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Gender Gaps in Health and Well-Being of Older Adults

A review of the burden of non-communicable diseases and barriers to healthcare for women and men

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INTRODUCTION

Women and men experience aging differently. Evidence from across the globe suggests that aging is not "gender-neutral", but rather "gender-imbalanced". Along with physical and physiological differences, social and gender norms contribute to different experiences for women and men that manifest across the life cycle (Box 8.1). These differences, such as in education, age at marriage, employment opportunities, as well as caregiving and living arrangements contribute to gender-based differences in socio-economic status as well as health outcomes in people as they age (Carmel 2019; Hosseinpoor et al. 2012; Weber et al. 2019).

While aging brings on the onset of non-communicable diseases (NCDs) for both women and men, their health outcomes vary due in part to gender-based differences. Several studies highlight higher male mortality at earlier ages due to heart disease or diabetes in high- and middle-income countries, for example. On the other hand, women in these countries also have similar levels of NCDs but tend to live longer with a lower quality of life.[1] Women's longer life expectancy compared to men means a greater concentration of women in older age groups and more years lived with disability. Women also go through menopause as they age, which takes a physical and mental toll, and is linked to an increased risk of contracting non-communicable diseases (Hess et al. 2012). At the same time, older women, especially in lower income countries, are less likely than men to receive proper healthcare due to their greater financial vulnerability – a direct consequence of gender gaps over the life cycle that affect women's patterns of labor force participation, income generation opportunities, and decision-making capacities (Quick, Jay, and Langer 2014; Cotlear 2011).

A multitude of factors contribute to differences in health outcomes of women, men, and other gender identities, and therefore healthcare needs. As highlighted above, epigenetic, and social determinants of health interact with gender (also considered a determinant of health) to influence knowledge, attitudes, and perceptions about health and health seeking behaviors, the ability to access and use health services, the capacity to pay for healthcare, and consequently health outcomes. Gender's interaction with race, ethnicity, or sexual orientation can further exacerbate barriers to health (Cené et al. 2016; Liu et al. 2019; O'Hanlan et al. 2004). Understanding and responding to these issues in policy and programs is essential for reducing gender gaps in availability of equitable, affordable, quality healthcare services.

Health systems play an important role in preventing and addressing age related disability and disease. However, health interventions for aging populations such as prevention and management of NCDs do not necessarily adopt a gender- responsive or transformative approach. There is a neutrality that assumes that women and men have similar needs for healthcare and have similar access and capacity to afford health services and, especially as they age. Yet, evidence on women's health and aging acknowledges the specific challenges older women such as increased risk of NCDs during menopause transition or social and financial constraints to access of health services (Anagnostis and Stevenson 2023; Carmel 2019; WHO 2015); and with the growing proportion of aging populations, the prevalence and severity of these issues is expected to increase (UN Women 2012). Health systems need to be at the very least responsive to the specific issues related to aging and longer life expectancies of women and men on the one hand, and their social and economic vulnerabilities on the other such as ability to pay and limited mobility.

With the progression of aging, older adults also require long-term care (LTC). While healthcare encompasses organized delivery of medical care, LTC is defined as the "day-to-day help with activities such as washing and dressing or help with household activities such as cleaning and cooking" that is likely accompanied with some type of medical care.[2] As with healthcare, long-term care policies and programs require a gender lens. Gender-based barriers to care that influence women's and men's health are also reflected in the access and use of LTC arrangements. For example, as women tend to live longer than men, they may need LTC services for a longer period of time. However, their capacity to pay for services may

1 On average life expectancy at birth for women is about 5 years higher than that for men, and in MICS the difference is generally about 8 to 10 years.

2 https://www.oecd.org/els/health-systems/long-term-care.htm

BOX 8.1 Gender gaps and the life course

As a social determinant of health, gender influences an individual's way of living, well-being and health, and patterns of seeking and receiving healthcare (e.g., Heise et al. 2019; Weber et al. 2019). Both the biological sex* and social constructs of gender influence health outcomes across the life cycle. This is seen in different demographic and health indicators observed in many countries, such as the distorted sex ratios at birth; in gender-based nutrition differentials; in the difference in health seeking behaviors for children based on their gender; in the quality of care; in the high proportion of maternal deaths despite being preventable and the excess high adult mortality among both women and men across different countries.

