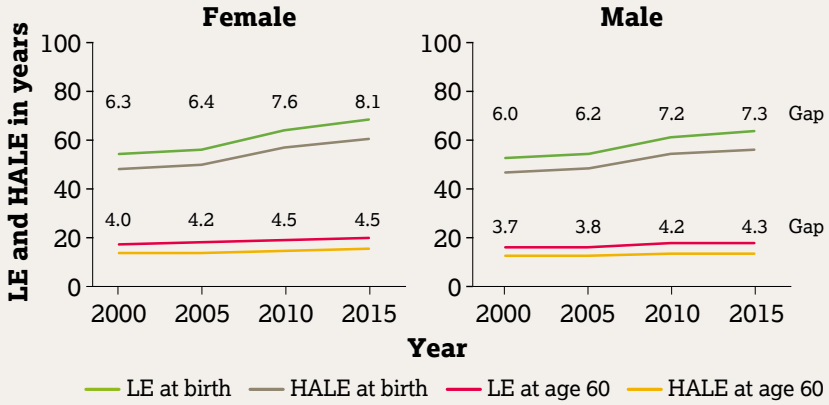
The proportion of disabilities caused by NCDs for older people remained relatively stable between 1990 and 2015 (Figure D3). For men aged 50 to 69, the rate varied over the period between 76 and 80 per cent, while for men aged 70 and over it varied between 82 and 84 per cent. For women aged 50 to 69, the proportion ranged between 78 and 82 per cent and for women aged 70 and over, between 84 and 85 per cent over the 25 years. However, the number of deaths related to NCDs has increased. This figure reached 44.5 per cent among people aged 50 to 69, and 51.2 per cent among those aged 70 and over in 2015 (Figure D4).

Figure D1: Population structure in Kenya



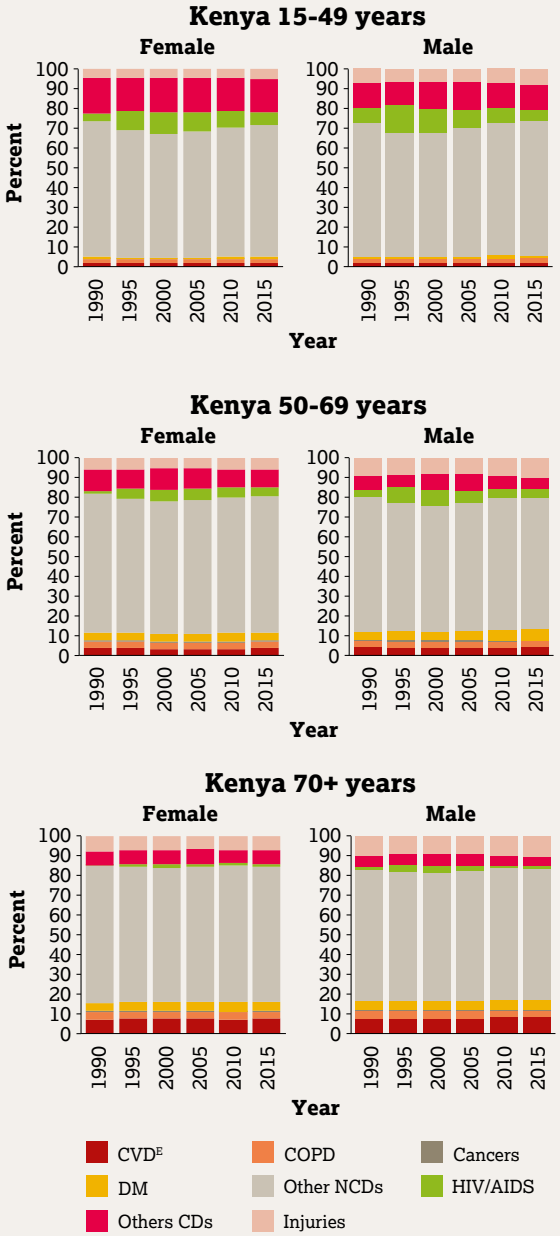
Source: United Nations, Department of Economic and Social Affairs, Population Division[C]

Figure D2: The gap between life expectancy (LE) and healthy life expectancy (HALE) in Kenya



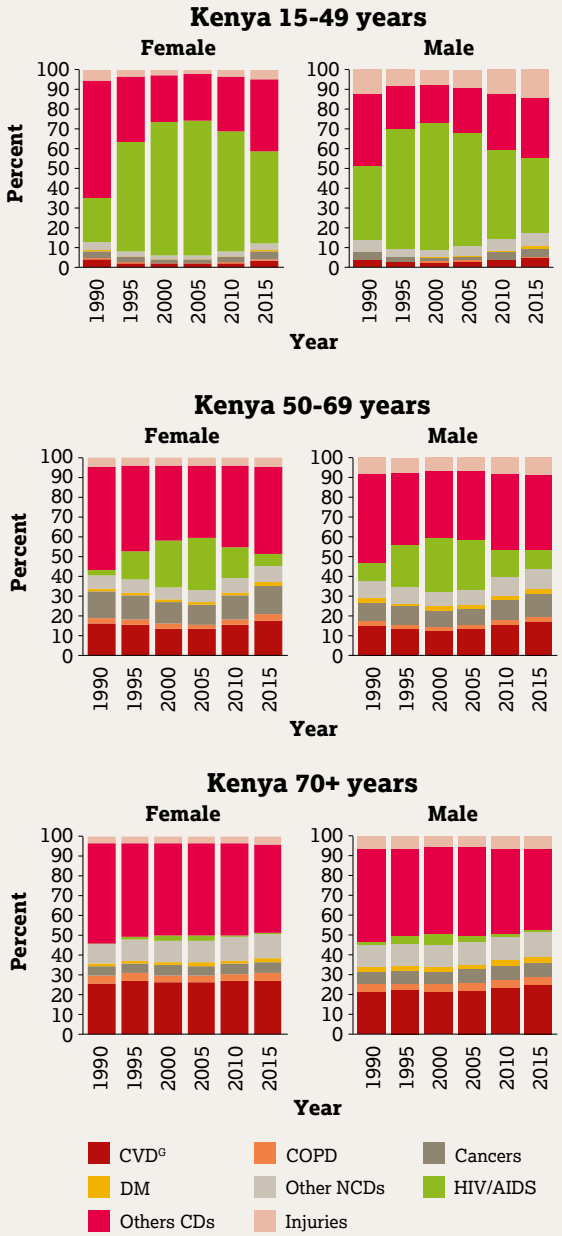
Source: World Health Organization[D]

Figure D3: Years lived with disability in Kenya



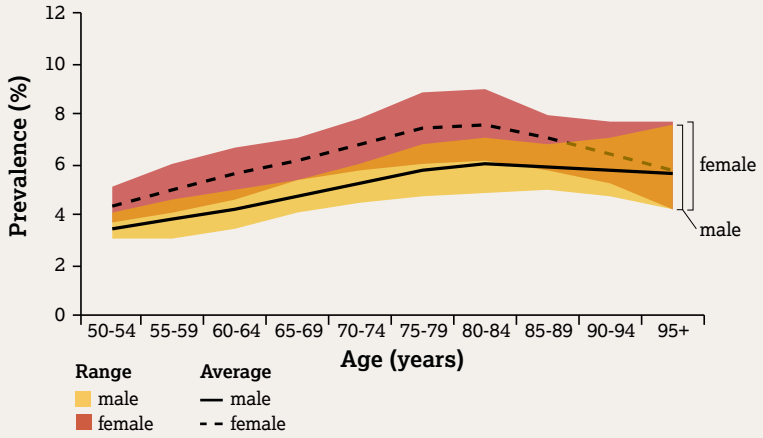
Source: Institute for Health Metrics and Evaluation[F]

Figure D4: Causes of death in Kenya



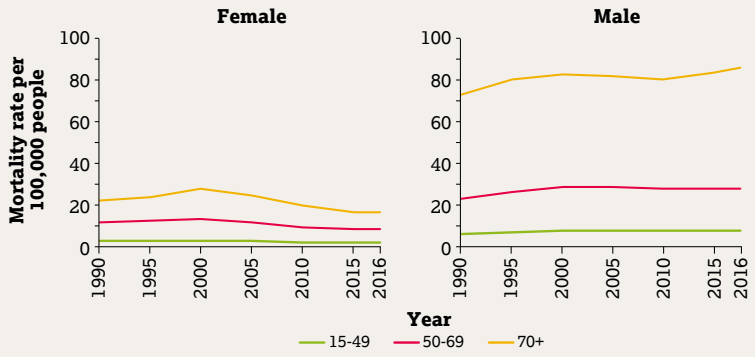
Source: Institute for Health Metrics and Evaluation[H]

Figure D5: Prevalence of major depressive disorders in Kenya, 2016



Source: Institute for Health Metrics and Evaluation[I]

Figure D6: Self-harm mortality rates in Kenya



Source: Institute for Health Metrics and Evaluation[J]

Ageing, mental health and cognitive impairment

The prevalence of major depressive disorders increases in Kenyan men and women between the ages of 50 and 80, after which it declines (Figure D5).[K] Women have a higher prevalence of depressive disorders than men across all age groups over 50 years.

Mortality rates from self-harm in older men, particularly men aged 70 and over, are striking: they are much higher than for men aged 15 to 49, and between 50 and 69, and for women at all ages (Figure D6). The rates for men aged 70 and over increased between 2010 and 2015. For women aged 70 and over, rates were highest in 2000, and then declined through to 2016.

In Kenya, the rates of dementia in men and women are similar until around age 70, when prevalence in both sexes increases rapidly, but with a steeper rise for women than for men (Figure D7).

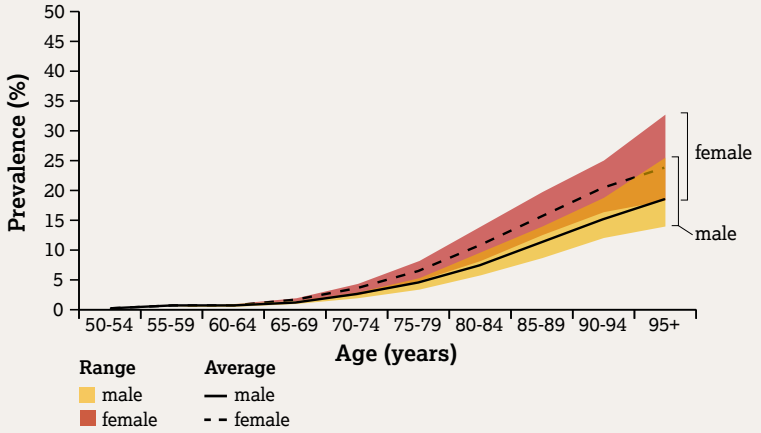
Prevalence of violence towards older people

The prevalence of physical, sexual and psychological violence was higher for older Kenyan women than for men, particularly among older women aged 50 to 59, and between 80 and 89. About 27 per cent of women aged 50 to 54 reported experiencing violence during 2016, compared with about 19 per cent for men of the same age (Figure D8).

Poverty and health financing

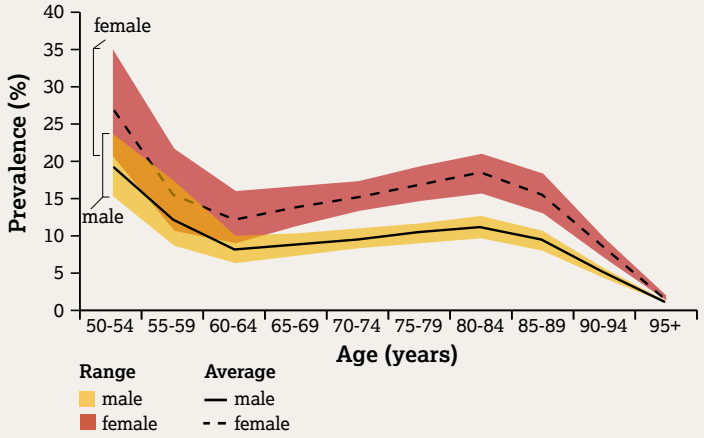
About 36 per cent of Kenya's population live below the national poverty line, while 66.2 per cent live on less than US$3.20 a day.[L,M] The estimated amount of out-of-pocket health expenditure per household in Kenya decreased from 40.3 per cent in 2008 to 33.4 per cent in 2015.[N] Per capita out-of-pocket health expenditure increased from $44 in 2008 to $52.5 in 2015.[O] In 2014, Kenya had 0.2 physicians per 1,000 people.[P]

Figure D7: Alzheimer's and other dementias in Kenya, 2016



Source: Institute for Health Metrics and Evaluation[Q]

Figure D8: Physical, sexual and psychological violence in Kenya, 2016



Source: Institute for Health Metrics and Evaluation[R]

It is not possible to analyse expenditure on or access to health insurance, mandatory or voluntary, by age group due to lack of age disaggregation in the relevant international datasets.

Older people remain largely invisible within the monitoring of universal health coverage (UHC). The UHC Index (Table D1) measures coverage of a range of essential services. Currently, these include two of particular concern to older people: access to treatment for diabetes and for hypertension. However, gaps in the data sources used to track UHC mean that we do not have systematic findings on older people's access to these treatments.

Table D1. Selected health and care indicators

Category	Indicator	
UHC Index 2015 (median value)[S]	Coverage of essential services under universal health coverage[T]	57
Financial protection (%)	Incidence of catastrophic health expenditure[U]	5.83
Long-term care and support	Gap in universal coverage of long-term care[V]	No data

Endnotes

A Compared with 49.7 million in 2017. United Nations, Department of Economic and Social Affairs, Population Division, *Profiles of ageing 2017*, https://population.un.org/ProfilesOfAgeing2017/index.html (22 October 2018)

B Author calculation based on data from United Nations, Department of Economic and Social Affairs, Population Division, *World population prospects: the 2017 revision*, DVD Edition, 2017

C United Nations, Department of Economic and Social Affairs, Population Division, *Probabilistic population projections based on the world population prospects: the 2017 revision*, http://esa.un.org/unpd/wpp (18 October 2018)

D World Health Organization, *Life expectancy and healthy life expectancy: data by country*, http://apps.who.int/gho/data/view.main.SDG2016LEXv (18 October 2018)

E CVD, cardiovascular disease; COPD, chronic obstructive pulmonary disease; CDs, communicable diseases

F Institute for Health Metrics and Evaluation, *GBD compare | viz hub*, 2016, https://vizhub.healthdata.org/gbd-compare (18 October 2018)

G CVD, cardiovascular disease; COPD, chronic obstructive pulmonary disease; CDs, communicable diseases

H Institute for Health Metrics and Evaluation, *GBD compare*

I Institute for Health Metrics and Evaluation, *Epi visualization | viz hub*, 2017, https://vizhub.healthdata.org/epi (18 October 2018)

J Institute for Health Metrics and Evaluation, *GBD compare*

K These results need to be interpreted carefully, however, taking into account the uncertainty intervals around the estimates

L World Bank, Global Poverty Working Group, *Poverty headcount ratio at national poverty lines (% of population)*, https://data.worldbank.org/indicator/SI.POV.NAHC?locations=KE (23 September 2018)

M World Bank, Development Research Group, *Poverty headcount ratio at $3.20 a day (2011 PPP) (% of population)*, https://data.worldbank.org/indicator/SI.POV.LMIC?locations=KE (23 September 2018)

N World Bank Data, *Out-of-pocket expenditure (% of current health expenditure), 2008 and 2015*, https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS?end=2015&locations=KE&start=2008&view=chart (23 September 2018)

O World Health Organization, *Out-of-pocket expenditure per capita, PPP (current international $)*, https://data.worldbank.org/indicator/SH.XPD.OOPC.PP.CD?locations=KE (23 September 2018)

P World Health Organization et al., *Physicians (per 1,000)*, https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=KE (23 September 2018)

Q Institute for Health Metrics and Evaluation, *Epi visualization*

R Institute for Health Metrics and Evaluation, *Epi visualization* (original values converted into percentages)

S The UHC Index measures coverage of essential health services, defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, NCDs and service capacity and access, among the general and most disadvantaged populations. It is presented on a scale of 0 to 100. The median national value for service coverage is 65 out of 100 (Hogan DR et al., *Lancet*, 6:2, 2018, pp.E152-E168, doi: 10.1016/S2214-109X(17)30472-2)

T World Health Organization, *Global Health Observatory: universal health coverage*, http://apps.who.int/gho/portal/uhc-cabinet-wrapper-v2.jsp?id=1010501 (23 September 2018)

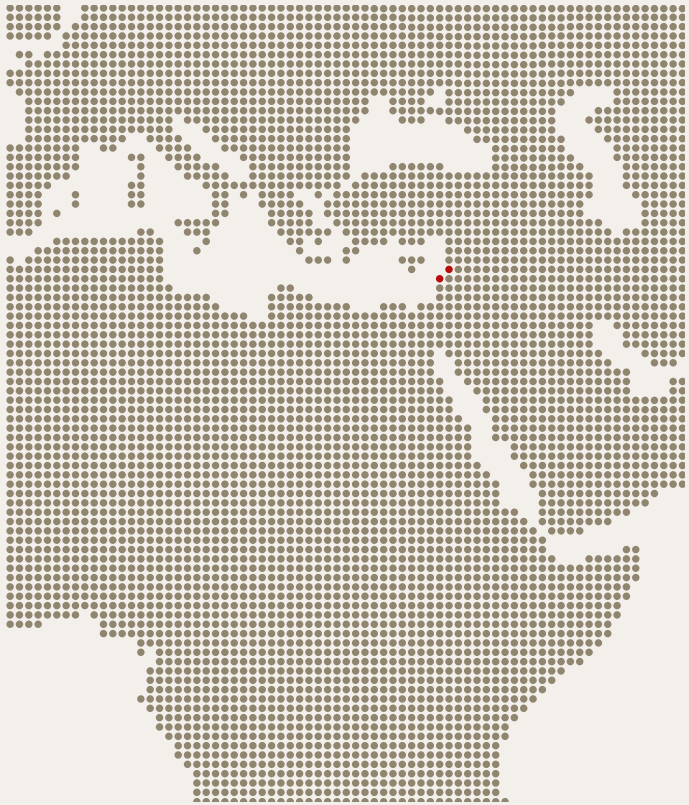
U Expressed as a percentage of the population with a household expenditure on health greater than 10 per cent of the total household expenditure or income. World Health Organization, *Global Health Observatory: universal health coverage*

V Expressed as a percentage, based on achieving a median number of 4.2 formal long-term care staff per 100 people aged 65 and older. International Labour Organization, *World social protection report 2017-19: universal social protection to achieve the sustainable development goals*, Geneva, International Labour Organization, 2017, table B.14, p.376

Lebanon

Key points

- Non-communicable diseases (NCDs) accounted for 80.9 per cent of the total years lived with disability in 2015.
- NCDs accounted for 90 per cent of all deaths among women and men aged 70 and over in 2015.
- Self-harm mortality rates among men, especially men aged 70 and over, were higher than for women across all age groups in 2016.



Ageing and longevity in Lebanon

Lebanon's population is expected to decline to 5.4 million by 2030;[A] however, the older population (aged 60 and over) will continue to increase, while the youngest population (aged 0 to 14) will decrease through to 2050 (Figure E1). The population aged 60 and over is predicted to increase by 2.6 per cent annually between 2015 and 2050, reaching 31.2 per cent by 2050.[B]

Both men and women are living longer. While women are expected to outlive men by 2.8 years, the number of years spent in poor health – the gap between life expectancy and healthy life expectancy – is greater for women (11.2 years) than for men (9.9 years) (Figure E2).

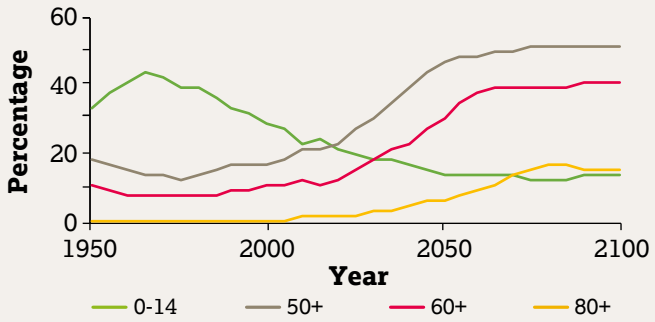
Ageing and shifting patterns of disease and disability

As the population ages, the burden of disease in Lebanon is shifting. NCDs accounted for 80.9 per cent of the total years lived with disability in Lebanon in 2015. NCDs are significant causes of disability among all age groups and for both sexes (Figure E3). However, they are declining across older cohorts (aged 50 to 69) and increasing across younger cohorts (aged 15 to 49).

There is also greater variation in the types of NCDs that cause disability in later life compared with earlier life. Cardiovascular disease (CVD) and diabetes cause more disability in later life than in early life. Generally, though, CVD has declined across genders and age cohorts. Cancer, on the other hand, is increasing across both sexes and all age cohorts.

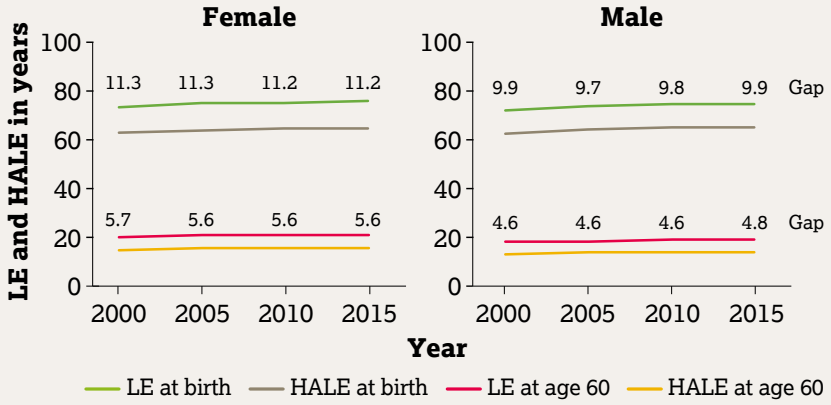
Injuries are a cause of disability throughout the life course, with men having higher rates of disability due to injuries than women across all age cohorts.

Figure E1: Population structure in Lebanon



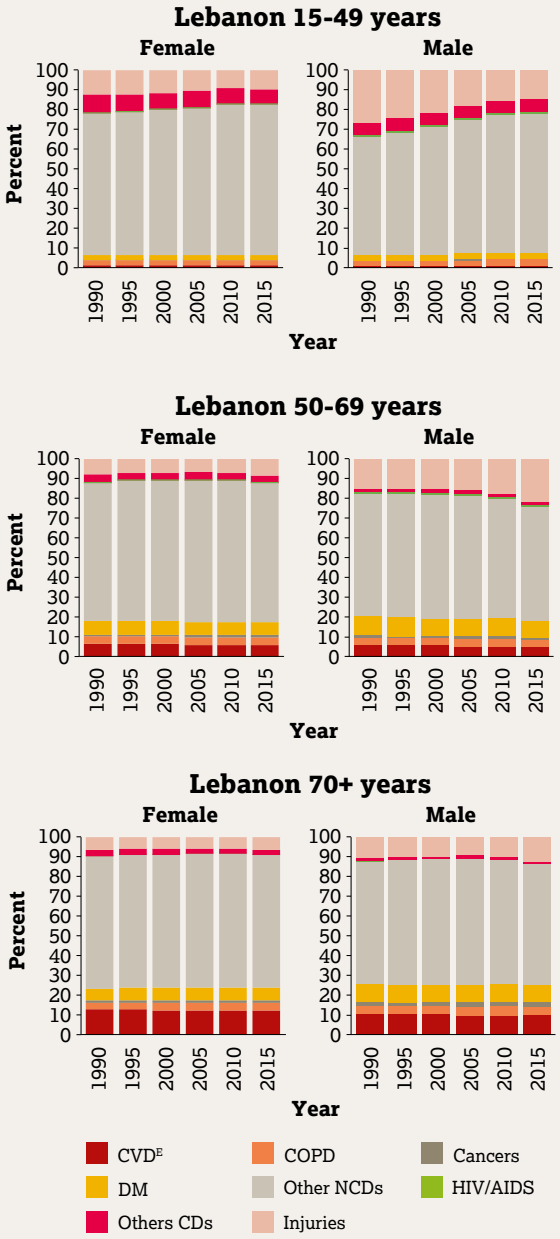
Source: United Nations, Department of Economic and Social Affairs, Population Division[C]

Figure E2: The gap between life expectancy (LE) and healthy life expectancy (HALE) in Lebanon



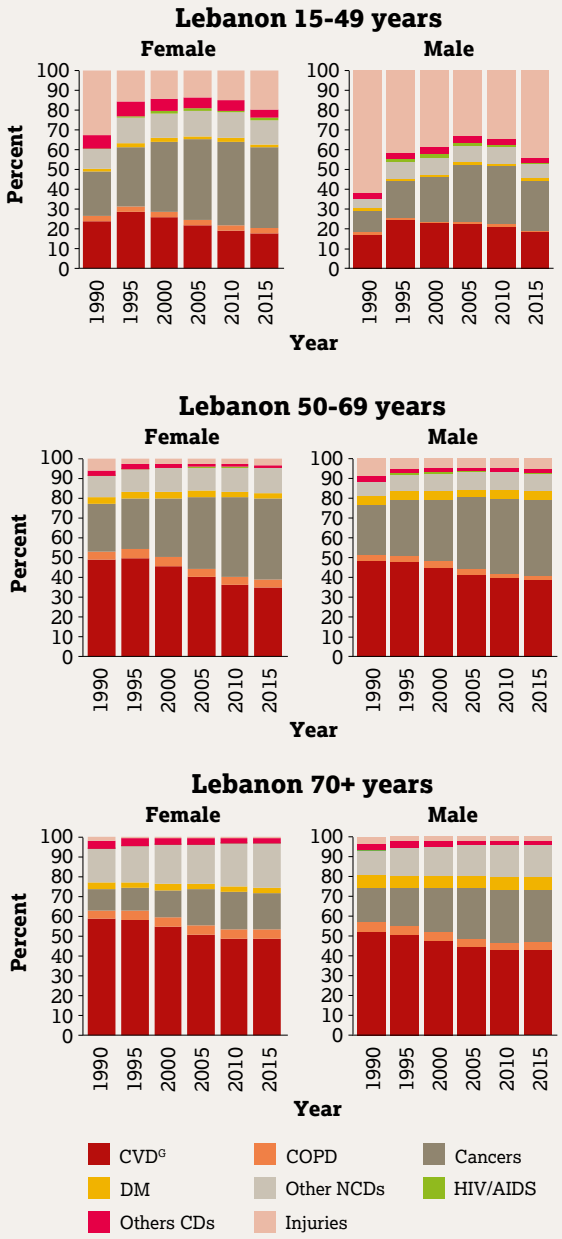
Source: World Health Organization[D]

Figure E3: Years lived with disability in Lebanon



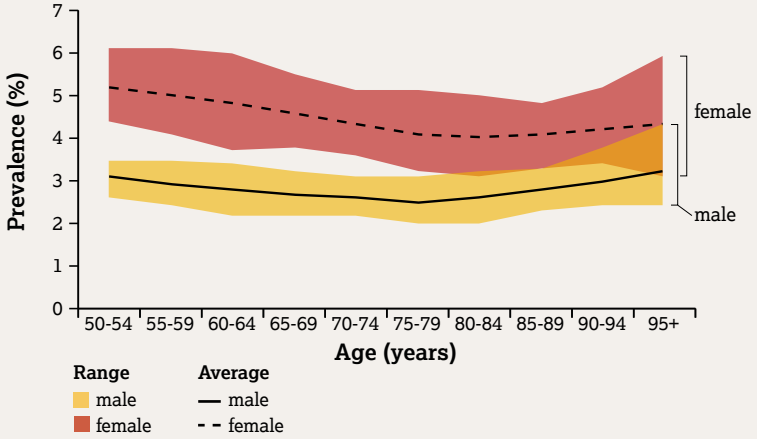
Source: Institute for Health Metrics and Evaluation[F]

Figure E4: Causes of death in Lebanon



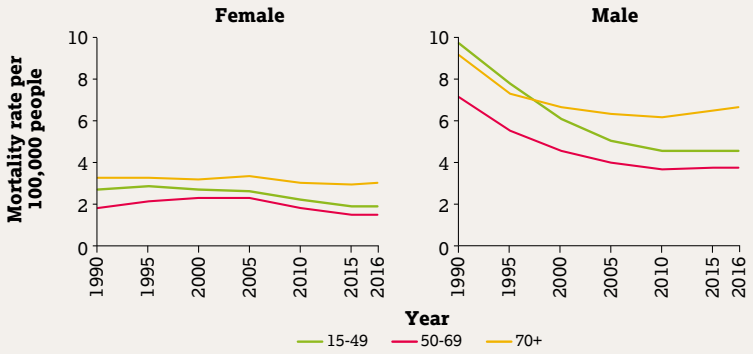
Source: Institute for Health Metrics and Evaluation[H]

Figure E5: Prevalence of major depressive disorders in Lebanon, 2016



Source: Institute for Health Metrics and Evaluation[I]

Figure E6: Self-harm mortality rates in Lebanon



Source: Institute for Health Metrics and Evaluation[J]

NCDs are the leading cause of death for both men and women and across age cohorts (Figure E4). NCDs accounted for over 90 per cent of all deaths among men and women aged 50 to 69, and 70 and over in Lebanon in 2015.

Injuries are the second-biggest cause of death among younger cohorts, with significantly higher mortality among younger men than women.

Ageing, mental health and cognitive impairment

The prevalence of major depressive disorders is decreasing in men and women between the ages of 50 and 80, after which it gradually increases (Figure E5). Women have higher rates than men across all age cohorts.[K]

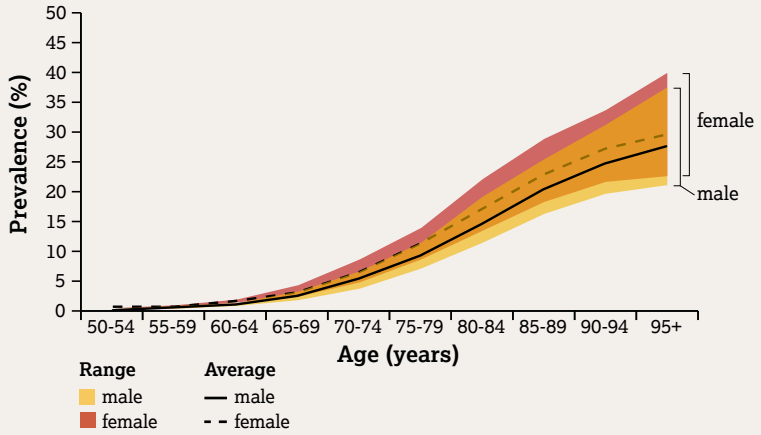
Looking at the burden of deaths resulting from injuries, specifically self-harm, the evidence shows that mortality rates are higher for men than women across all age groups (Figure E6). Older men (aged 70 and over) have the highest mortality rate, higher than younger men and women of all ages. Among women, older women (aged 70 and over) have the highest rate of self-harm mortality.

In Lebanon, the rates of dementia in men and women are similar until age 70, after which prevalence in both sexes increases rapidly, with a steeper rise in women than men (Figure E7).

Prevalence of violence towards older people

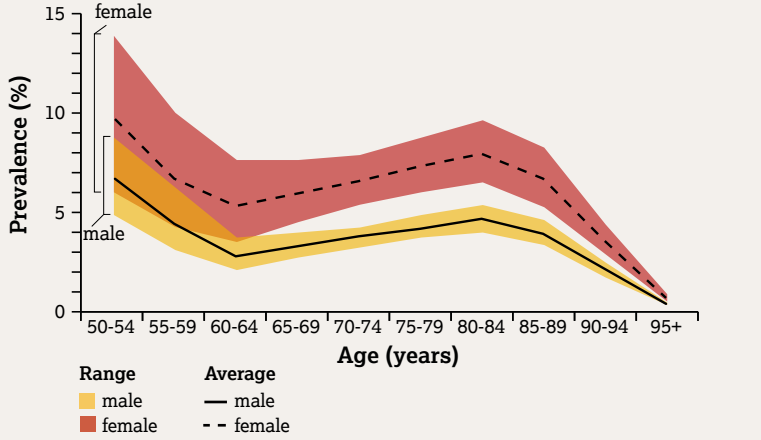
The prevalence of violence against older people is higher among women than men across all higher age groups (Figure E8). For example, nearly 8 per cent of women aged 80 to 84 experienced violence, compared with 5 per cent of men of the same age.

Figure E7: Alzheimer's and other dementias in Lebanon, 2016



Source: Institute for Health Metrics and Evaluation[L]

Figure E8: Physical, sexual and psychological violence in Lebanon, 2016



Source: Institute for Health Metrics and Evaluation[M]

Poverty and health financing

An estimated 27 per cent of the population lived below the poverty line in 2012 (the most recent year for which data is available).[N] The estimated out-of-pocket health expenditure in Lebanon has decreased from 44.9 per cent in 2008 to 32.1 per cent in 2015, as a percentage of total household health spending.[O] Per capita out-of-pocket health expenditure declined from $491 in 2008 to $358 in 2015.[P]

It is not possible to analyse expenditure or access to health insurance, mandatory or voluntary, by age group due to lack of age disaggregation in the relevant international datasets.

Older people remain largely invisible within the monitoring of universal health coverage (UHC). The UHC Index (Table E1) measures coverage of a range of essential services. Currently, these include two of particular concern to older people: access to treatment for diabetes and for hypertension. However, gaps in the data sources used to track UHC mean that we do not have systematic findings on older people's access to these treatments.

Table E1. Selected health and care indicators

Category	Indicators	
UHC Index 2015 (median value)[Q]	Coverage of essential services under universal health coverage[R]	68
Financial protection (%)	Incidence of catastrophic health expenditure[S]	44.85
Long-term care and support	Gap in universal coverage of long-term care[T]	no data

Endnotes

A From 6.08 million in 2017. United Nations, Department of Economic and Social Affairs, Population Division, *Profiles of ageing 2017*, https://population.un.org/ProfilesOfAgeing2017/index.html (22 October 2018)

B Author calculation based on data from United Nations, Department of Economic and Social Affairs, Population Division, *World population prospects: the 2017 revision*, DVD Edition, 2017

C United Nations, Department of Economic and Social Affairs, Population Division, *Probabilistic population projections based on the world population prospects: the 2017 revision*, http://esa.un.org/unpd/wpp (18 October 2018)

D World Health Organization, *Life expectancy and healthy life expectancy: data by country*, http://apps.who.int/gho/data/view.main.SDG2016LEXv?lang=en (18 October 2018)

E CVD, cardiovascular disease; COPD, chronic obstructive pulmonary disease; CDs, communicable diseases

F Institute for Health Metrics and Evaluation, *GBD compare | viz hub*, 2016, https://vizhub.healthdata.org/gbd-compare (18 October 2018)

G CVD, cardiovascular disease; COPD, chronic obstructive pulmonary disease; CDs, communicable diseases

H Institute for Health Metrics and Evaluation, *GBD compare*

I Institute for Health Metrics and Evaluation, *Epi visualization | viz hub*, 2017, https://vizhub.healthdata.org/epi (18 October 2018)

J Institute for Health Metrics and Evaluation, *GBD compare*

K However, these results need to be interpreted carefully taking into account the uncertainty intervals around the estimates

L Institute for Health Metrics and Evaluation, *Epi visualization*

M Institute for Health Metrics and Evaluation, *Epi visualization* (original values converted into percentages)

N World Bank, Global Poverty Working Group, *Poverty headcount ratio at national poverty lines (% of population)*, https://data.worldbank.org/indicator/SI.POV.NAHC?locations=LB (23 September 2018)

O World Health Organization, *Out-of-pocket expenditure (% of current health expenditure)*, https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS?locations=LB (23 September 2018)

P World Bank Group, *Out-of-pocket health expenditure per capita (PPP current international dollars)*, 2015, https://data.worldbank.org/indicator/SH.XPD.OOPC.PP.CD?locations=LB (23 September 2018)

Q The UHC Index measures coverage of essential health services, defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, NCDs and service capacity and access, among the general and most disadvantaged populations. It is presented on a scale of 0 to 100. The median national value for service coverage is 65 out of 100 (Hogan DR et al., *Lancet*, 6:2, 2018, pp.E152-E168, doi: 10.1016/S2214-109X(17)30472-2)

R World Health Organization, *Global Health Observatory: universal health coverage*, http://apps.who.int/gho/portal/uhc-cabinet-wrapper-v2.jsp?id=1010501 (23 September 2018)

S Expressed as a percentage of the population with a household expenditure on health greater than 10 per cent of the total household expenditure or income. World Health Organization, *Global Health Observatory: universal health coverage*

T Expressed as a percentage, based on achieving a median number of 4.2 formal long-term care staff per 100 people aged 65 and older. International Labour Organization, W*orld social protection report 2017-19: universal social protection to achieve the Sustainable Development Goals*, Geneva, International Labour Organization, 2017, table B.14, p.376

Republic of Moldova

Key points

- Moldova's population is declining and ageing. By 2050, more than one-third of all people will be aged 60 and over.
- Non-communicable diseases (NCDs) accounted for 81 per cent of years lived with disability in 2015.
- NCDs accounted for 99 per cent of deaths among women and men aged 70 and over in 2015.
- People in Moldova face high out-of-pocket expenditure on healthcare.
- The prevalence of violence is higher among women than among men across all age groups.

Ageing and longevity in Moldova

The population of Moldova is expected to decline to 3.8 million by 2030.[A] The older population (people aged 60 and over) is expected to continue to increase through to 2050, after which it will stabilise. The population aged 60 and over will increase by 1.5 per cent annually between 2015 and 2050, reaching 34.5 per cent of the total.[B] Meanwhile, the youngest cohort of the population (aged 0 to 14) is expected to decrease through to 2035, after which it will flatten out at about 14 per cent of the total, through to 2100 (Figure F1).

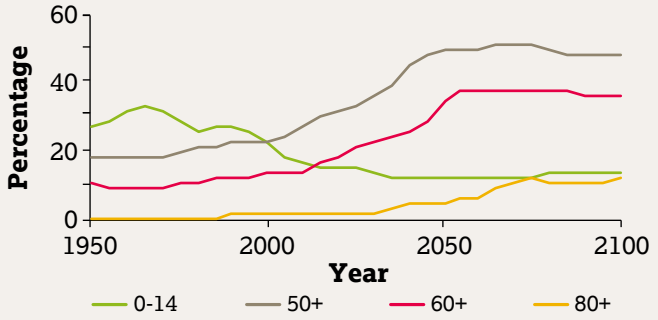
Both men and women are living longer. While women are expected to outlive men by 7.7 years, the number of years spent in poor health – the gap between life expectancy and healthy life expectancy – is greater for women (8.8 years) than for men (6.9 years) (Figure F2).

Ageing and shifting patterns of disease and disability

NCDs contribute to the vast majority of years lived with disability at all ages. They accounted for 81.2 per cent of the total years lived with disability in Moldova in 2015. The burden of disability related to communicable, maternal, neonatal and nutritional diseases, as well as injuries, decreased for women and men aged 70 and over between 1990 and 2015 (Figure F3). The impact of cardiovascular disease (CVD) was highest in the group aged 70 and over, for both men and women in 2015.

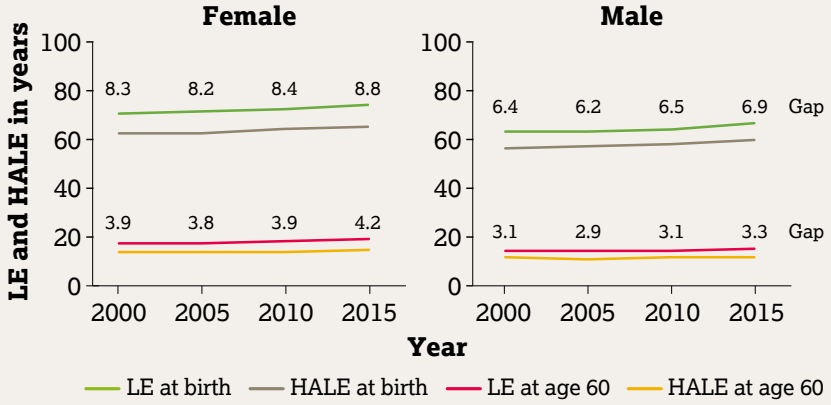
The number of deaths related to NCDs has increased over the last 25 years. NCDs accounted for over 90 per cent of all deaths among men and women; in 2015, this figure was as high as 94 per cent among individuals aged 50 to 69, and 99 per cent among those aged 70 and over. Most of these deaths were related to CVD. This pattern of causes differs from that of younger adults, with cancers and other NCDs being the leading causes of mortality (at 27 per cent and 28 per cent, respectively) among women aged 15 to 49, and other NCDs (24 per cent) for men aged 15 to 49 (Figure F4).