Gender roles are established from an early age and perpetuated across the life course. From the day they are born, children receive signals on what is expected of them and how they should behave based on their gender. These gender norms are passed on by parents and family, teachers and peers, as well as signaling from others in the community (Munoz-Boudet et al. 2013). Gender norms translate into power hierarchies and vulnerabilities, acting as powerful motivators to encourage or prohibit specific individual attitudes and behaviors by sanctioning deviation from these shared expectations.

Gender and health are fundamentally connected. Pre-determined gender roles and expectations about behavior create inequities in health and access to health services before birth and continue through the entire life course of a person. Women's limited empowerment, for example, in some countries makes it harder for them to access reproductive, maternal and child health services for themselves and their children freely. Similarly, men may deliberately ignore illness or avoid seeking medical help, to avoid being perceived as weak by their peers. These patterns influence the health outcomes of women and men and persist over their life course.

A life course approach to healthcare supports healthy longevity and can help reduce gender gaps. *Healthy longevity refers to the human life span lived to the best possible quality of health that helps to build and preserve human capital, especially as people age* (O'Keefe and Haldane 2024). Healthy longevity happens across the life course. While the seeds for healthy longevity are planted even before a person is born, as people age, healthy longevity means avoiding death and serious disability in middle age, enabling a high level of mental and social functioning through middle and older ages, and a socially connected and reasonably pain-free, short period of time before death.

Understanding and addressing gender gaps across the human life course such as reducing early marriages, facilitating use of reproductive and maternal health services, reducing delays in seeking healthcare for female children when sick, or ensuring access to affordable health services and mental health care, especially for vulnerable populations can help to promote healthy longevity for not only for women, but also their children, as well as men, and other gender identities.

* *The differences in the biological determinants of health and illness include differential genetic vulnerability to illness, reproductive and hormonal factors, and differences in physiological characteristics that can contribute to gender gaps in health over the life-cycle.*

be more limited than that of men. Moreover, it is often women who provide LTC, whether through formal or informal arrangements. Thus, LTC provision can be a source of female employment (when formal arrangements are in place) or it can pull women from the labor markets (when informal arrangements are employed). These dynamics make it all the more important to approach LTC through a gender lens.

Objectives

This study is part of a series of papers on healthy longevity. It examines the sex disaggregated prevalence and mortality related to four key NCDs for older adults and discusses the key barriers to healthcare for older women. The paper aims to: (i) present a descriptive analysis of gender-based gaps in key NCD outcomes for populations aged 45 years and older; (ii) examine the barriers to access and use of healthcare, especially for women aged 45 years and above; and (iii) review the challenges associated with availability of health and long-term care.

The chapter discusses challenges related to healthy longevity and healthcare from a gendered perspective, especially for older women, and complements the discussion on LTC in other studies in the series. It draws heavily from the evidence base on high income and aging societies for LTC but it's focus is broader and covers, to the extent possible, gender gaps in health outcomes and health care for lower- and middle-income countries.

A life course approach to policy making is important for healthy longevity. So is consideration of gender, especially from the point of view of distribu-

BOX 8.2 The Healthy Longevity Framework and Gender

The Healthy Longevity Initiative (HLI) examines the links between human capital formation ((knowledge, skills, and other individual aspects that contribute to productivity) and its maintenance during adulthood and as people age. Gender is an important aspect of human capital formation, affecting health, education and employment opportunities and outcomes. The influence of gender is clear within the context of the HLI framework (O'Keefe and Haldane 2024):

- Decisions or choices made for girls and boys earlier in life, and across the life course influence health outcomes in older ages. Early marriage and childbirth, for example, affects women's health and life opportunities for the rest of their lives, and childhood health and nutrition influence adult health outcomes.
- As populations age, human capital accumulation increases at a decreasing rate and it starts to deplete among the very elderly, especially because of a decline in their health. Women and men can experience differences in depreciation of human capital due to a combination of health and social factors.

tional impacts. Cross-sector interventions, including those that target child and adolescent health, improve access to life-saving medicines and technologies, and promote healthy behaviors contribute to better health across the life cycle, including older age cohorts. Interventions that reduce gender gaps in healthy longevity benefits both men and women. Affording women and girls access to reproductive and maternal health, for example, supports better reproductive health (e.g., in managing menstruation, prevention of STIs) and pregnancy outcomes for mother and child, and reduces the burden of reproductive disability (e.g., uterine prolapse or fistula, or endometriosis) with long term benefits, especially as women age. Similarly, such an approach can contribute to reducing the burden of early mortality due to NCDs, especially among men.