Figure F1: Population structure in Moldova



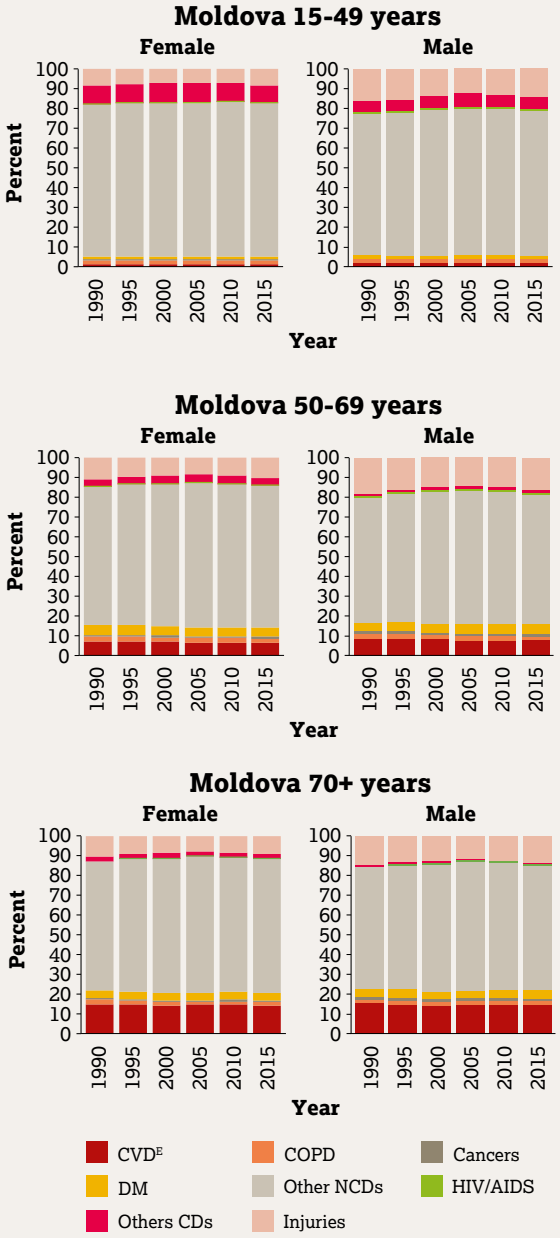
Source: United Nations, Department of Economic and Social Affairs, Population Division[C]

Figure F2: The gap between life expectancy (LE) and healthy life expectancy (HALE) in Moldova



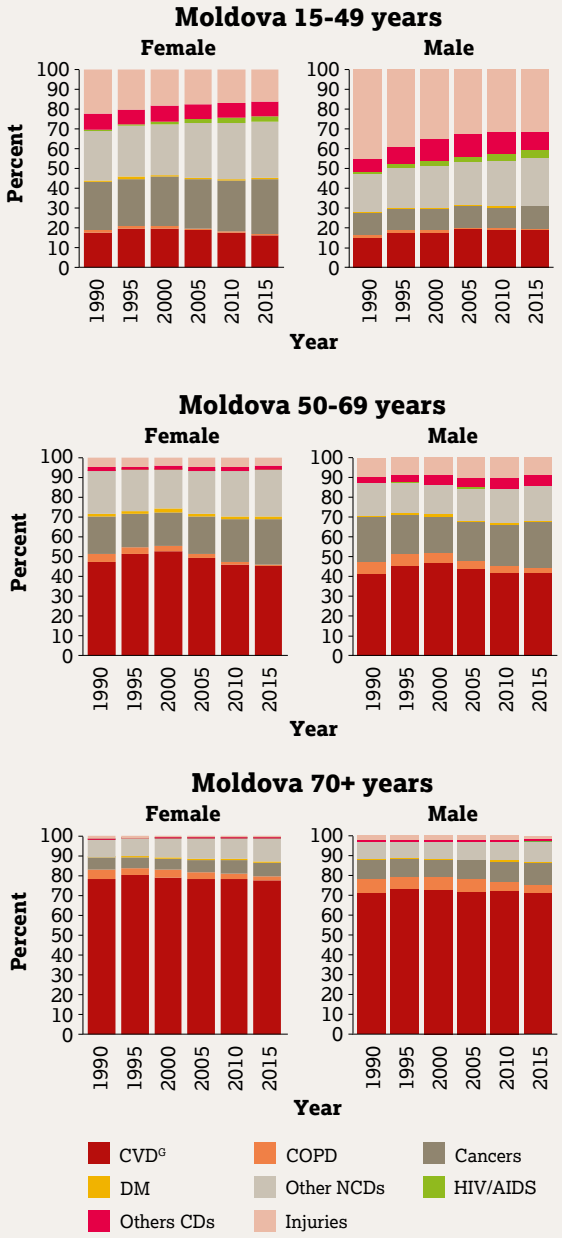
Source: World Health Organization[D]

Figure F3: Years lived with disability in Moldova



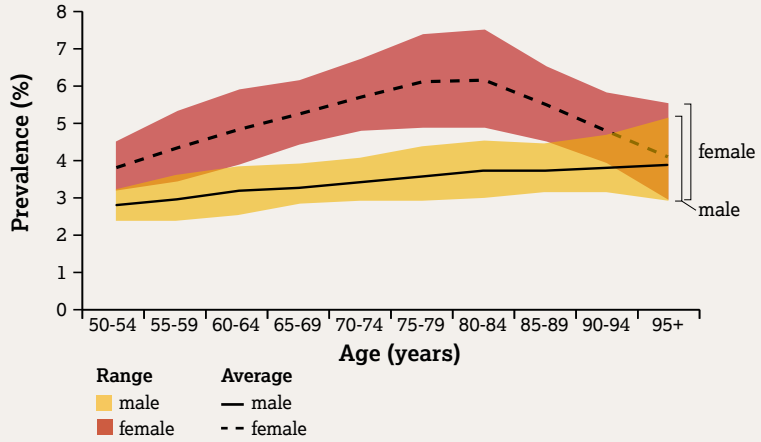
Source: Institute for Health Metrics and Evaluation[F]

Figure F4: Causes of death in Moldova



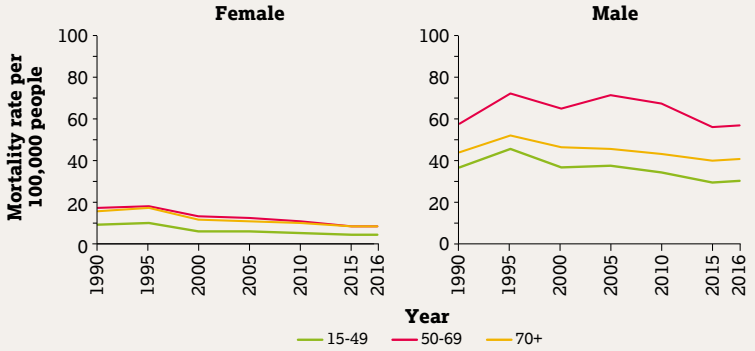
Source: Institute for Health Metrics and Evaluation[H]

Figure F5: Prevalence of major depressive disorders in Moldova, 2016



Source: Institute for Health Metrics and Evaluation[I]

Figure F6: Self-harm mortality rates in Moldova



Source: Institute for Health Metrics and Evaluation[J]

Ageing, mental health and cognitive impairment

The prevalence of major depressive disorders is higher among women than men across all age groups (Figure F5). Rates of depression among women peak at around age 80, then decline. For men, rates continue to rise beyond the age of 80.[K]

Men have higher self-harm mortality rates than women across all age groups (Figure F6). The mortality rates for men aged 50 to 69 are higher than for men in the age group 15 to 49, and higher than for women across all age cohorts.

Rates of dementia are similar for men and women in Moldova, increasing rapidly at around the age of 70 for both sexes (Figure F7).

Prevalence of violence towards older people

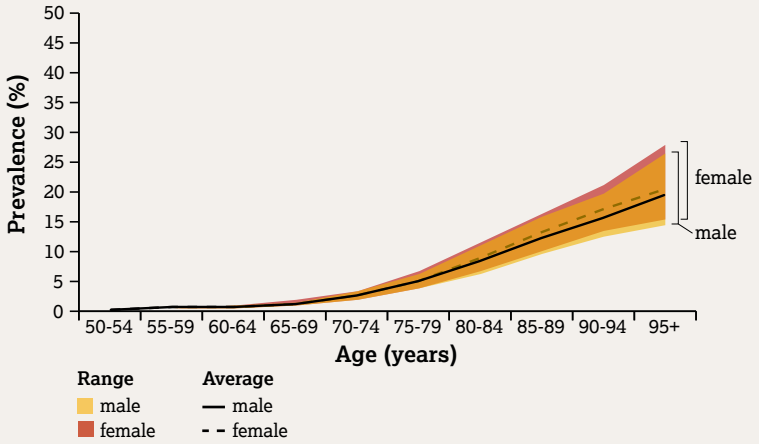
The prevalence of physical, sexual and psychological violence was higher for older Moldovan women than for men, in all groups aged 50 and over. About 11 per cent of women aged 50 to 54 experienced violence in 2016, compared with about 4 per cent of men in the same age group (Figure F8).

Poverty and health financing

The proportion of the population living below the national poverty line decreased from 26.4 per cent in 2008 to 9.6 per cent in 2015.[L]

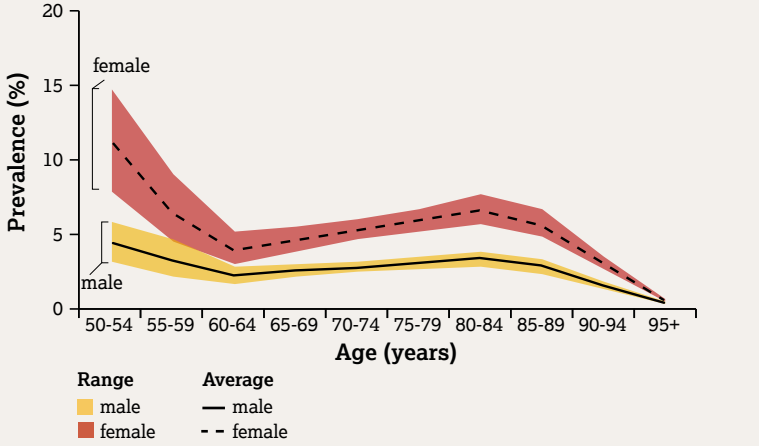
The last few decades have seen an increased focus on primary healthcare in Moldova, supported by the National Health Policy 2007-2021 and the Health System Development Strategy 2008-2017. These have improved the coverage of health services and satisfaction with these services, and gone some way to protecting people against financial risks. Amendments to the law on mandatory health insurance in 2009 and 2010 were meant to increase access to services and financial protection, yet almost 50 per cent of the population remain uninsured.

Figure F7: Alzheimer's and other dementias in Moldova, 2016



Source: Institute for Health Metrics and Evaluation[M]

Figure F8: Physical, sexual and psychological violence in Moldova, 2016



Source: Institute for Health Metrics and Evaluation[N]

Despite these developments, out-of-pocket health expenditure per household remains high, at 46 per cent of total health expenditure.[O] In 2015, Moldova had 3.2 physicians per 1,000 people, but with higher densities in urban than rural areas.[P]

It is not possible to analyse expenditure or access to health insurance, mandatory or voluntary, by age group due to lack of age disaggregation in the relevant international datasets.

Older people remain largely invisible within the monitoring of universal health coverage (UHC). The UHC Index (Table F1) measures coverage of a range of essential services. Currently, these include two of particular concern to older people: access to treatment for diabetes and for hypertension. However, gaps in the data sources used to track UHC mean that we do not have systematic findings on older people's access to these treatments.

Table F1. Selected health and care indicators

Category	Indicators	
UHC Index 2015 (median value)[Q]	Coverage of essential services under universal health coverage[R]	65
Financial protection (%)	Incidence of catastrophic health expenditure[S]	16.1
Long-term care and support	Gap in universal coverage of long-term care[T]	No data

Endnotes

A From 4 million in 2017. United Nations, Department of Economic and Social Affairs, Population Division, *Profiles of ageing 2017*, https://population.un.org/ProfilesOfAgeing2017/index.html (22 October 2018)

B Author calculation based on data from United Nations, Department of Economic and Social Affairs, Population Division, *World population prospects: the 2017 revision*, DVD Edition, 2017

C United Nations, Department of Economic and Social Affairs, Population Division, *Probabilistic population projections based on the world population prospects: the 2017 revision*, http://esa.un.org/unpd/wpp (18 October 2018)

D World Health Organization, *Life expectancy and healthy life expectancy: data by country*, http://apps.who.int/gho/data/view.main.SDG2016LEXv?lang=en (18 October 2018)

E CVD, cardiovascular disease; COPD, chronic obstructive pulmonary disease; CDs, communicable diseases

F Institute for Health Metrics and Evaluation, *GBD compare | viz hub*, 2016, https://vizhub.healthdata.org/gbd-compare (18 October 2018).

G CVD, cardiovascular disease; COPD, chronic obstructive pulmonary disease; CDs, communicable diseases

H Institute for Health Metrics and Evaluation, *GBD compare*

I Institute for Health Metrics and Evaluation, *Epi visualization | viz hub*, 2017, https://vizhub.healthdata.org/epi (18 October 2018)

J Institute for Health Metrics and Evaluation, *GBD compare*

K However, these results need to be interpreted carefully, taking into account the uncertainty intervals around the estimates

L World Bank, Global Poverty Working Group, *Poverty headcount ratio at national poverty lines (% of population)*, https://data.worldbank.org/indicator/SI.POV.NAHC?locations=MD (3 September 2018)

M Institute for Health Metrics and Evaluation, *Epi visualization*

N Institute for Health Metrics and Evaluation, *Epi visualization* (original values converted into percentages)

O World Health Organization, *Out-of-pocket expenditure (% of current health expenditure)*, https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS?locations=MD (23 September 2018)

P World Bank Group, *Physicians (per 1,000)*, https://data.worldbank.org/indicator/SH.MED.PHYS.ZS?locations=MD (23 September 2018)

Q The UHC Index measures coverage of essential health services, defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, NCDs and service capacity and access, among the general and most disadvantaged populations. It is presented on a scale of 0 to 100. The median national value for service coverage is 65 out of 100 (Hogan DR et al., *Lancet*, 6:2, 2018, pp.E152-E168, doi: 10.1016/S2214-109X(17)30472-2)

R World Health Organization, *Global Health Observatory: universal health coverage*, http://apps.who.int/gho/portal/uhc-cabinet-wrapper-v2.jsp?id=1010501 (23 September 2018)

S Expressed as a percentage of the population with a household expenditure on health greater than 10 per cent of the total household expenditure or income. World Health Organization, *Global Health Observatory: universal health coverage*

T Expressed as a percentage, based on achieving a median number of 4.2 formal long-term care staff per 100 people aged 65 and older. International Labour Organization, *World social protection report 2017-19: universal social protection to achieve the Sustainable Development Goals*, Geneva, International Labour Organization, 2017, table B.14, p.376

Myanmar

Key points

- The gap between life expectancy and healthy life expectancy is greater for women (9.1 years) than for men (7.8 years).
- Non-communicable diseases (NCDs) account for 81 per cent of the total years lived with disability.
- Men have slightly higher rates of depressive disorders than women across all age groups.
- The prevalence of violence is higher among women than among men across all age groups.

Ageing and longevity in Myanmar

The population of Myanmar is predicted to reach 59 million by 2030.[A] The older population (aged 60 and over) is expected to continue increasing, while the youngest population (aged 0 to 14) will continue to decrease through 2050 (Figure G1). The population aged aged 60 and over is expected to increase by 2.6 per cent annually between 2015 and 2050, reaching 18.5 per cent of the total.[B]

Both men and women are living longer. While in 2015 women were expected to outlive men by 4.4 years, the number of years spent in poor health – the gap between life expectancy and healthy life expectancy – is greater for women (9.1 years) than for men (7.8 years) (Figure G2).

Ageing and shifting patterns of disease and disability

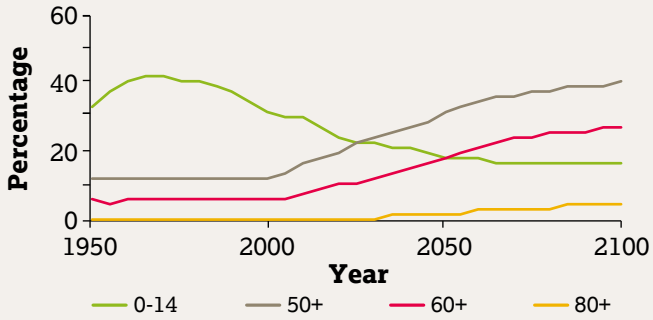
NCDs are the leading cause of disability across all age groups and for both sexes. NCDs accounted for 81 per cent of the total years lived with disability in Myanmar in 2015. However, communicable diseases (CDs) and injuries constitute nearly 20 per cent of this burden among younger cohorts.

NCDs increased across all age groups and both sexes between 1990 and 2015, while CDs decreased (Figure G3). Across the life course in Myanmar, there is a change in the types of NCD that cause disability. At later stages of life (ages 50 and over), cardiovascular disease (CVD), chronic obstructive pulmonary disease (COPD) and diabetes become more prominent (especially for men), compared with the earlier stages of life (ages 15 to 49).

NCDs are a major cause of mortality across generations, increasing across sexes and age cohorts (Figure G4). Myanmar has higher rates of NCD-related deaths among older people.

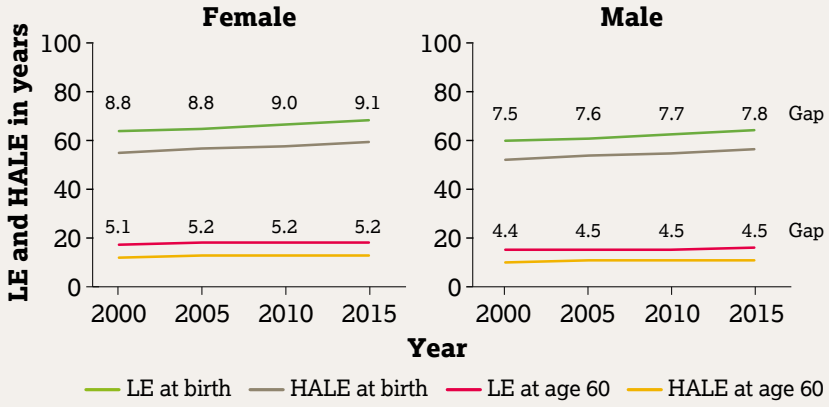
Among younger people, CDs contribute to nearly 30 per cent of mortalities. While CDs are declining with age across both sexes, NCD-related deaths have been steadily increasing among younger cohorts – making it a double burden.

Figure G1: Population structure in Myanmar



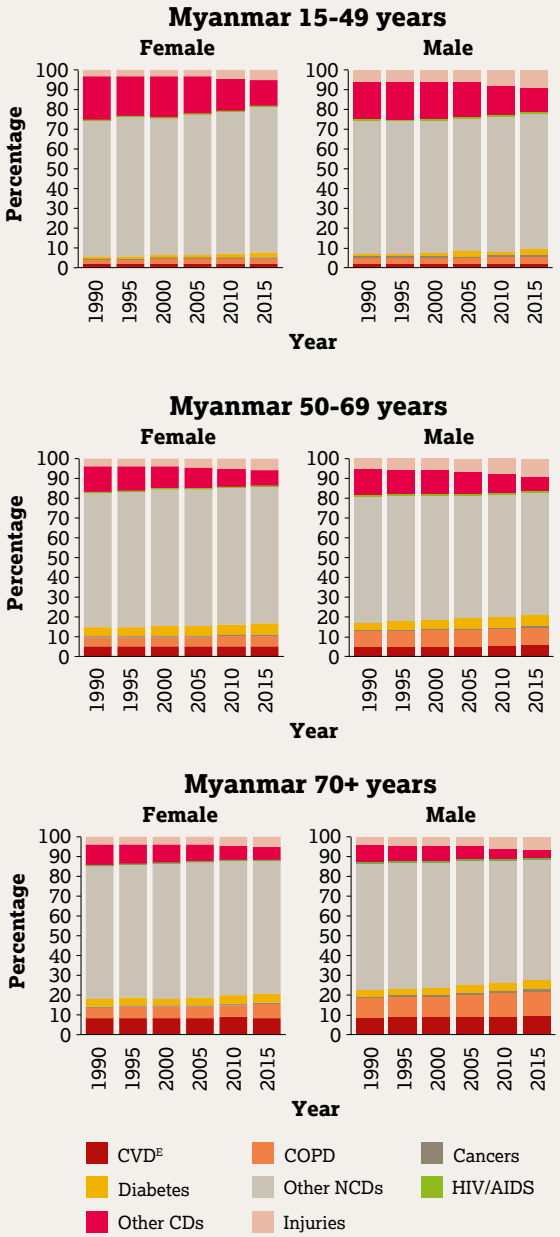
Source: United Nations, Department of Economic and Social Affairs, Population Division[C]

Figure G2: The gap between life expectancy (LE) and healthy life expectancy (HALE) in Myanmar



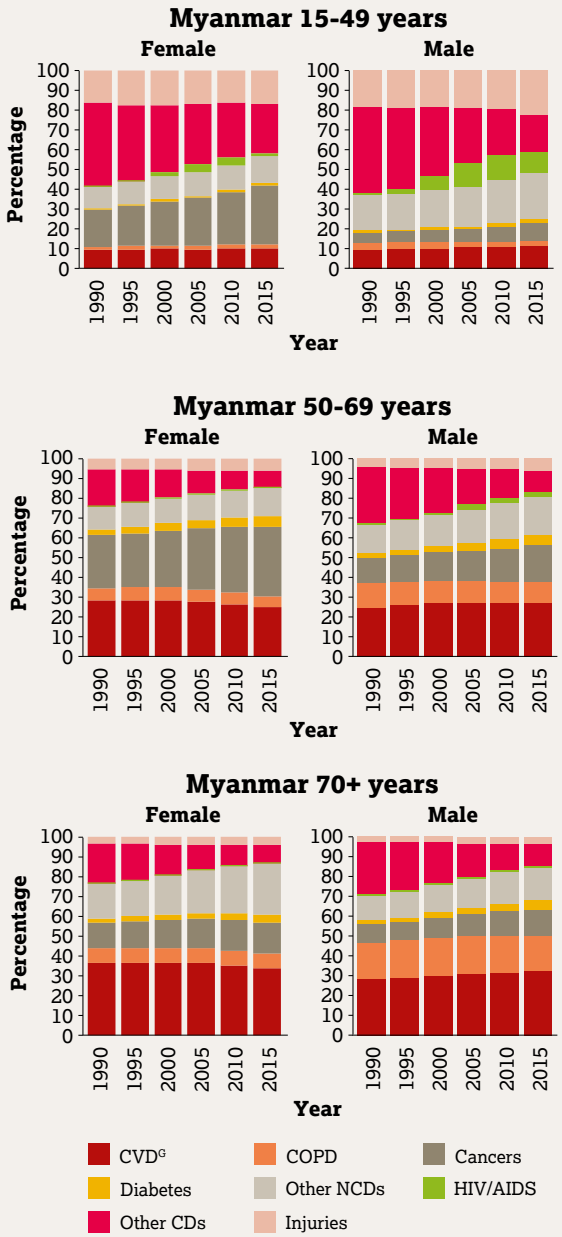
Source: World Health Organization[D]

Figure G3: Years lived with disability in Myanmar



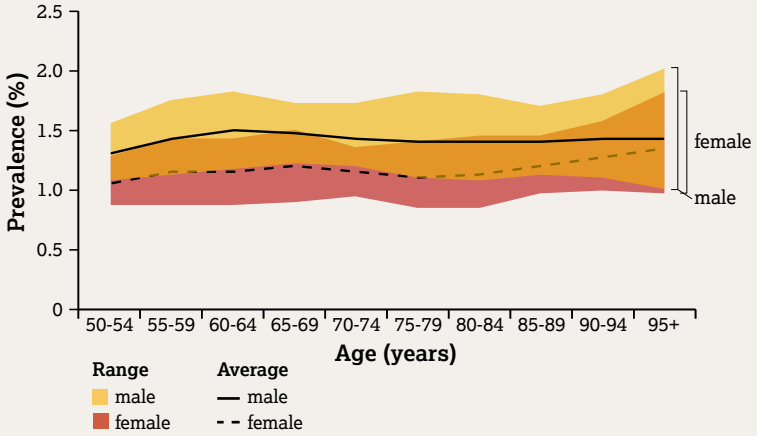
Source: Institute for Health Metrics and Evaluation[F]

Figure G4: Causes of death in Myanmar



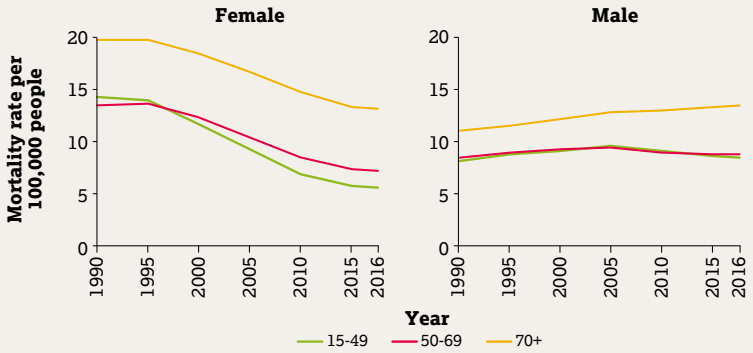
Source: Institute for Health Metrics and Evaluation[H]

Figure G5: Prevalence of major depressive disorders in Myanmar, 2016



Source: Institute for Health Metrics and Evaluation[I]

Figure G6: Self-harm mortality rates in Myanmar



Source: Institute for Health Metrics and Evaluation[J]

In older age groups, CVDs are the dominant cause of mortality for both men and women – about 35 per cent of the total burden of disease. However, while CVDs remain the dominant cause of mortality for women, deaths due to cancer and other NCDs are increasing.