Methodology

The study is based on a literature review of demand and supply issues combined with secondary data analysis to build a profile of health outcomes and barriers in access to care. The literature review is based on peer reviewed journal articles, white papers, and published reports on the topic for the time period 2006-2023, with the inclusion of some earlier documents dating back to 1990 when these were relevant to the topic at hand. The data analysis uses the Global Burden of Disease (IHME) database and World Development Indicators.

Literature was identified using string combinations of key words (Table 8.1). Databases searched included pub med, google scholar, google, and the World Bank's "imagebank" and "open repository" databases. In addition, a search request was also submitted to the World Bank Library search services on "menopause". Menopause (and reproductive health), while not covered in this study, were used as identifier terms for papers on health issues among middle-aged women who are not of reproductive age. The string "women, aging, and health" provided over 10,000 results because of the width of topics covered under it (epidemiology, supply, and demand). The search was refined with additional terms (as listed above. On the demand side, this still yielded over 500 articles. Article titles and abstracts were then reviewed, and 91 were selected as relevant to the topic at hand with about half used in the final write up. On the supply side, an initial 245 papers were identified and reviewed, with roughly 65 included in the final analysis. Seminal reports and other supporting evidence, when identified were also included in the review.

TABLE 8.1 Key search teams for the review (not an exhaustive list)

Aging	Health/healthcare	Access	Gender
Elderly	Reproductive health	Affordability	Caregivers
Women	Demand for healthcare	Quality	Gender differences
Men	Utilization of healthcare	Mobility	Female
Supply side care	Menopause	Long-term care/LTC	Informal care giving

For the quantitative review, the study focuses on women and men aged 45 years and above. We use the *Global Burden of Disease* for health data and the *World Development Indicators* database for data on income for the year 2019. We examine the proportion of deaths attributable to a disease, disease prevalence, and years of life lived with disability (YLD) due to disease in three age groups: 45-59 years, 60-79 years, and 80 years and above.[3,4] As most women experience menopause during age 45-59 years, we also include this age group. The data analysis examines gender gaps in four major NCDs affecting older age groups: cardio-vascular disease, diabetes, cancers, and mental health. For mental health outcomes, we consider prevalence and YLD due to depressive disorders as well as self-harm since they are both connected to mental health and have considerably different outcomes for women and men.