Ageing, mental health and cognitive impairment

Mental illness contributes substantially to mortality and morbidity in Myanmar. The prevalence of major depressive disorders is slightly higher among men than women across all age groups (Figure G5).[K]

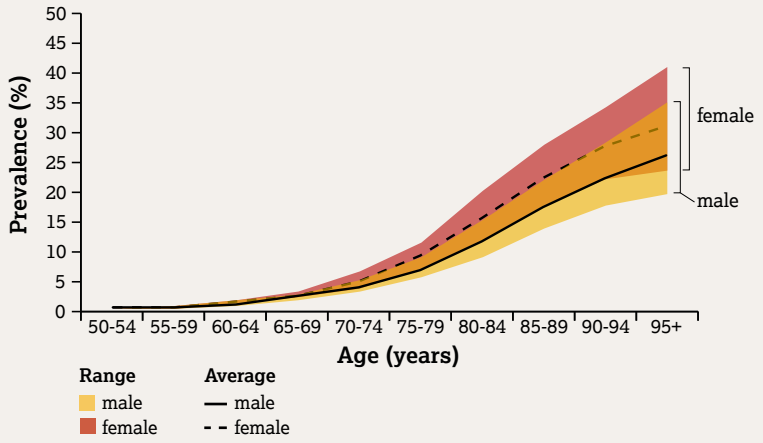
Self-harm mortality rates in women aged 70 and over were higher than in men in 1990 (Figure G6). However, the rates for women aged 70 and over have consistently declined since 1995, while among men of the same age, they have increased and are now marginally higher (13.5 deaths per 100,000 population for men and 13.2 per 100,000 population for women). The mortality rates for women across other age cohorts also declined, while rates for men aged 15 to 49, and 50 to 69 increased until 2005 and then declined.

In Myanmar, rates of dementia in men and women are similar up to the age of 70, when prevalence in both sexes increases rapidly, but with a steeper rise in women than in men (Figure G7).

Prevalence of violence towards older people

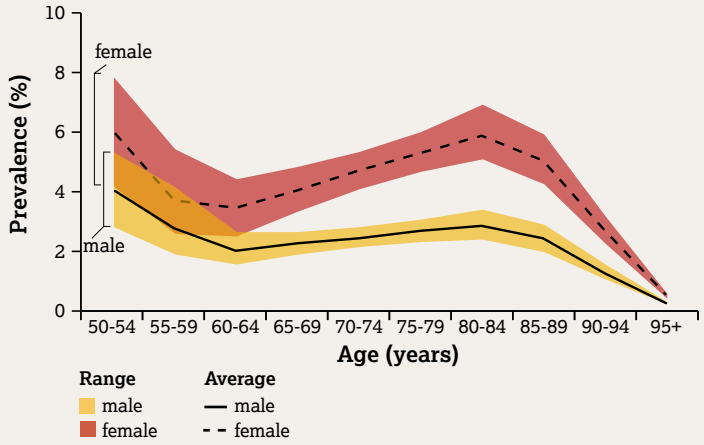
The prevalence of physical, sexual and psychological violence is higher among older women in Myanmar compared with men. About 6 per cent of women aged 80 to 84 experienced violence in 2016 compared with about 3 per cent of men aged 80 to 84 (Figure G8).

Figure G7: Alzheimer's and other dementias in Myanmar, 2016



Source: Institute for Health Metrics and Evaluation[L]

Figure G8: Physical, sexual and psychological violence in Myanmar, 2016



Source: Institute for Health Metrics and Evaluation[M]

Poverty and health financing

Up to 67.6 per cent of Myanmar's population lived below the poverty line (US$5.50 a day) in 2015.[N] Household out-of-pocket health expenditure has declined from 86.6 per cent in 2008, but remains high: in 2015 it was 73.9 per cent.[O]

It is not possible to analyse expenditure or access to health insurance, mandatory or voluntary, by age group due to lack of age disaggregation in the relevant international datasets.

Older people remain largely invisible within the monitoring of universal health coverage (UHC). The UHC Index (Table G1) measures coverage of a range of essential services. Currently, these include two of particular concern to older people: access to treatment for diabetes and for hypertension. However, gaps in the data sources used to track UHC mean that we do not have systematic findings on older people's access to these treatments.

Table G1. Selected health and care indicators

Category	Indicators	
UHC Index 2015 (median value)[P]	Coverage of essential services under universal health coverage[Q]	60
Financial protection	Incidence of catastrophic health expenditure[R]	No data
Long-term care and support	Gap in universal coverage of long-term care[S]	No data

Endnotes

A Up from 53.38 in 2017. United Nations, Department of Economic and Social Affairs, Population Division, *Profiles of ageing 2017*, https://population.un.org/ProfilesOfAgeing2017/index.html (22 October 2018)

B Author calculation based on data from United Nations, Department of Economic and Social Affairs, Population Division, *World population prospects: the 2017 revision*, 2017, DVD Edition

C United Nations, Department of Economic and Social Affairs, Population Division, *Probabilistic population projections based on the world population prospects: the 2017 revision*, http://esa.un.org/unpd/wpp (18 October 2018)

D World Health Organization, *Life expectancy and healthy life expectancy: data by country*, http://apps.who.int/gho/data/view.main.SDG2016LEXv (18 October 2018)

E CVD, cardiovascular disease; COPD, chronic obstructive pulmonary disease; CDs, communicable diseases

F Institute for Health Metrics and Evaluation, *GBD compare | viz hub*, 2016, https://vizhub.healthdata.org/gbd-compare (18 October 2018)

G CVD, cardiovascular disease; COPD, chronic obstructive pulmonary disease; CDs, communicable diseases

H Institute for Health Metrics and Evaluation, *GBD compare*

I Institute for Health Metrics and Evaluation, *Epi visualization | viz hub*, 2017, https://vizhub.healthdata.org/epi (18 October 2018).

J Institute for Health Metrics and Evaluation, *GBD compare*

K However, these results need to be interpreted carefully, taking into account the uncertainty intervals around the estimates

L Institute for Health Metrics and Evaluation, *Epi visualization*

M Institute for Health Metrics and Evaluation, *Epi visualization* (original values converted into percentages)

N World Bank, Development Research Group, *Poverty headcount ratio at $5.50 a day (2011 PPP)* (% of population), https://data.worldbank.org/indicator/SI.POV.UMIC?locations=MM (1 November 2018)

O World Health Organization, *Out-of-pocket expenditure (% of current health expenditure)*, https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS?locations=MM (23 September 2018)

P The UHC Index measures coverage of essential health services, defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, NCDs and service capacity and access, among the general and most disadvantaged populations. It is presented on a scale of 0 to 100. The median national value for service coverage is 65 out of 100 (Hogan DR et al., *Lancet*, 6:2, 2018, pp.E152-E168, doi: 10.1016/S2214-109X(17)30472-2)

Q World Health Organization, *Global Health Observatory: universal health coverage*, http://apps.who.int/gho/portal/uhc-cabinet-wrapper-v2.jsp?id=1010501 (23 September 2018)

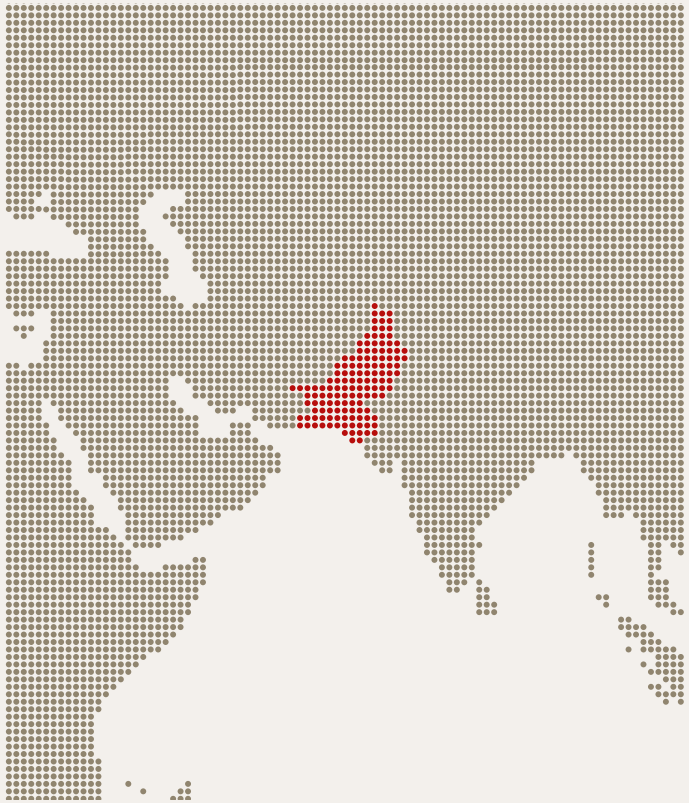
R Expressed as a percentage of the population with a household expenditure on health greater than 10 per cent of the total household expenditure or income. World Health Organization, *Global Health Observatory: universal health coverage*

S Expressed as a percentage, based on achieving a median number of 4.2 formal long-term care staff per 100 people aged 65 and older. International Labour Organization, *World social protection report 2017-19: universal social protection to achieve the Sustainable Development Goals*, Geneva, International Labour Organization, 2017, table B.14, p.376

Pakistan

Key points

- In 2015, non-communicable diseases (NCDs) accounted for 86 per cent of deaths among people aged 50 and over.
- Deaths due to chronic obstructive pulmonary disease (COPD) were more prevalent among men aged 50 to 69 and 70 and over than among women in the same age groups.
- Deaths due to cancers were more prevalent among women aged 50 to 69 and 70 and over than among men in the same age groups.
- Prevalence of violence was significantly higher among older women than among men.



Ageing and longevity in Pakistan

The population of Pakistan will surpass 244 million by 2030.[A] The older population (aged 60 and over) is predicted to continue to increase, while the youngest population (aged 0 to 14) will continue to decrease as a proportion of the total population through to the end of the century (Figure H1). The population aged 60 and over is expected to increase by 3.3 per cent annually between 2015 and 2050, reaching 12.9 per cent of the total population.[B]

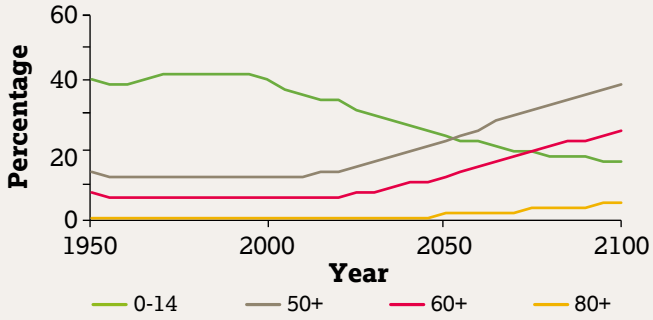
Both men and women are living longer. While women are expected to outlive men by 1.8 years, the number of years spent in poor health – the gap between life expectancy and healthy life expectancy – is greater for women (9.5 years) than for men (8.1 years) (Figure H2).

Ageing and shifting patterns of disease and disability

As the population ages, the burden of disease in Pakistan is shifting. NCDs accounted for 78.2 per cent of total years lived with disability in Pakistan in 2015. NCDs are the leading cause of disability across all age groups for both sexes, ranging from 78 per cent of years lived with disability among women aged 15 to 49 and 80 per cent for men of the same age, to 85 per cent for both men and women aged 70 and over (Figure H3). Communicable diseases (CDs) and injuries constitute nearly 20 per cent of this burden among people aged 15 to 49.

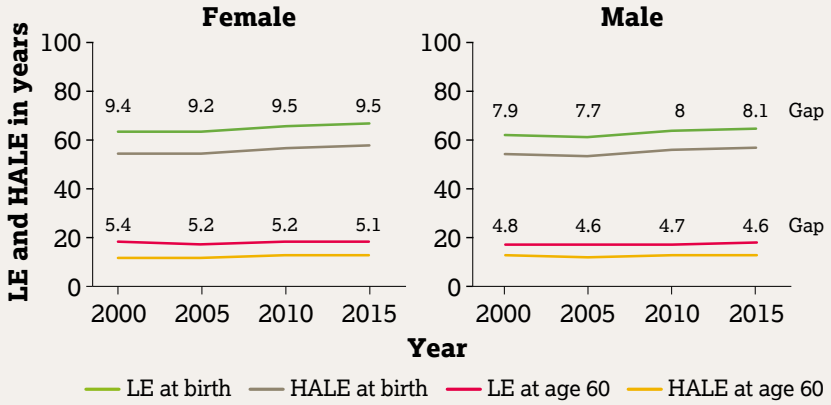
NCDs increased and CDs decreased from 1990 to 2015, across all age groups and sexes. Across the life course in Pakistan, we see a change in the types of NCD that cause disability. At later stages of life (age 70 and over), cardiovascular disease (CVD) is responsible for 8.8 and 9.2 per cent of disability among women and men, respectively, and COPD for 7 and 10.8 per cent among women and men, respectively. Diabetes becomes more prominent as a cause of disability, for both women and men, than during the earlier stages of life (ages 15 to 49).

Figure H1: Population structure in Pakistan



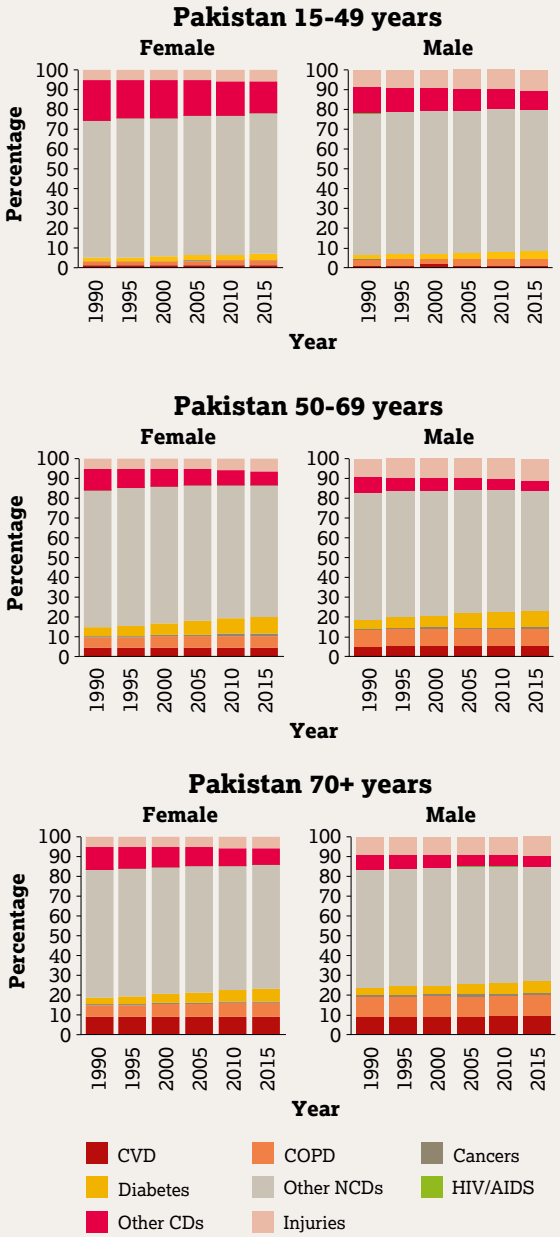
Source: United Nations, Department of Economic and Social Affairs, Population Division[C]

Figure H2: The gap between life expectancy (LE) and healthy life expectancy (HALE) in Pakistan



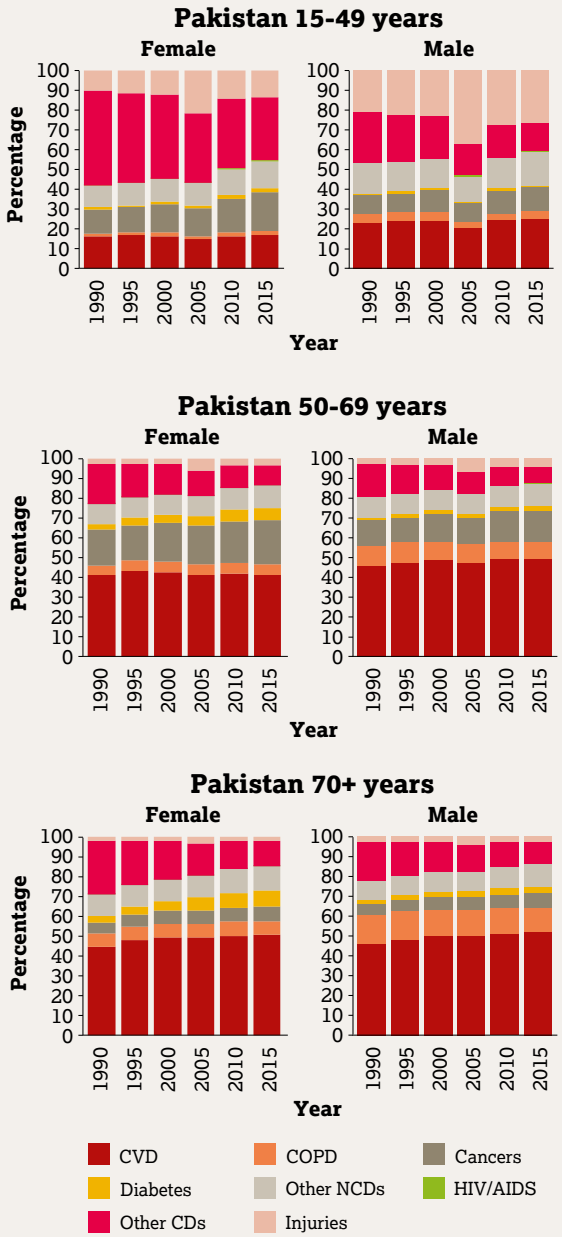
Source: World Health Organization[D]

Figure H3: Years lived with disability in Pakistan



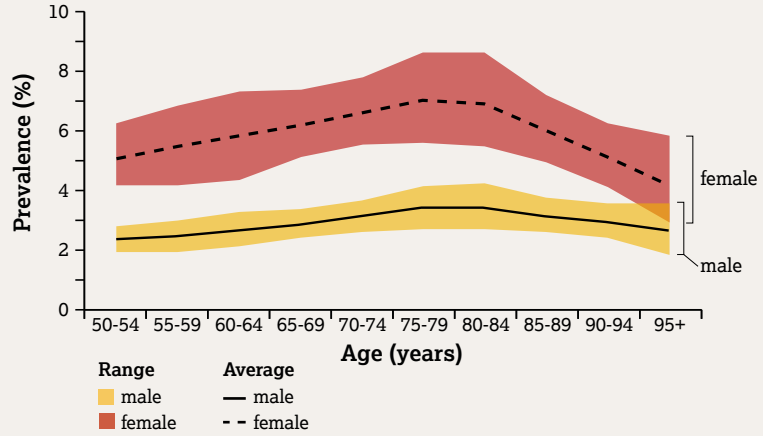
Source: Institute for Health Metrics and Evaluation[E]

Figure H4: Causes of death in Pakistan



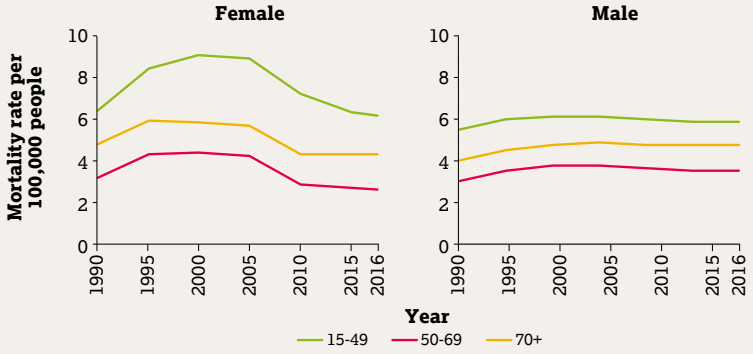
Source: Institute for Health Metrics and Evaluation[F]

Figure H5: Prevalence of major depressive disorders in Pakistan, 2016



Source: Institute for Health Metrics and Evaluation[G]

Figure H6: Self-harm mortality rates in Pakistan



Source: Institute for Health Metrics and Evaluation[H]

The number of deaths related to NCDs has increased in the last 25 years across generations and sexes, with higher rates of NCD-related deaths among older people (Figure H4). NCDs accounted for 62.4 per cent of all deaths among men and women in Pakistan in 2015, and was as high as 86 per cent among individuals aged 50 to 69, and 70 and over. Among older people (aged 70 and over), CVDs are the dominant cause of mortality for both men and women – about 50 per cent of the total burden of disease. However, there are differences between genders: diabetes and cancer are greater causes of mortality among older women, and COPD is greater among older men.

This pattern of causes differs considerably in younger adults. Among people aged 15 to 49, NCD-related deaths have been steadily increasing among younger cohorts, with CVD being the leading NCD cause of death for men, and cancer for women. CDs were the second leading cause of death for women (32 per cent), and injuries were the second leading cause for men (26 per cent).

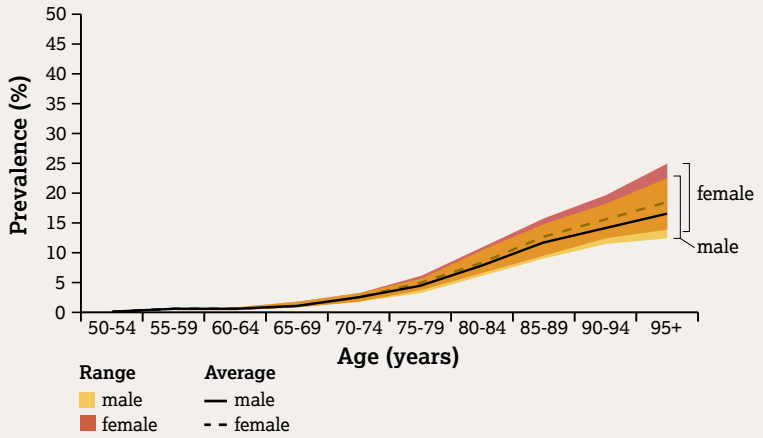
Ageing, mental health and cognitive impairment

The prevalence of major depressive disorders in Pakistan is increasing among men and women between the ages of 50 and 80, after which it decreases (Figure H5). Women have higher rates of major depressive disorders than men across all age groups.

Looking at the burden of deaths resulting from injuries, specifically self-harm, rates were higher among women than men across all age cohorts in the early 1990s (Figure H6). The female self-harm mortality rate began to fall around 2000 for the cohorts aged 50 to 69, and around 1995 for those 70 and over; it is below the self-harm rate for men of the same age.

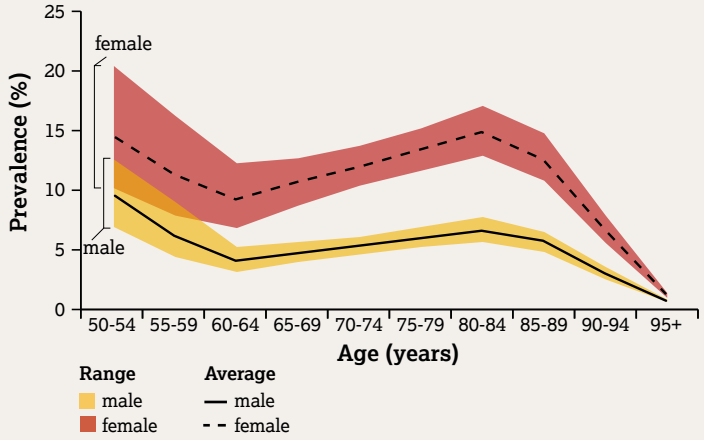
Rates of dementia in Pakistan are similar for men and women, with the prevalence in both sexes increasing rapidly after the age of 70 (Figure H7).

Figure H7: Alzheimer's and other dementias in Pakistan, 2016



Source: Institute for Health Metrics and Evaluation[I]

Figure H8: Physical, sexual and psychological violence in Pakistan, 2016



Source: Institute for Health Metrics and Evaluation[J]

Prevalence of violence towards older people

The prevalence of physical, sexual and psychological violence is much higher among older Pakistani women than older men (Figure H8). For example, about 15 per cent of women aged 80 to 84 experienced violence in 2016 compared with about 6.5 per cent of men in the same age group.

Poverty and health financing

Household out-of-pocket health expenditure in Pakistan decreased from 73.1 per cent of total health expenditure in 2008 to 66.5 per cent in 2015.[K] Per capita out-of-pocket health expenditure increased slightly from $88 in 2008 to $89.4 in 2015.[L]

It is not possible to analyse expenditure or access to health insurance, mandatory or voluntary, by age group due to lack of age disaggregation in the relevant international datasets.

Older people remain largely invisible within the monitoring of universal health coverage (UHC). The UHC Index (Table H1) measures coverage of a range of essential services. Currently, these include two of particular concern to older people: access to treatment for diabetes and for hypertension. However, gaps in the data sources used to track UHC mean that we do not have systematic findings on older people's access to these treatments.

Table H1. Selected health and care indicators

Category	Indicators	
UHC Index 2015 (median value)[M]	Coverage of essential services under universal health coverage[N]	40
Financial protection (%)	Incidence of catastrophic health expenditure[O]	1.03
Long-term care and support	Gap in universal coverage of long-term care[P]	No data

Endnotes

A Up from 197.01 million in 2017. United Nations, Department of Economic and Social Affairs, Population Division, *Profiles of ageing 2017*, https://population.un.org/ProfilesOfAgeing2017/index.html (22 October 2018)

B Author calculation based on data from United Nations, Department of Economic and Social Affairs, Population Division, *World population prospects: the 2017 revision*, DVD Edition, 2017

C United Nations, Department of Economic and Social Affairs, Population Division, *Probabilistic population projections based on the world population prospects: the 2017 revision*, http://esa.un.org/unpd/wpp (18 October 2018)

D World Health Organization, *Life expectancy and healthy life expectancy: data by country*, http://apps.who.int/gho/data/view.main.SDG2016LEXv (18 October 2018)

E Institute for Health Metrics and Evaluation, *GBD compare | viz hub*, 2016, https://vizhub.healthdata.org/gbd-compare (18 October 2018)

F Institute for Health Metrics and Evaluation, *GBD compare*

G Institute for Health Metrics and Evaluation, *Epi visualization | viz hub*, 2017, https://vizhub.healthdata.org/epi (18 October 2018)

H Institute for Health Metrics and Evaluation, *GBD compare*

I Institute for Health Metrics and Evaluation, *Epi visualization*

J Institute for Health Metrics and Evaluation, *Epi visualization* (original values converted into percentages)

K World Health Organization, *Out-of-pocket expenditure (% of current health expenditure)*, https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS?locations=PK (23 September 2018)

L World Health Organization, *Out-of-pocket health expenditure per capita (PPP current international dollars)*, 2015, https://data.worldbank.org/indicator/SH.XPD.OOPC.PP.CD?locations=PK (23 September 2018)

M The UHC Index measures coverage of essential health services, defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, NCDs and service capacity and access, among the general and most disadvantaged populations. It is presented on a scale of 0 to 100. The median national value for service coverage is 65 out of 100 (Hogan DR et al., *Lancet*, 6:2, 2018, pp.E152-E168, doi: 10.1016/S2214-109X(17)30472-2)

N World Health Organization, *Global Health Observatory: universal health coverage*, http://apps.who.int/gho/portal/uhc-cabinet-wrapper-v2.jsp?id=1010501 (23 September 2018)

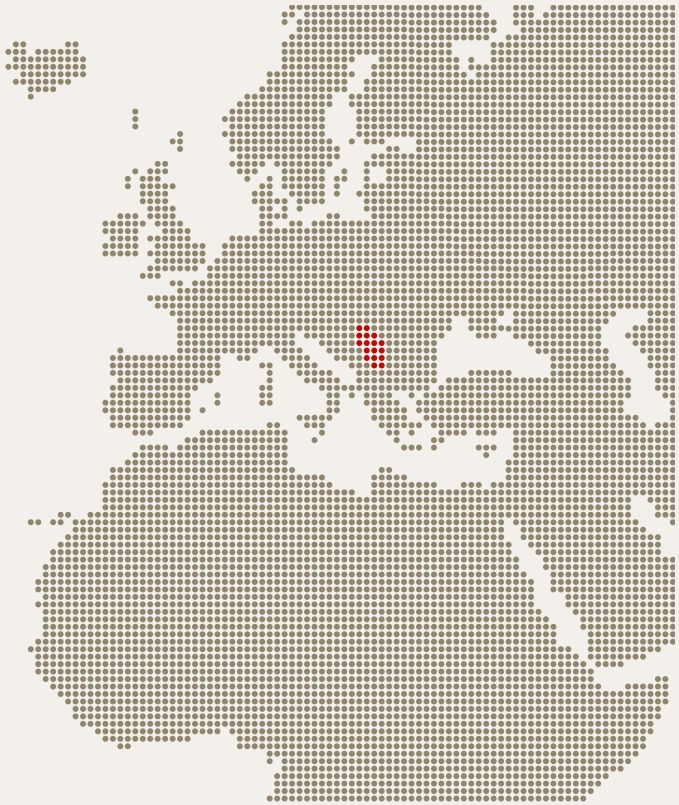
O Expressed as a percentage of the population with a household expenditure on health greater than 10 per cent of the total household expenditure or income. World Health Organization, *Global Health Observatory: universal health coverage*

P Expressed as a percentage, based on achieving a median number of 4.2 formal long-term care staff per 100 people aged 65 and older. International Labour Organization, *World social protection report 2017-19: universal social protection to achieve the Sustainable Development Goals*, Geneva, International Labour Organization, 2017, table B.14, p.376

Serbia

Key points

- While the overall population of Serbia is decreasing in size, the older population is increasing.
- Non-communicable diseases (NCDs) are the leading cause of mortality, responsible for over 90 per cent of all deaths among men and women aged 50 to 69, and 70 and over.
- Rates of self-harm among older people (aged 50 and over) have declined but are significantly higher for older men than for older women.
- The prevalence of major depressive disorders is increasing among older men, but rates are still higher for older women overall.
- The prevalence of violence is higher among older Serbian women than among men.



Ageing and longevity in Serbia

Serbia's population is expected to decline to 8 million by 2030.[A] The older population (people aged 60 and over) will increase in number, while the youngest population (ages 0 to 14) will continue to decrease through to the end of the century (Figure I1). By 2005, the proportion of the population aged 60 and over had already exceeded that of those aged 0 to 14.

Both men and women are living longer. While women are expected to outlive men by 5.1 years, the number of years spent in poor health – the gap between life expectancy and healthy life expectancy – is greater for women (9.5 years) than for men (8.4 years) (Figure I2).

Ageing and shifting patterns of disease and disability

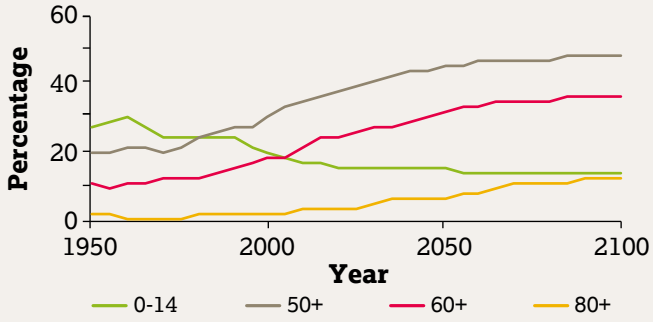
As the population ages, the pattern of disease in Serbia is shifting. NCDs are significant causes of disability among all age groups and for both sexes. They accounted for 81.3 per cent of the total years lived with disability in 2015. However, NCDs are declining overall, across both sexes and all age cohorts (Figure I3).

There is greater variation in the types of NCD that cause disability in later life compared with earlier life. For example, cardiovascular disease (CVD) and diabetes cause more disability among people aged 70 and over than among people aged 15 to 49.

Injuries are a cause of disability through all periods of life, with men having higher rates of disability due to injuries than women across all age cohorts.

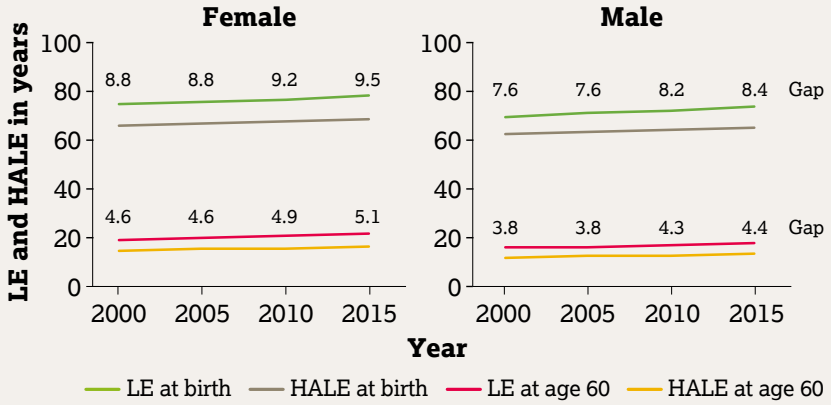
NCDs are the leading cause of death across sexes and all three age cohorts (15-49, 50-69, 70+), with mortality rates highest among people aged 70 and over (Figure I4). NCDs accounted for about 63 per cent and 81 per cent of deaths among men and women aged 15 to 49, respectively, and over 90 per cent of deaths among men and women aged 50 to 69, and 70 and over in 2015.

Figure I1: Population structure in Serbia



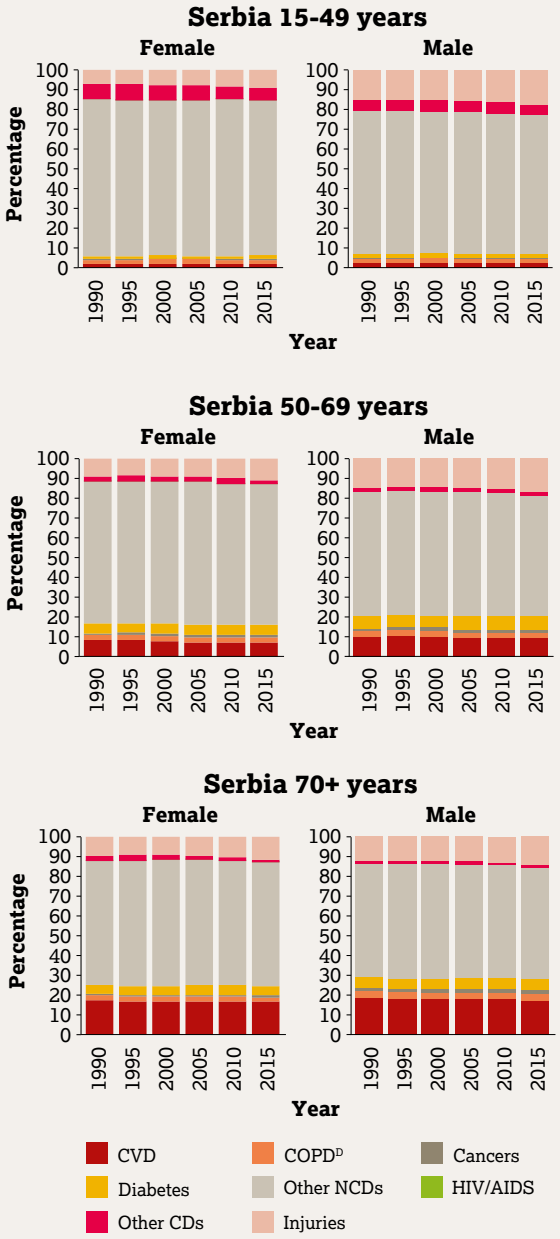
Source: United Nations, Department of Economic and Social Affairs, Population Division[B]

Figure I2: The gap between life expectancy (LE) and healthy life expectancy (HALE) in Serbia



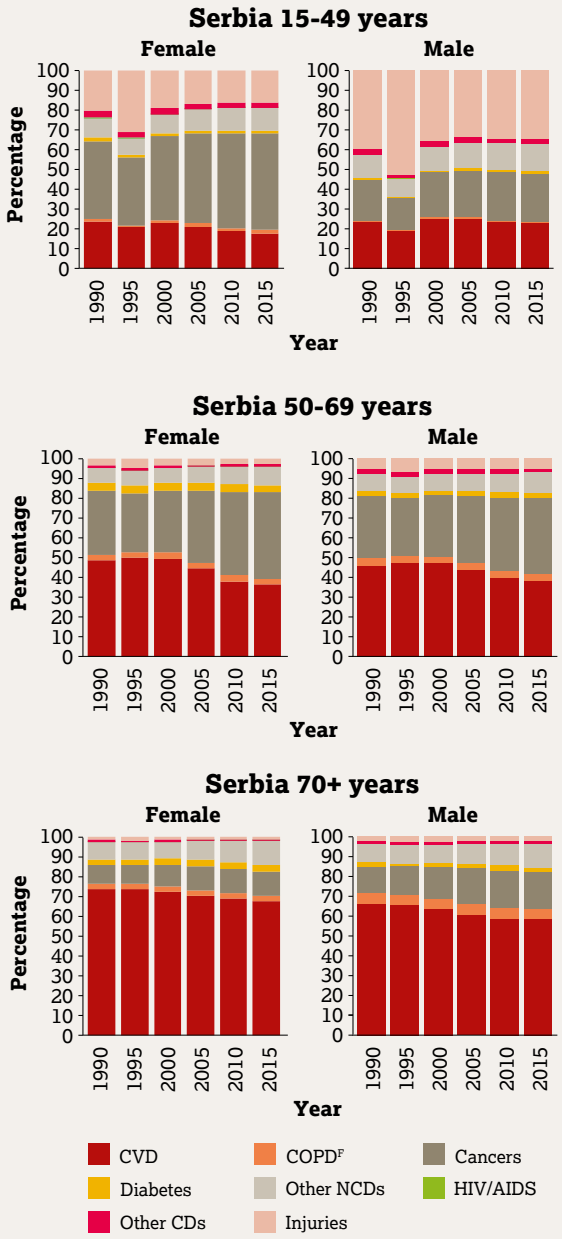
Source: World Health Organization[C]

Figure I3: Years lived with disability in Serbia



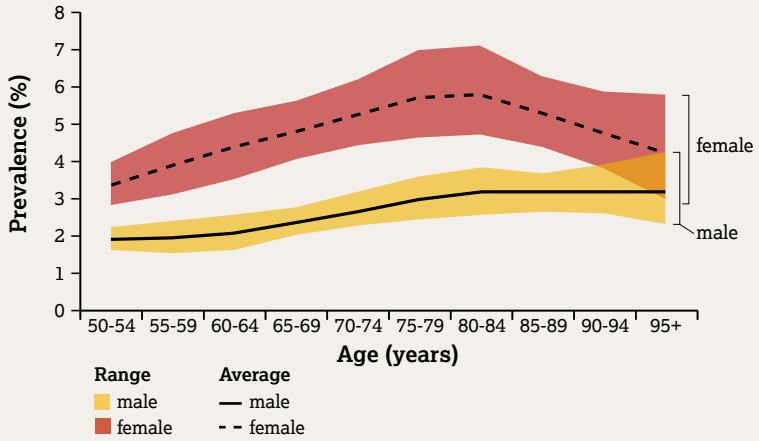
Source: Institute for Health Metrics and Evaluation[E]

Figure I4: Causes of death in Serbia



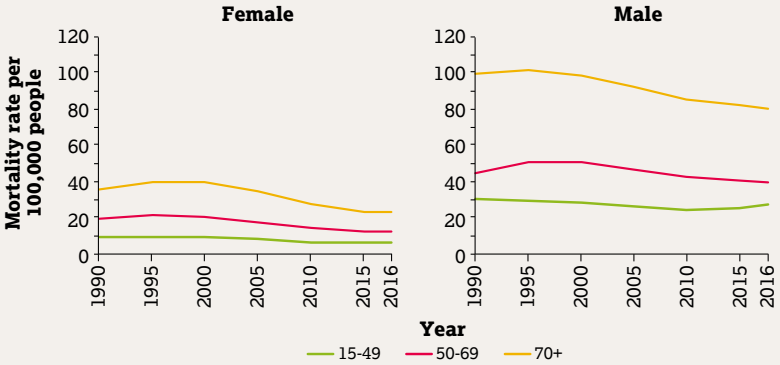
Source: Institute for Health Metrics and Evaluation[G]

Figure I5: Prevalence of major depressive disorders in Serbia, 2016



Source: Institute for Health Metrics and Evaluation[H]

Figure I6: Self-harm mortality rates in Serbia



Source: Institute for Health Metrics and Evaluation[I]

The composition of NCDs leading to death is changing. For example, the proportion of deaths related to CVD has decreased in all age groups, while the proportion of cancer deaths has increased across all age groups and both sexes.

Ageing, mental health and cognitive impairment

The prevalence of major depressive disorders is higher among women than men across all age cohorts (Figure I5). The prevalence for women rises with age up to 80 years, and then declines. For men, the prevalence of depression increases up to age 80, and then levels off.

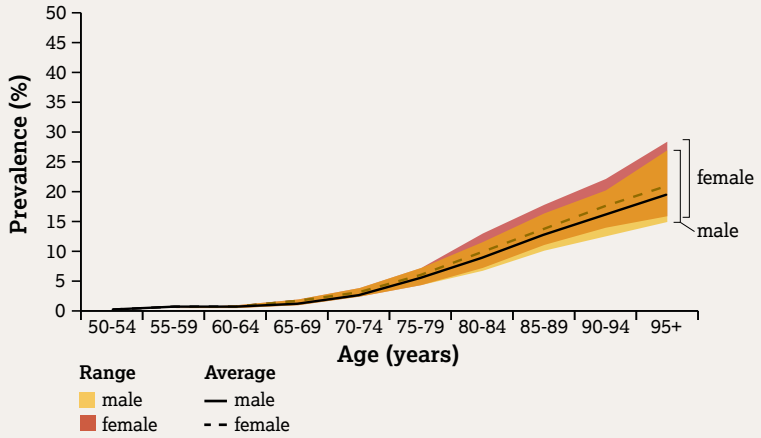
Looking at the burden of deaths resulting from injuries, specifically self-harm, there are much higher rates among men than women across age cohorts (Figure I6). The mortality rate due to self-harm is highest among men aged 70 and over. Overall, between 1990 and 2015, rates declined for both women and men aged 50 to 69, and 70 and over.

Rates of dementia in men and women are similar for all age groups in Serbia (Figure I7).

Prevalence of violence towards older people

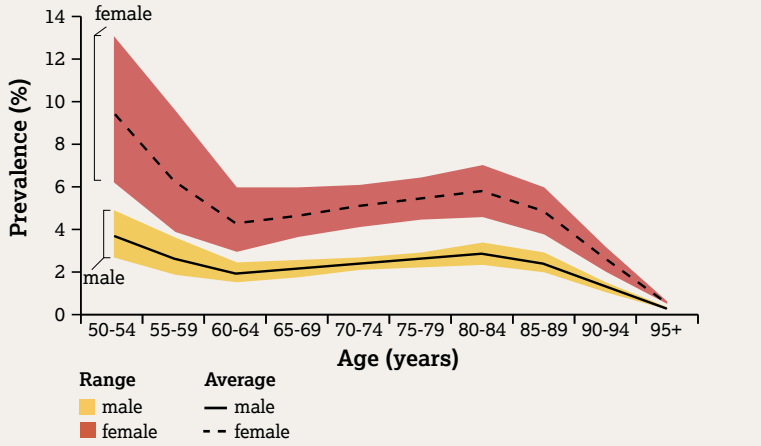
The prevalence of physical, sexual and psychological violence was higher among older Serbian women compared with men across all age groups. Some 9.4 per cent of women aged 50 to 54 experienced violence during the previous 12 months, compared with 3.6 per cent of men in the same age group (Figure I8).

Figure I7: Alzheimer's and other dementias in Serbia, 2016



Source: Institute for Health Metrics and Evaluation[J]

Figure I8: Physical, sexual and psychological violence in Serbia, 2016



Source: Institute for Health Metrics and Evaluation[K]

Poverty and health financing

The estimated household out-of-pocket health expenditure in Serbia increased from 35.1 per cent in 2008 to 40.6 per cent in 2015.[L] In 2015, per capita out-of-pocket expenditure was $537, an increase from $420 in 2008.[M]

It is not possible to analyse expenditure or access to health insurance, mandatory or voluntary, by age group due to lack of age disaggregation in the relevant international datasets.

Older people remain largely invisible within the monitoring of universal health coverage (UHC). The UHC Index (Table I1) measures the coverage of a range of essential services. Currently, these include two of particular concern to older people: access to treatment for diabetes and for hypertension. However, gaps in the data sources used to track UHC mean that we do not have systematic findings on older people's access to these treatments.

Table I1. Selected health and care indicators

Category	Indicators	
UHC Index 2015 (median value)[N]	Coverage of essential services under universal health coverage[O]	65
Financial protection (%)	Incidence of catastrophic health expenditure[P]	9
Long-term care and support	Gap in universal coverage of long-term care[Q]	No data

Endnotes

A From 8.8 million in 2017. United Nations, Department of Economic and Social Affairs, *Population Division, Serbia: population by age group* (thousands), https://population.un.org/ProfilesOfAgeing2017/index.html (1 November 2018)

B United Nations, Department of Economic and Social Affairs, Population Division, *Probabilistic population projections based on the world population prospects: the 2017 revision*, http://esa.un.org/unpd/wpp (18 October 2018)

C World Health Organization, *Life expectancy and healthy life expectancy: data by country*, http://apps.who.int/gho/data/view.main.SDG2016LEXv (18 October 2018)

D COPD, chronic obstructive pulmonary disease; CDs, communicable diseases

E Institute for Health Metrics and Evaluation, *GBD compare | viz hub*, 2016, https://vizhub.healthdata.org/gbd-compare (18 October 2018)

F COPD, chronic obstructive pulmonary disease; CDs, communicable diseases

G Institute for Health Metrics and Evaluation, *GBD compare*

H Institute for Health Metrics and Evaluation, *Epi visualization | viz hub*, 2017, https://vizhub.healthdata.org/epi (18 October 2018)

I Institute for Health Metrics and Evaluation, *GBD compare*

J Institute for Health Metrics and Evaluation, *Epi visualization*

K Institute for Health Metrics and Evaluation, *Epi visualization* (original values converted into percentages)

L World Health Organization, *Out-of-pocket expenditure (% of current health expenditure)*, https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS?locations=RS (1 November 2018)

M World Bank Group, *Out-of-pocket health expenditure per capita (PPP current international dollars)*, 2015, https://data.worldbank.org/indicator/SH.XPD.OOPC.PP.CD?locations=RS (1 November 2018)

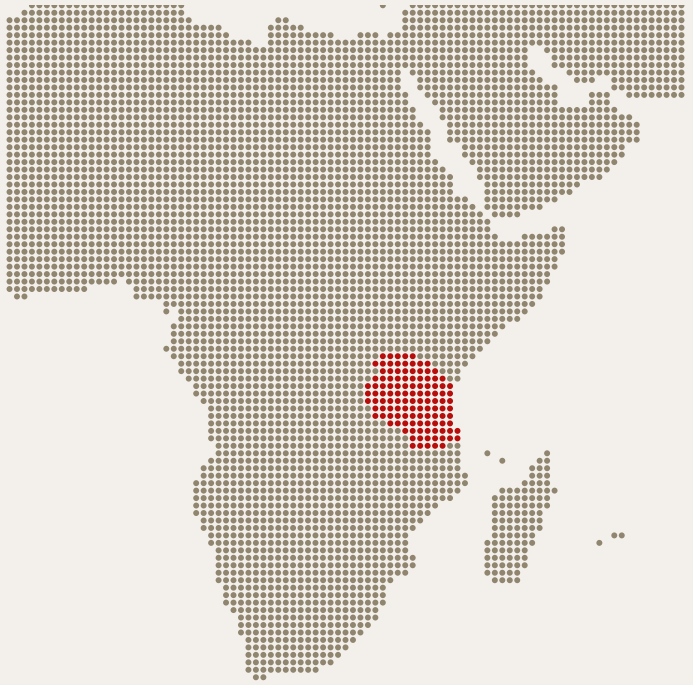
N The UHC Index measures coverage of essential health services, defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, NCDs and service capacity and access, among the general and most disadvantaged populations. It is presented on a scale of 0 to 100. The median national value for service coverage is 65 out of 100 (Hogan DR et al., *Lancet*, 6:2, 2018, pp.E152-E168, doi: 10.1016/S2214-109X(17)30472-2)

O World Health Organization, *Global Health Observatory: universal health coverage*, http://apps.who.int/gho/portal/uhc-cabinet-wrapper-v2.jsp?id=1010501 (23 September 2018)

P Expressed as a percentage of the population with a household expenditure on health greater than 10 per cent of the total household expenditure or income. World Health Organization, *Global Health Observatory: universal health coverage*

Q Expressed as a percentage, based on achieving a median number of 4.2 formal long-term care staff per 100 people aged 65 and older. International Labour Organization, *World social protection report 2017-19: universal social protection to achieve the Sustainable Development Goals*, Geneva, International Labour Organization, 2017, table B.14, p.376

United Republic of Tanzania



Key points

- Non-communicable diseases (NCDs) accounted for 72.2 per cent of the total years lived with disability in Tanzania in 2015.
- Rates of dementia increase rapidly in Tanzania beyond the age of 70, with a steeper rise among women than men.
- The prevalence of major depressive disorders is increasing in both men and women between the ages of 50 and 80.
- The prevalence of violence is much higher among older women than among older men.
- The small but steady increase in deaths resulting from self-harm for men aged 70 and over warrants investigation.

Ageing and longevity in Tanzania

The population of Tanzania is expected to reach 84 million by 2030.[A] The size of the older population (aged 60 and over) is expected to continue increasing, while the youngest population (aged 0 to 14) will continue to decrease through to 2050 (Figure J1).

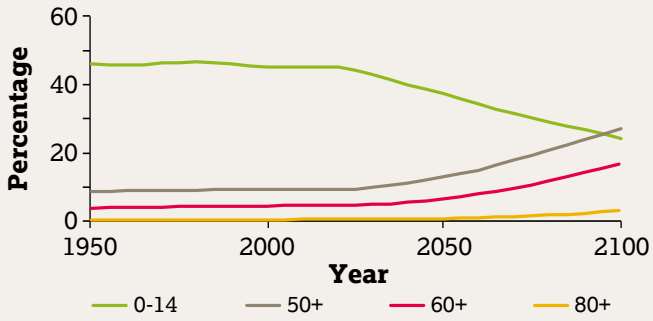
Both men and women are living longer in Tanzania. While women are expected to outlive men by 4.1 years, the number of years spent in poor health – the gap between life expectancy and healthy life expectancy – is greater for women (7.8 years) than for men (7 years) (Figure J2).

Ageing and shifting patterns of disease and disability

As the population ages, the burden of disease in Tanzania is shifting. NCDs accounted for 72.2 per cent of the total years lived with disability in 2015. The burden of disability from NCDs increased for all age groups between 1990 and 2015, and NCDs contribute to the vast majority of years lived with disability at all ages (Figure J3). Disability burdens related to communicable diseases (CDs) decreased across the age groups 50 to 69, and 70 and over in the period 1990 to 2015.

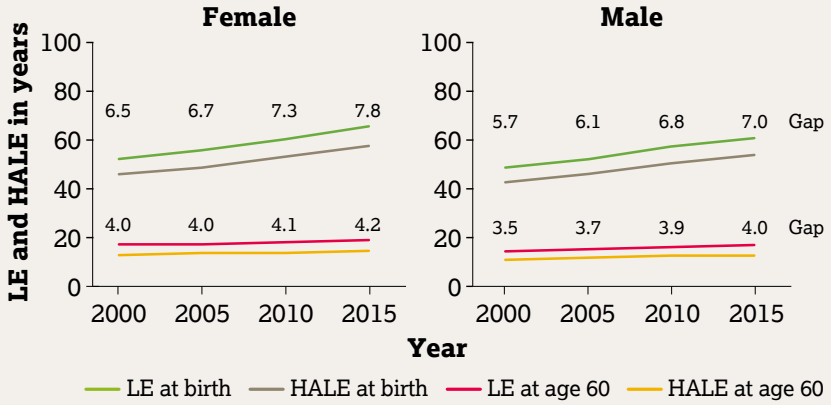
The number of deaths related to NCDs has increased across all age groups in the period 1990 to 2015, except for women aged 15 to 49. NCDs accounted for 60 per cent and 67 per cent of all deaths among men and women aged 50 to 69, and 70 and over, respectively, in 2015. This pattern differs considerably from that of younger adults, among whom NCDs accounted for 23 per cent and 20 per cent of deaths among men and women, respectively (Figure J4). Older people are therefore experiencing a double burden of disease – from NCDs and CDs.

Figure J1: Population structure in Tanzania



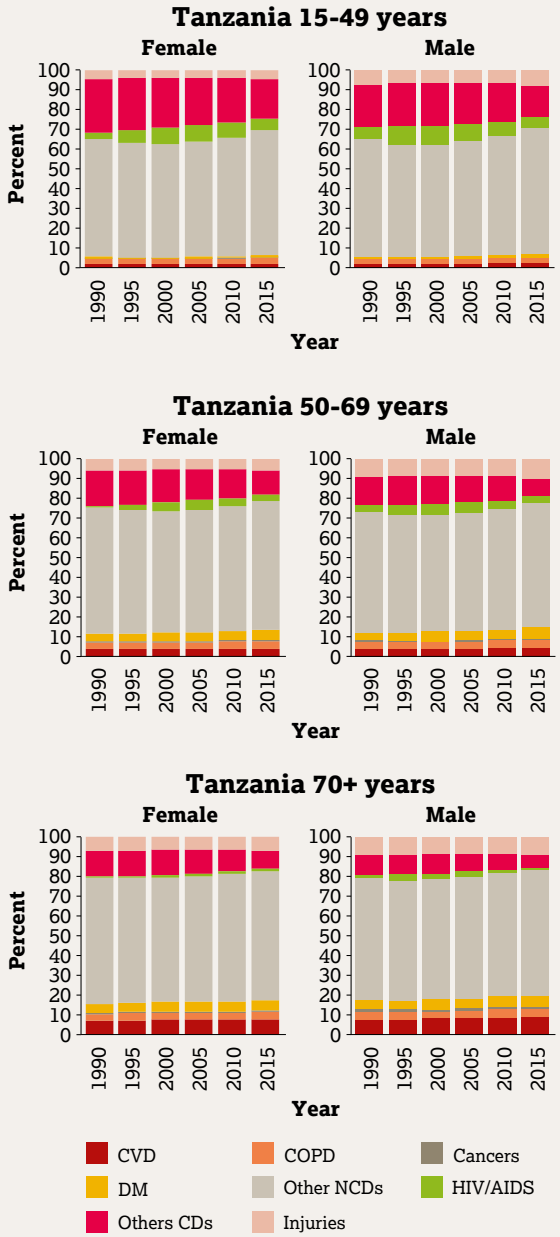
Source: United Nations, Department of Economic and Social Affairs, Population Division[B]

Figure J2: The gap between life expectancy (LE) and healthy life expectancy (HALE) in Tanzania



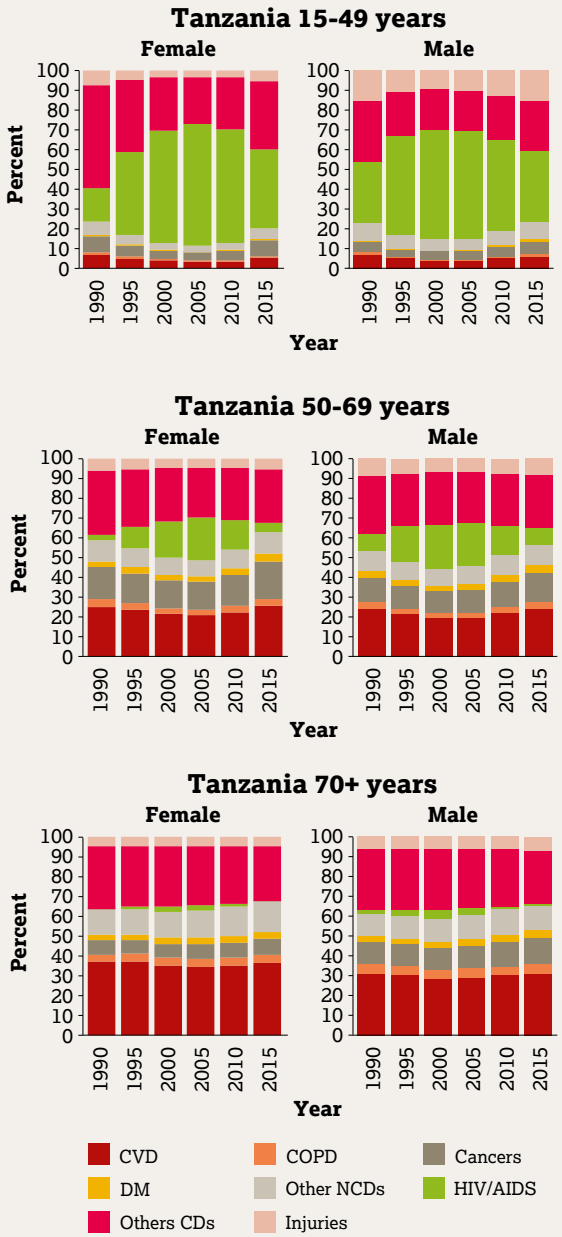
Source: World Health Organization[C]

Figure J3: Years lived with disability in Tanzania



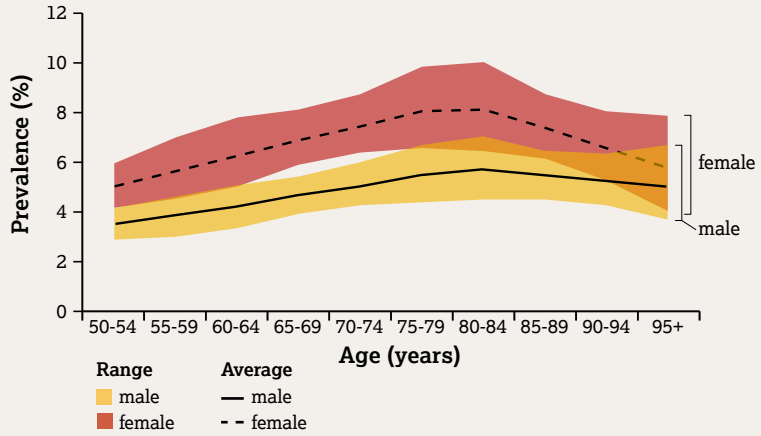
Source: Institute for Health Metrics and Evaluation[E]

Figure J4: Causes of death in Tanzania



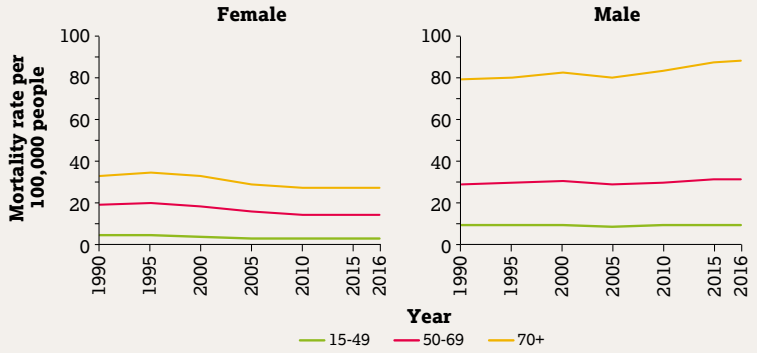
Source: Institute for Health Metrics and Evaluation[G]

Figure J5: Prevalence of major depressive disorders in Tanzania, 2016



Source: Institute for Health Metrics and Evaluation[H]

Figure J6: Self-harm mortality rates in Tanzania



Source: Institute for Health Metrics and Evaluation[I]

Ageing, mental health and cognitive impairment

The prevalence of major depressive disorders is increasing in men and women aged 50 to 80, after which point it declines (Figure J5).[J] Women have higher rates of major depressive disorders than men at each age, on average.

Looking at the burden of deaths resulting from injuries, specifically self-harm, there are higher rates among men than women over the period 1990 to 2016, and declining rates in women aged 50 to 69, and 70 and over from 1995. In particular, the small but steady increase in rates of death from self-harm for men aged 70 and over since 1990 warrants investigation (Figure J6).

In Tanzania, rates of dementia in men and women are similar until around the age of 70, after which the prevalence in both sexes increases rapidly, with a steeper rise in women (Figure J7).

Prevalence of violence towards older people

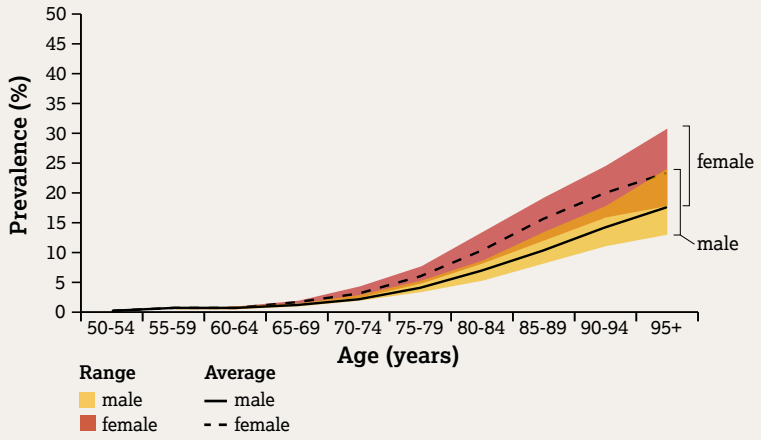
The prevalence of physical, sexual and psychological violence in 2016 was higher among older Tanzanian women than men, particularly among women aged 50 to 80. About 24 per cent of women aged 50 to 54 reported experiencing violence in 2016, compared with about 9 per cent of men in this age group (Figure J8).

Poverty and health financing

Estimated household out-of-pocket health expenditure in Tanzania decreased from 32.9 per cent in 2008 to 26 per cent in 2015.[K] Out-of-pocket health expenditure per person declined from $34 in 2008 to $25.2 in 2015.[L]

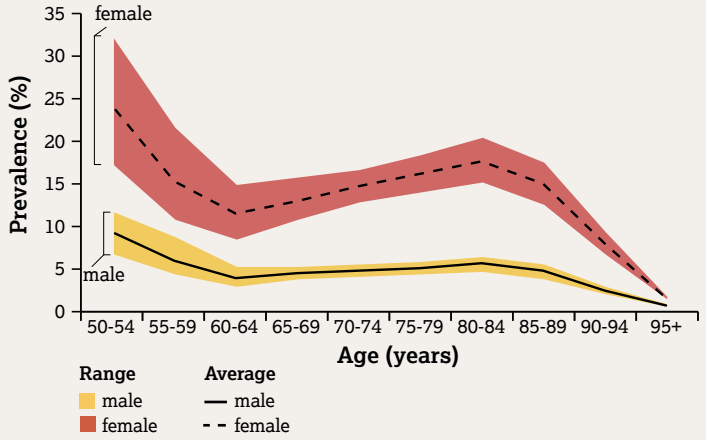
It is not possible to analyse expenditure or access to health insurance, mandatory or voluntary, by age group due to lack of age disaggregation in the relevant international datasets.

Figure J7: Alzheimer's and other dementias in Tanzania, 2016



Source: Institute for Health Metrics and Evaluation[M]

Figure J8: Physical, sexual and psychological violence in Tanzania, 2016



Source: Institute for Health Metrics and Evaluation[N]

Older people remain largely invisible within the monitoring of universal health coverage (UHC). The UHC Index (Table J1) measures the coverage of a range of essential services. Currently, these include two of particular concern to older people: access to treatment for diabetes and for hypertension. However, gaps in the data sources used to track UHC mean that we do not have systematic findings on older people's access to these treatments.

Table J1. Selected health and care indicators

Category	Indicators	
UHC Index 2015 (median value)[O]	Coverage of essential services under universal health coverage[P]	39
Financial protection (%)	Incidence of catastrophic health expenditure[Q]	9.87
Long-term care and support	Gap in universal coverage of long-term care[R]	No data

Endnotes

A Up from 57.31 million in 2017. United Nations, Department of Economic and Social Affairs, Population Division, *Profiles of ageing 2017*, https://population.un.org/ProfilesOfAgeing2017/index.html (22 October 2018)

B United Nations, Department of Economic and Social Affairs, Population Division, *Probabilistic population projections based on the world population prospects: the 2017 revision*, http://esa.un.org/unpd/wpp (18 October 2018)

C World Health Organization, *Life expectancy and healthy life expectancy: data by country*, http://apps.who.int/gho/data/view.main.SDG2016LEXv (18 October 2018)

D CVD, cardiovascular disease; COPD, chronic obstructive pulmonary disease; CDs, communicable diseases

E Institute for Health Metrics and Evaluation, *GBD compare | viz hub*, 2016, https://vizhub.healthdata.org/gbd-compare (18 October 2018)

F CVD, cardiovascular disease; COPD, chronic obstructive pulmonary disease; CDs, communicable diseases

G Institute for Health Metrics and Evaluation, *GBD compare*

H Institute for Health Metrics and Evaluation, *Epi visualization | viz hub*, 2017, https://vizhub.healthdata.org/epi (18 October 2018)

I Institute for Health Metrics and Evaluation, *GBD compare*

J However, these results need to be interpreted carefully, taking into account the uncertainty intervals around the estimates

K World Health Organization, *Out-of-pocket expenditure (% of current health expenditure)*, https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS?locations=TZ (23 September 2018)

L World Bank Group, *Out-of-pocket health expenditure per capita (PPP current international dollars)*, 2015, https://data.worldbank.org/indicator/SH.XPD.OOPC.PP.CD?locations=TZ (23 September 2018)

M Institute for Health Metrics and Evaluation, *Epi visualization*

N Institute for Health Metrics and Evaluation, *Epi visualization* (original values converted into percentages)

O The UHC Index measures coverage of essential health services, defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and most disadvantaged populations. It is presented on a scale of 0 to 100. The median national value for service coverage is 65 out of 100 (Hogan DR et al., *Lancet*, 6:2, 2018, pp.E152-E168, doi: 10.1016/S2214-109X(17)30472-2)

P World Health Organization, *Global Health Observatory: universal health coverage*, http://apps.who.int/gho/portal/uhc-cabinet-wrapper-v2.jsp?id=1010501 (23 September 2018)

Q Expressed as a percentage of the population with a household expenditure on health greater than 10 per cent of the total household expenditure or income. World Health Organization, *Global Health Observatory: universal health coverage*

R Expressed as a percentage, based on achieving a median number of 4.2 formal long-term care staff per 100 people aged 65 and older. International Labour Organization, *World social protection report 2017-19: universal social protection to achieve the Sustainable Development Goals*, Geneva, International Labour Organization, 2017, table B.14, p.376

Vietnam

Key points

- Non-communicable diseases (NCDs) accounted for 83.8 per cent of the total years lived with disability in Vietnam in 2015.
- The gap between life expectancy and healthy life expectancy is greater for women than for men by almost three years.
- The prevalence of violence against older people is higher among Vietnamese women than among men.
- The prevalence of major depressive disorders is higher among older women than among men.

Ageing and longevity in Vietnam

Vietnam's population is expected to surpass 106 million by 2030.[A] The older population (aged 60 and over) will continue to increase, while the youngest population (aged 0 to 14) will continue to decrease overall through to the end of the century (Figure K1).

Both men and women are living longer in Vietnam. While women are expected to outlive men by 9.2 years, the number of years spent in poor health – the gap between life expectancy and healthy life expectancy – is greater for women (10.2 years) than for men (7.5 years) (Figure K2).

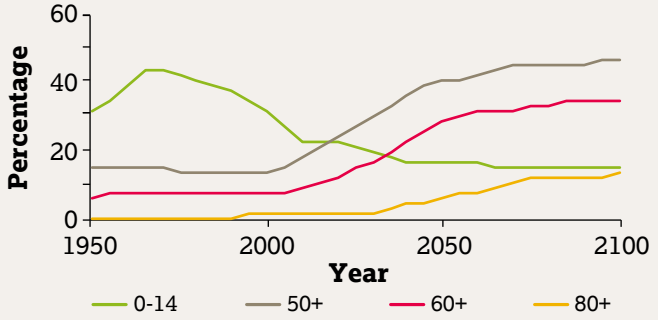
Ageing and shifting patterns of disease and disability

As the population ages, the burden of disease in Vietnam is shifting. NCDs accounted for 83.8 per cent of the total years lived with disability in Vietnam in 2015. While NCDs increased, communicable diseases (CDs) decreased from 1990 to 2015 across all age groups and both sexes (Figure K3).

Across the life course in Vietnam, there is a change in the types of NCDs that cause disability. In the later stages of life (age groups 50 to 69, and 70 and over), cardiovascular disease (CVD), chronic obstructive pulmonary disease (COPD) become more prominent (especially for men) than they are during the earlier stages of life (ages 15 to 49). CDs are more prominent during the earlier stages of life (ages 15 to 49).

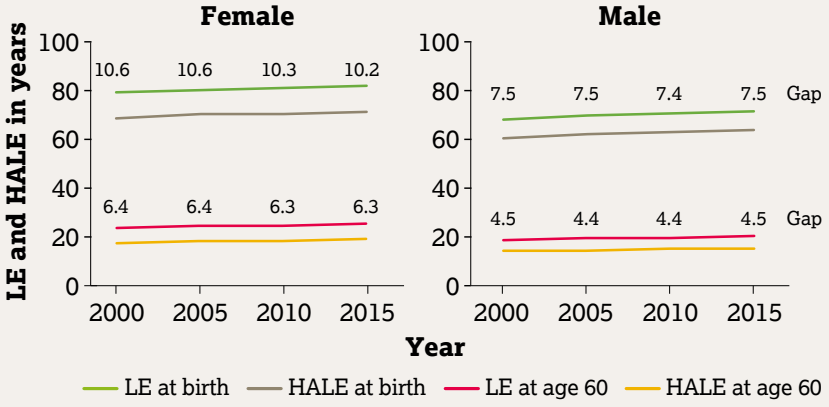
Causes of death differ between generations (Figure K4). In younger people, CDs and injuries are responsible for 51 per cent of all mortalities for men and 39 per cent for women, and NCDs for the remainder – although NCD-related deaths have been steadily increasing among younger cohorts. Among younger adults (aged 15 to 49), NCDs account for 49 per cent and 61 per cent of deaths among men and women, respectively.

Figure K1: Population structure in Vietnam



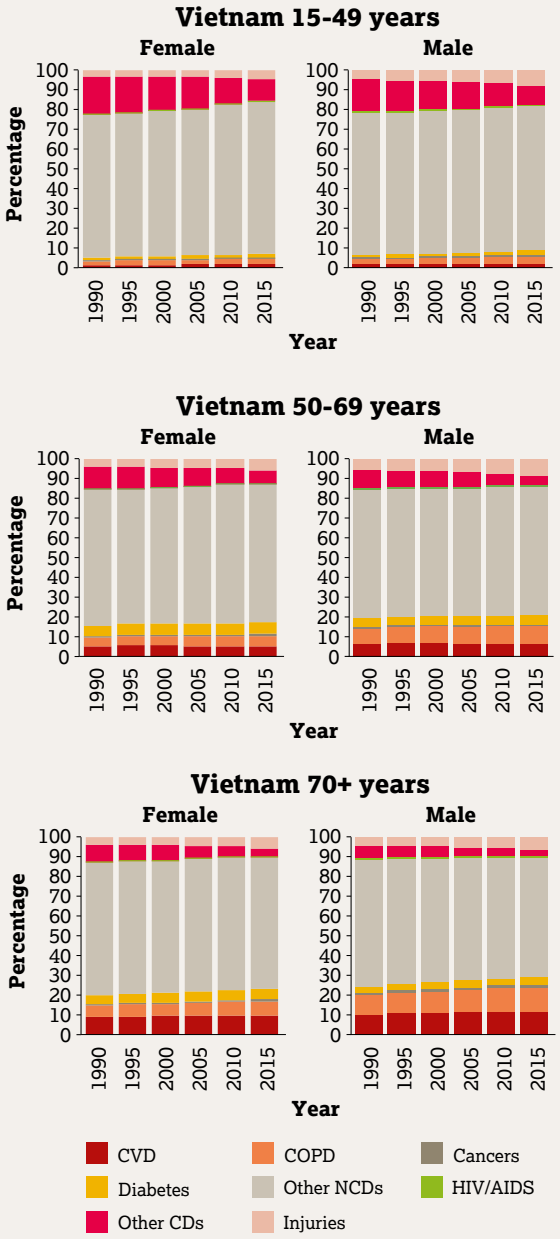
Source: United Nations, Department of Economic and Social Affairs, Population Division[B]

Figure K2: The gap between life expectancy (LE) and healthy life expectancy (HALE) in Vietnam



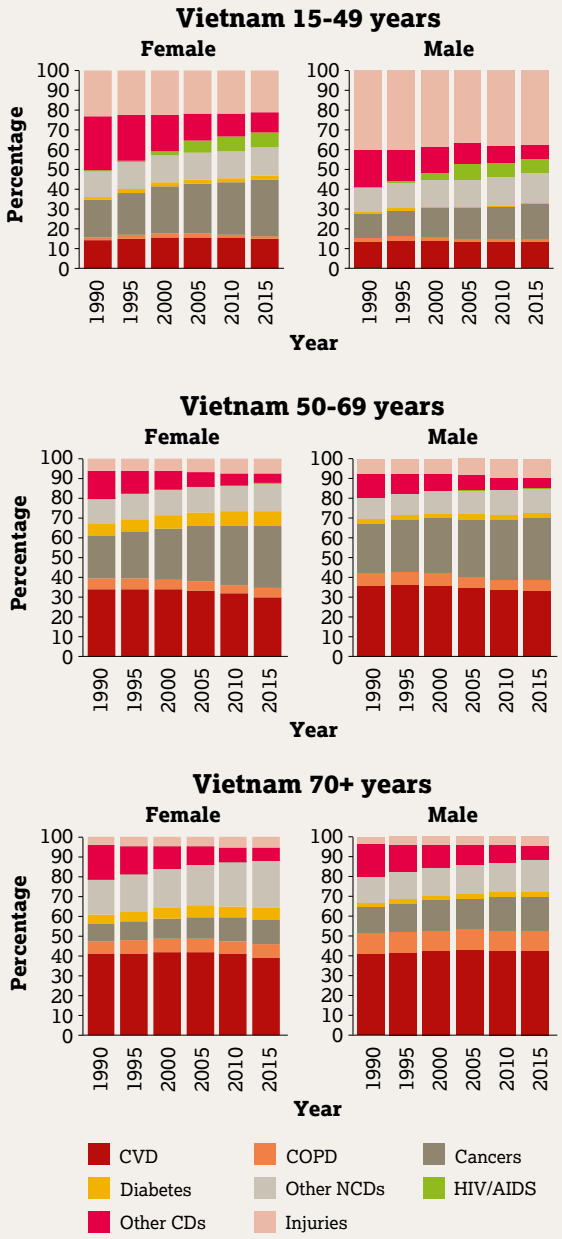
Source: World Health Organization[C]

Figure K3: Years lived with disability in Vietnam



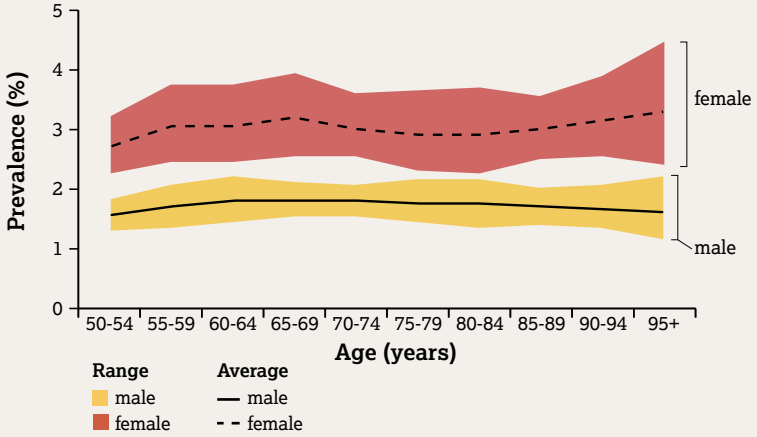
Source: Institute for Health Metrics and Evaluation[D]

Figure K4: Causes of death in Vietnam



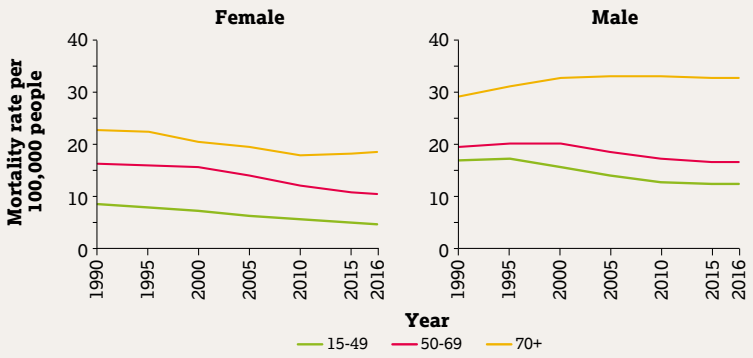
Source: Institute for Health Metrics and Evaluation[E]

Figure K5: Prevalence of major depressive disorders in Vietnam, 2016



Source: Institute for Health Metrics and Evaluation[F]

Figure K6: Self-harm mortality rates in Vietnam



Source: Institute for Health Metrics and Evaluation[G]

By contrast, NCDs are the dominant cause of mortality for older people, causing over 85 per cent of all deaths among men and women aged 50 to 69, and 70 and over in 2015. CVD is responsible for the largest share of deaths in men aged 50 to 69, and for men and women aged 70 and over, with rises in cancer-related mortality and other NCDs increasing the overall rate of NCD-related mortality across all ages and both sexes.

Ageing, mental health and cognitive impairment

The prevalence of major depressive disorders is higher for women than for men across all cohorts aged 50 and over. This prevalence increases between the ages of 50 and 60 for men and women. After this point, it gradually declines for men. It declines for women aged 60 to 80 but increases again after the age of 80 (Figure K5).[H]

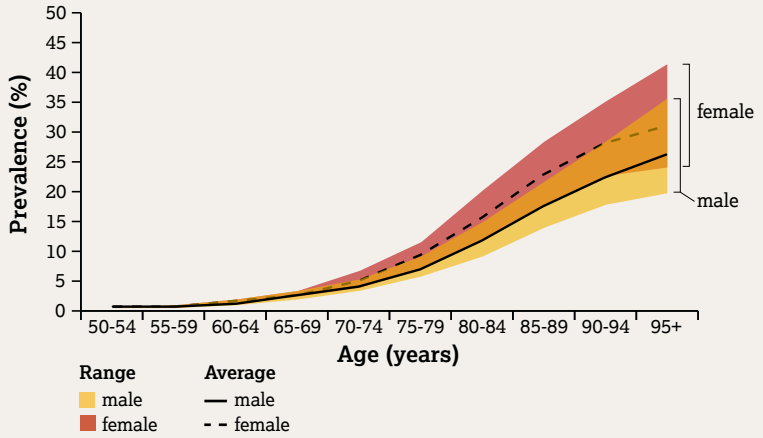
Looking at the burden of deaths resulting from injuries, specifically self-harm, the mortality rate among men aged 70 and over is the highest across age cohorts and sexes (Figure K6). Male mortality rate at ages 70 and over from this cause increased from 1990 until around 2000, remaining at a rate of around 33 per 100,000 until 2015. The mortality rate for women in the same age group declined until around 2010, and then started to increase. The mortality rate among men of other age cohorts is also higher than for women of corresponding age.

In Vietnam, the rates of dementia in men and women are similar until around the age of 70, when prevalence in both sexes increases rapidly, with a steeper rise among women than men (Figure K7).

Prevalence of violence towards older people

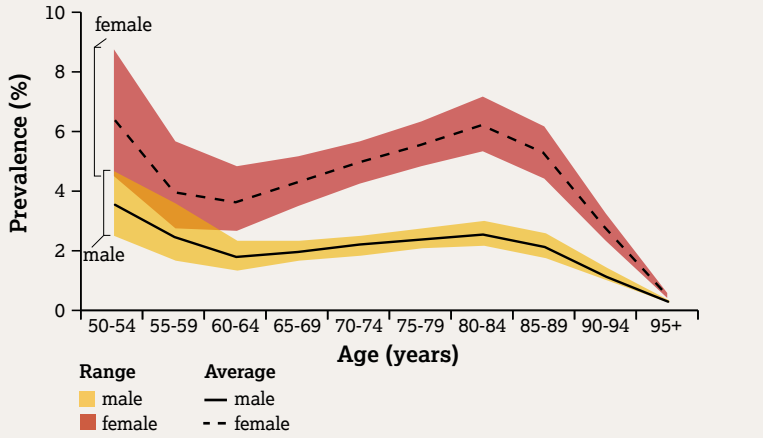
The prevalence of physical, sexual and psychological violence was higher among older Vietnamese women compared with men of the same age (Figure K8). The gender gap is largest for the age cohort 80 to 84, with 2.5 per cent prevalence for men and 6.2 per cent for women.

Figure K7: Alzheimer's and other dementias in Vietnam, 2016



Source: Institute for Health Metrics and Evaluation[I]

Figure K8: Physical, sexual and psychological violence in Vietnam, 2016



Source: Institute for Health Metrics and Evaluation[J]

Poverty and health financing

Poverty levels in Vietnam decreased dramatically between 2012 and 2016. To illustrate this, the proportion of the population living below the national poverty line decreased from 17.2 per cent in 2012 to 9.8 per cent in 2016.[K] However, the estimated household out-of-pocket health expenditure in Vietnam increased from 2011 to 2015, rising from 39.1 per cent to 43.5 per cent.[L] Per capita out-of-pocket health expenditure increased from $102 in 2011 to $145 in 2015.[M]

It is not possible to analyse expenditure or access to health insurance, mandatory or voluntary, by age group due to lack of age disaggregation in the relevant international datasets.

Older people remain largely invisible within the monitoring of universal health coverage (UHC). The UHC Index (Table K1) measures coverage of a range of essential services. Currently, these include two of particular concern to older people: access to treatment for diabetes and for hypertension. However, gaps in the data sources used to track UHC mean that we do not have systematic findings on older people's access to these treatments.

Table K1. Selected health and care indicators

Category	Indicator	
UHC Index 2015 (median value)[N]	Coverage of essential services under universal health coverage[O]	73
Financial protection (%)	Incidence of catastrophic health expenditure[P]	9.81
Long-term care and support	Gap in universal coverage of long-term care[Q]	No data

Endnotes

A Up from 95.54 million in 2017. United Nations, Department of Economic and Social Affairs, Population Division, *Profiles of ageing 2017*, https://population.un.org/ProfilesOfAgeing2017/index.html (22 October 2018)

B United Nations, Department of Economic and Social Affairs, Population Division, *Probabilistic population projections based on the world population prospects: the 2017 revision*, http://esa.un.org/unpd/wpp (18 October 2018)

C World Health Organization, *Life expectancy and healthy life expectancy: data by country*, http://apps.who.int/gho/data/view.main.SDG2016LEXv (18 October 2018)

D Institute for Health Metrics and Evaluation, *GBD compare | viz hub*, 2016, https://vizhub.healthdata.org/gbd-compare (18 October 2018)

E Institute for Health Metrics and Evaluation, *GBD compare*

F However, these results need to be interpreted carefully, taking into account the uncertainty intervals around the estimates

G Institute for Health Metrics and Evaluation, *Epi visualization | viz hub*, 2017, https://vizhub.healthdata.org/epi (18 October 2018)

H Institute for Health Metrics and Evaluation, *GBD compare*

I Institute for Health Metrics and Evaluation, *Epi visualization*

J Institute for Health Metrics and Evaluation, *Epi visualization* (original values were converted into percentages)

K World Bank Group, *Poverty headcount ratio at national poverty lines (% of population)*, https://data.worldbank.org/indicator/SI.POV.NAHC?locations=VN (23 September 2018)

L World Health Organization, *Out-of-pocket expenditure (% of current health expenditure)*, https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS?locations=VN (23 September 2018)

M World Bank Group, *Out-of-pocket health expenditure per capita (PPP current international dollars)*, 2015, https://data.worldbank.org/indicator/SH.XPD.OOPC.PP.CD?locations=VN (23 September 2018)

N The UHC Index measures coverage of essential health services, defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, NCDs and service capacity and access, among the general and most disadvantaged populations. It is presented on a scale of 0 to 100. The median national value for service coverage is 65 out of 100 (Hogan DR et al., *Lancet*, 6:2, 2018, pp.E152-E168, doi: 10.1016/S2214-109X(17)30472-2)

O World Health Organization, *Global Health Observatory: universal health coverage*, http://apps.who.int/gho/portal/uhc-cabinet-wrapper-v2.jsp?id=1010501 (23 September 2018)

P Expressed as a percentage of the population with a household expenditure on health greater than 10 per cent of the total household expenditure or income. World Health Organization, *Global Health Observatory: universal health coverage*

Q Expressed as a percentage, based on achieving a median number of 4.2 formal long-term care staff per 100 people aged 65 and older. International Labour Organization, *World social protection report 2017-19: universal social protection to achieve the Sustainable Development Goals*, Geneva, International Labour Organization, 2017, table B.14, p.376

Zimbabwe

Key points

- Non-communicable diseases (NCDs) accounted for 73.6 per cent of years lived with disability in Zimbabwe in 2015.
- NCDs also accounted for 66 and 51 per cent of deaths among women and men aged 50 to 69, respectively, and 74.5 and 64.8 per cent among women and men aged 70 and over, respectively, in 2015.
- The self-harm mortality rate among men aged 70 and over doubled over the period from 1990 to 2016.

Ageing and longevity in Zimbabwe

The population of Zimbabwe is expected to reach 21.5 million by 2030.[A] The older population (aged 60 and over) will continue to increase, while the youngest population (aged 0 to 14) will continue to decrease through to the end of the century (Figure L1).

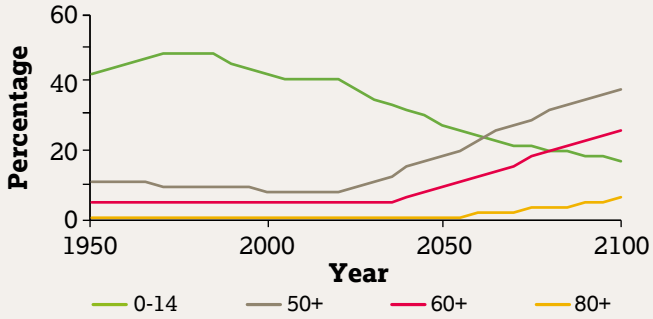
Both men and women are living longer in Zimbabwe. While women are expected to outlive men by 3.4 years, the number of years spent in poor health – the gap between life expectancy and healthy life expectancy – is greater for women (7.1 years) than for men (6.8 years) (Figure L2).

Ageing and shifting patterns of disease and disability

NCDs accounted for 73.6 per cent of the total years lived with disability in Zimbabwe in 2015. NCDs are the predominant driver of years lived with disability across the life course, and across all the age groups from 50 and over (Figure L3). The proportion of disability caused by NCDs for people aged 50 to 69, and 70 and over remained relatively unchanged between 1990 and 2015. Patterns were similar for men and women aged 50 to 69 and 70 and over.

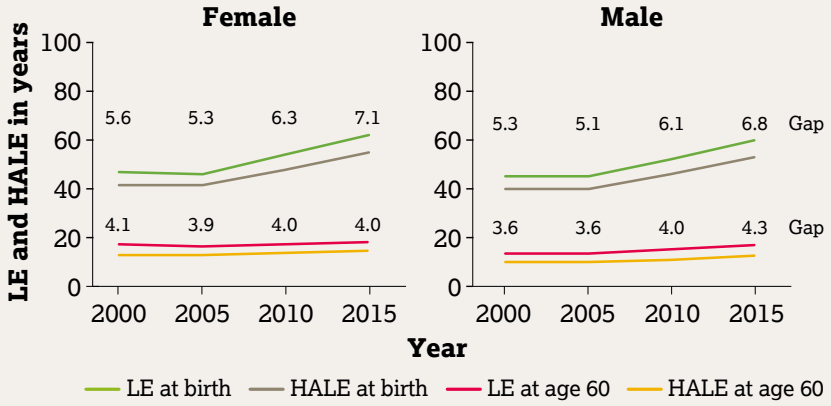
NCD-related deaths accounted for over 34 per cent of all deaths among men and women in 2015, and was as high as 66 and 51 per cent among women and men aged 50 to 69, respectively, and 74.5 and 64.8 per cent among women and men aged 70 and over, respectively (Figure L4). This pattern differs considerably for younger adults (aged 15 to 49), where communicable diseases (CDs) dominate. In older age groups, NCDs overtake CDs but there is still a clear double burden of disease. The proportion of NCD-related deaths is higher among women aged 50 to 69 compared with men of the same age.

Figure L1: Population structure in Zimbabwe



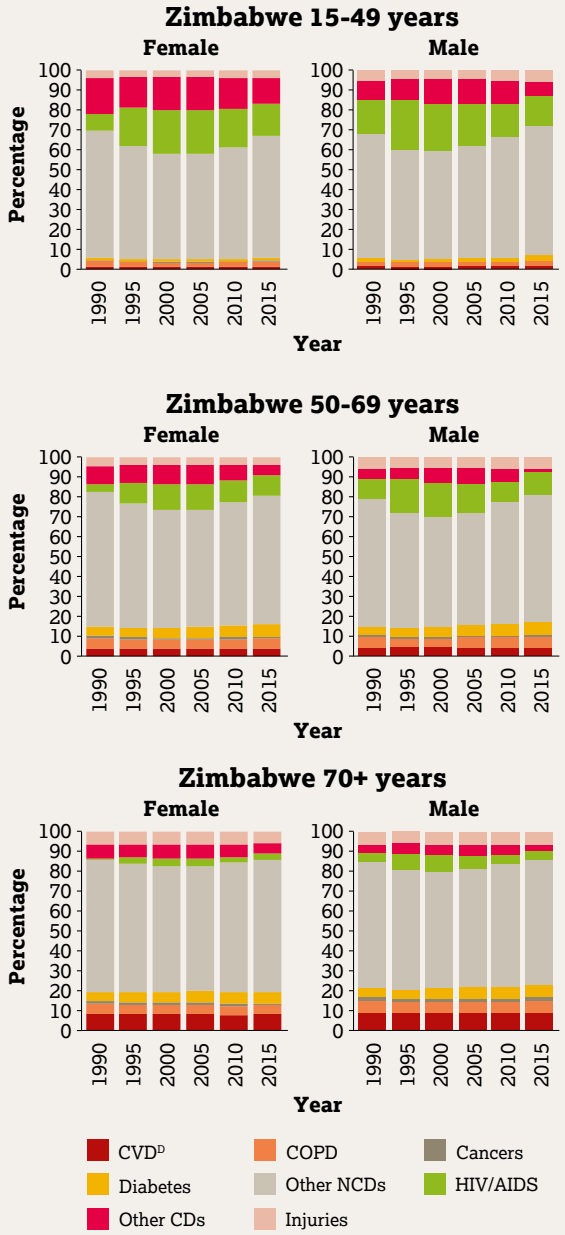
Source: United Nations, Department of Economic and Social Affairs, Population Division[B]

Figure L2: The gap between life expectancy (LE) and healthy life expectancy (HALE) in Zimbabwe



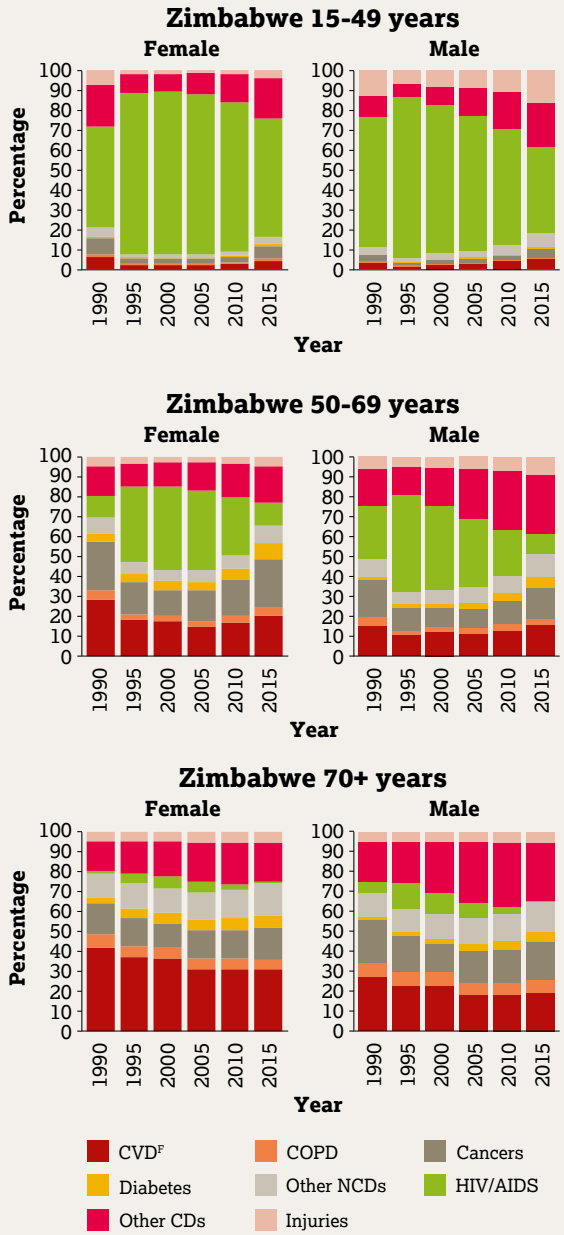
Source: World Health Organization[C]

Figure L3: Years lived with disability in Zimbabwe



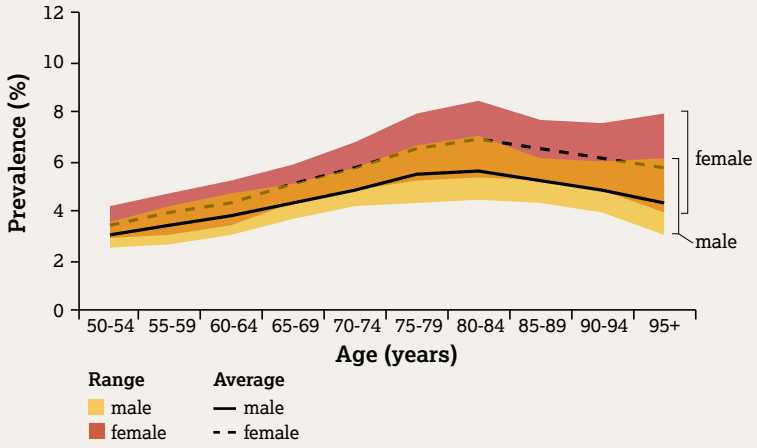
Source: Institute for Health Metrics and Evaluation[E]

Figure L4: Causes of death in Zimbabwe



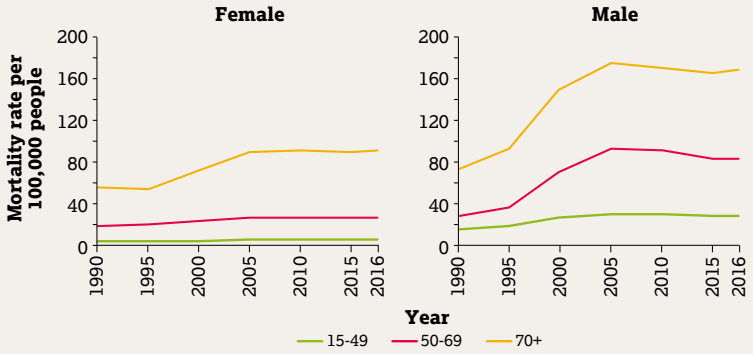
Source: Institute for Health Metrics and Evaluation[G]

Figure L5: Prevalence of major depressive disorders in Zimbabwe, 2016



Source: Institute for Health Metrics and Evaluation[H]

Figure L6: Self-harm mortality rates in Zimbabwe



Source: Institute for Health Metrics and Evaluation[I]

Ageing, mental health and cognitive impairment

The prevalence of major depressive disorders is increasing in men and women between the ages of 50 and 80.[J] Women have higher rates than men across all age groups (Figure L5).

Looking at the burden of deaths resulting from injuries, specifically self-harm, men have higher mortality rates than women across all age groups, especially for the cohort aged 70 and over (Figure L6). Self-harm mortality rates in Zimbabwe doubled among men aged 70 and over between 1990 and 2016.

Rates of dementia in men and women are similar until around the age of 70, at which point the prevalence in both sexes increases rapidly, but with a steeper rise for women (Figure L7).

Prevalence of violence towards older people

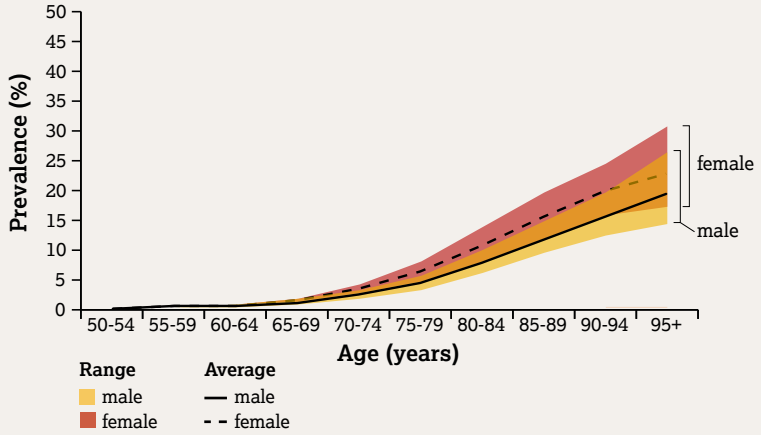
The prevalence of physical, sexual and psychological violence was slightly higher among older Zimbabwean women than their male counterparts, particularly among women aged 80 and over. About 13 per cent of women aged 80 to 84 experienced violence in 2016, compared with 10 per cent of men in the same age group (Figure L8).

Poverty and health financing

Household out-of-pocket health expenditure in Zimbabwe decreased from 39.7 per cent in 2010 to 26 per cent in 2015.[K] Per capita out-of-pocket health expenditure is $47 compared with the sub-Saharan African average of $70.6.[L]

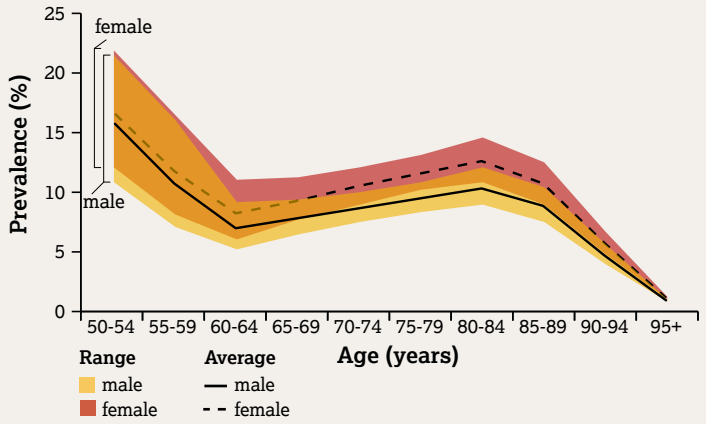
It is not possible to analyse expenditure or access to health insurance, mandatory or voluntary, by age group due to lack of age disaggregation in the relevant international datasets.

Figure L7: Alzheimer's and other dementias in Zimbabwe, 2016



Source: Institute for Health Metrics and Evaluation[M]

Figure L8: Physical, sexual and psychological violence in Zimbabwe, 2016



Source: Institute for Health Metrics and Evaluation[N]

Older people remain largely invisible within the monitoring of universal health coverage (UHC). The UHC Index (Table L1) measures coverage of a range of essential services. Currently, these include two of particular concern to older people: access to treatment for diabetes and for hypertension. However, gaps in the data sources used to track UHC mean that we do not have systematic findings on older people's access to these treatments.

Table L1. Selected health and care indicators

Category	Indicator	
UHC Index 2015 (median value)[O]	Coverage of essential services under universal health coverage[P]	55
Financial protection	Incidence of catastrophic health expenditure[Q]	No data
Long-term care and support	Gap in universal coverage of long-term care[R]	No data

Endnotes

A Up from 16.53 million in 2017. United Nations, Department of Economic and Social Affairs, Population Division, *Profiles of ageing 2017*, https://population.un.org/ProfilesOfAgeing2017/index.html (22 October 2018)

B United Nations, Department of Economic and Social Affairs, Population Division, *Probabilistic population projections based on the world population prospects: the 2017 revision*, http://esa.un.org/unpd/wpp (18 October 2018)

C World Health Organization, *Life expectancy and healthy life expectancy: data by country*, http://apps.who.int/gho/data/view.main.SDG2016LEXv (18 October 2018)

D CVD, cardiovascular disease; COPD, chronic obstructive pulmonary disease

E Institute for Health Metrics and Evaluation, *GBD compare | viz hub*, 2016, https://vizhub.healthdata.org/gbd-compare (18 October 2018)

F CVD, cardiovascular disease; COPD, chronic obstructive pulmonary disease

G Institute for Health Metrics and Evaluation, *GBD compare*

H Institute for Health Metrics and Evaluation, *Epi visualization | viz hub*, 2017, https://vizhub.healthdata.org/epi (18 October 2018)

I Institute for Health Metrics and Evaluation, *GBD compare*

J However, these results need to be interpreted carefully, taking into account the uncertainty intervals around the estimates

K World Health Organization, *Out-of-pocket expenditure (% of current health expenditure)*, https://data.worldbank.org/indicator/SH.XPD.OOPC.CH.ZS?locations=ZW-ZG (23 September 2018)

L World Bank Group, *Out-of-pocket health expenditure per capita (PPP current international dollars)*, 2015, https://data.worldbank.org/indicator/SH.XPD.OOPC.PP.CD?locations=ZW-ZG (23 September 2018)

M Institute for Health Metrics and Evaluation, *Epi visualization*

N Institute for Health Metrics and Evaluation, *Epi visualization* (original values converted into percentages)

O The UHC Index measures coverage of essential health services, defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, NCDs and service capacity and access, among the general and most disadvantaged populations. It is presented on a scale of 0 to 100. The median national value for service coverage is 65 out of 100 (Hogan DR et al., *Lancet*, 6:2, 2018, pp.E152-E168, doi: 10.1016/S2214-109X(17)30472-2)

P World Health Organization, *Global Health Observatory: universal health coverage*, http://apps.who.int/gho/portal/uhc-cabinet-wrapper-v2.jsp?id=1010501 (23 September 2018)

Q Expressed as a percentage of the population with a household expenditure on health greater than 10 per cent of the total household expenditure or income. World Health Organization, *Global Health Observatory: universal health coverage*

R Expressed as a percentage, based on achieving a median number of 4.2 formal long-term care staff per 100 people aged 65 and older. International Labour Organization, *World social protection report 2017-19: universal social protection to achieve the Sustainable Development Goals*, Geneva, International Labour Organization, 2017, table B.14, p.376

Appendix 2: Methodology†

Selection of data

After a period of research to identify available national-level data sources and negotiating access to those data sets, we resorted to relying to a great degree on data estimates from the Institute for Health Metrics and Evaluation's global burden of disease (GBD) study and WHO's Global Health Observatory. The goal was to address how older adults in a selection of countries are included in the 2030 Agenda and universal health coverage (UHC), so the decision did to some extent align national and international issues. A number of the target countries had no available data sets (nationally representative data). Of the countries for which potential data sets were identified, a number did not have complete data documentation. An analysis of country data sets requires complete metadata, including sampling information, and user-friendly data sets to obtain reliable and valid results. Additionally, international data sources are more comparable across countries.

The GBD studies, for example, rely on more than 90,000 data sources. The WHO Global Health Observatory also relies on many different data sources and inputs, in partnership with member states. One of the challenges with these data sources is to understand the raw data used to generate the estimates, the limitations of the raw input data and assumptions required in generating estimates. However, a lot of effort has been invested by researchers from around the world to harmonise the multitude of data sources and inputs that construct these two data sources, hence giving some credibility to the estimates generated based on these data sources.

Results from a few country-specific studies were included – and bring some additional context to the results. These data sets highlighted a specific issue, with future work needed to compare and contrast how national-level data points relate to data estimates generated from sources such as the GBD study or the WHO Global Health Observatory.

Data sources

We extracted data on different data sources, including:

1. the world population prospects maintained by the United Nations, Department of Economic and Social Affairs, Population Division: data on population in different age groups, median age

2. the Institute of Health Metrics and Evaluation: data on disability-adjusted life years (DALYs), years lived with disability (YLDs), causes of death, self-harm mortality rate – the data is from the *Global burden of disease 2016*, accessed during September-October 2018

3. the WHO Global Health Observatory: data on DALYs, YLDs, causes of death, mainly when regional data were presented, estimates for UHC monitoring, life expectancy, healthy life expectancy

4. the International Labour Organization's *World social protection report*: some data on long-term care indicators, and pension coverage.‡

† This note on the methodology used for the report was provided by Dr Paul Kowal, Chiang Mai University and World Health Organization, and Professor Nawi Ng, Umeå University.

‡ International Labour Organization, *World social protection report data 2017-2019: universal social protection to achieve the sustainable development goals*, International Labour Organization, 2017, https://www.social-protection.org/gimi/Wspr.action (8 November 2018)

Some of the graphs were obtained from the Institute of Health Metrics and Evaluation's viz hub, including those on prevalence of major depressive disorders, Alzheimer's and other dementias, and physical, psychological and sexual violence.

How graphs were prepared

For the charts on YLDs and causes of mortality, data sets by country were downloaded from the respective agency's websites (http://ghdx.healthdata.org, www.who.int/gho and www.social-protection.org/gimi/Wspr.action). The data was reshaped into either long- or wide-format to fit the type of graphs generated. New variables – relative frequencies (percentages), aggregated data from multiple age groups, and so on – were created. All variables were labelled properly to provide clarity in the output graphs.

Some results for the report were generated by the report team from data downloaded from Institute for Health Metrics and Evaluation. Most of the graphs were generated using the graphical tools in Stata, and some of the graphs were created in Microsoft Excel. For the report, these graphs were traced for redrawing by designers. Some of the graphs include average values as well as upper and lower uncertainty intervals.[§]

Description of the analysis

Most of the graphs were descriptive, presented in line, simple bar or stacked-bar diagrams. In most of the graphs, the y-axis represents the percentages, and in some of the graphs, the absolute value or rate per 100,000 people of the respective indicator is presented in the graph. When disease burdens or causes of death were presented, they were largely grouped into NCDs (including the four major ones of cardiovascular disease, chronic obstructive pulmonary disease, cancers and diabetes), communicable diseases (including HIV/AIDS) and injuries.

Graphs in the main report are made comparable across the 12 profile countries using common x- and y-scale units. Countries in the graph were grouped and ordered based on their geographical regions – Asia, Africa, Latin America, and Europe and the Middle East. Some graphs contrast the estimate in four different country groups (low income, low-to-middle income, upper-middle income and high income).

Graphs in the individual country profiles (Appendix 1) often compare population subgroups, such as men versus women, and populations in different age groups (0-14, 15-49, 50-69, and 70 and over, or in some graphs, 50 and over, 60 and over, and 70 and over). Graphs from different countries were made on common x- and y-axis scales to facilitate easier visual comparison across country profiles.

National data mapping

The data archives/repositories accessed to identify potential data sources can be found at www.helpage.org/global-agewatch/about/notes.

§ Uncertainty interval: "A range of values that reflects the certainty of an estimate. Larger uncertainty intervals can result from limited data availability, small studies and conflicting data, while smaller uncertainty intervals can result from extensive data availability, large studies and data that are consistent across sources" – Institute for Health Metrics and Evaluation, *Terms defined*, www.healthdata.org/terms-defined (8 November 2018).

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