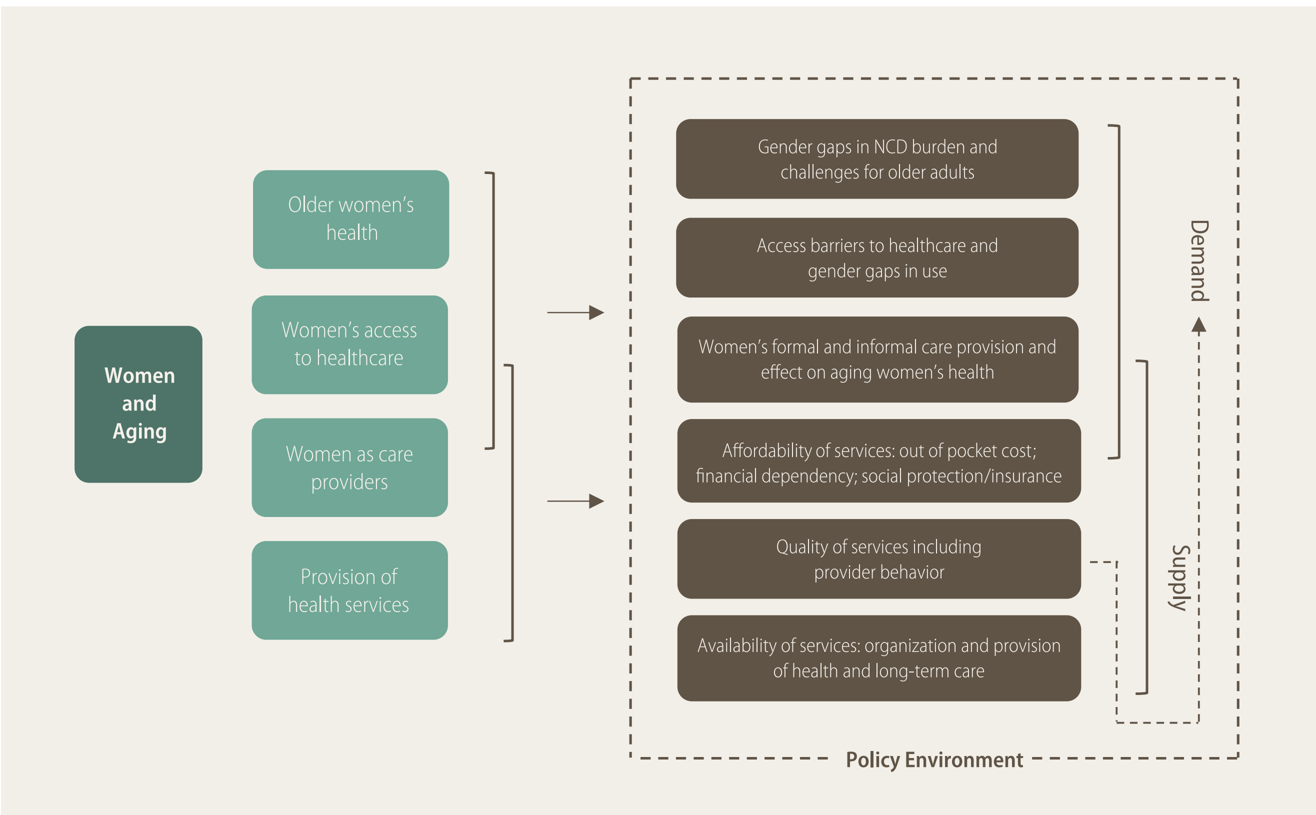
Structure of the review

The structure for this review follows the interactions individuals, and in particular, women may have with the healthcare system (Figure 8.1). The review focuses on four main areas that overlap health sector demand and supply issues:

a. Women's health needs as they age focusing on gender differences in mortality and prevalence of non-communicable diseases (NCDs) in women and men aged 45 years and above.

b. Women's access to and utilization of healthcare, including informal and long-term care. This also covers issues related to affordability such as the effects of out-of-pocket expenditures or insurance on demand for services.

FIGURE 8.1 Structure and Linkages for Women and Aging in Health Review



3 The authors acknowledge the limitations of the GBD dataset. However, for the purpose of this study, the protocols employed for data collection and analysis are sufficient and the dataset offers more complete information than other sources alone.

4 YLD is a widely used measure to convey the impact of disease on the quality of life prior to being resolved or death from the disease. While the methods used to calculate YLD have some limitations, it is a useful way of conveying the negative impact or the non-monetary cost of living with a disease. In most cases in this study, the YLD follows a similar pattern to the prevalence data and are shown only to strengthen the message that higher prevalence is linked to greater burden of disease.

c. Provision of health and long-term care services for aging women including availability and quality of services covering both formal and informal care; and

d. Women as providers of care. This focuses especially on the role women play as informal care givers in the context of long-term care.

Demand for health, and long-term care services, is associated with individuals' health status, their need for services, their ability to afford it, and the ease with which they can access and use these. An individual's health status is linked to many factors including their health and nutrition across the lifecycle, and their socio-economic status (which in turn also influences accessibility and affordability). Access to services depends on factors such as availability of services (supply), ease of physical access/transport, individuals' mobility, and their awareness of said services. Whether available services are used depends on socio-economic factors such as wealth and education, cultural norms, as well as quality of services. At the same time, availability of services and quality of services are interlinked and can affect demand for these services. The framework looks these issues from a gendered perspective, focusing on aging women and men. It helps to identify where the gaps are in terms of demand and supply of services, why these exist, and consequently how to address them (London 2008; WHO 2009).

GENDER DIFFERENTIATED HEALTH OUTCOMES OF AGING POPULATIONS

Men and women experience aging differently due to biological and socio-economic reasons. Women for example, have a longer life expectancy at birth compared to men which can increase their chances of living with illness or disability over longer periods. For instance, there are a greater number of blind women than men, and women bear a higher burden of Alzheimer's disease compared to men because of their longer life spans (Dubal 2020; WHO 2007). Moreover, women's reproductive cycle has a significant impact on their health and well-being (e.g., physiological changes due to childbirth or menopause) compared to men's. Socio-economic inequalities and gender norms that prevent women from generating income or accumulating savings, especially in lower income countries can adversely influence women's health further through restricting their access and use of health services, especially in LMICs (e.g., Dhar 2001; Prus and Gee 2003 ; Szanton et al. 2008; Zhan 2005). In addition, women's limited mobility and dependence on other family members, particularly males, restricts their access to timely care. On the other hand, gender norms can also create barriers for men to access timely healthcare, which can contribute to worsening health or early and avoidable mortality (Etienne 2018; McGraw, White, and Russell-Bennett 2021; Novak et al. 2019).

Examining data on major NCDS for women and men aged 45 and above shows across countries shows some common threads for women and men. These are discussed below:

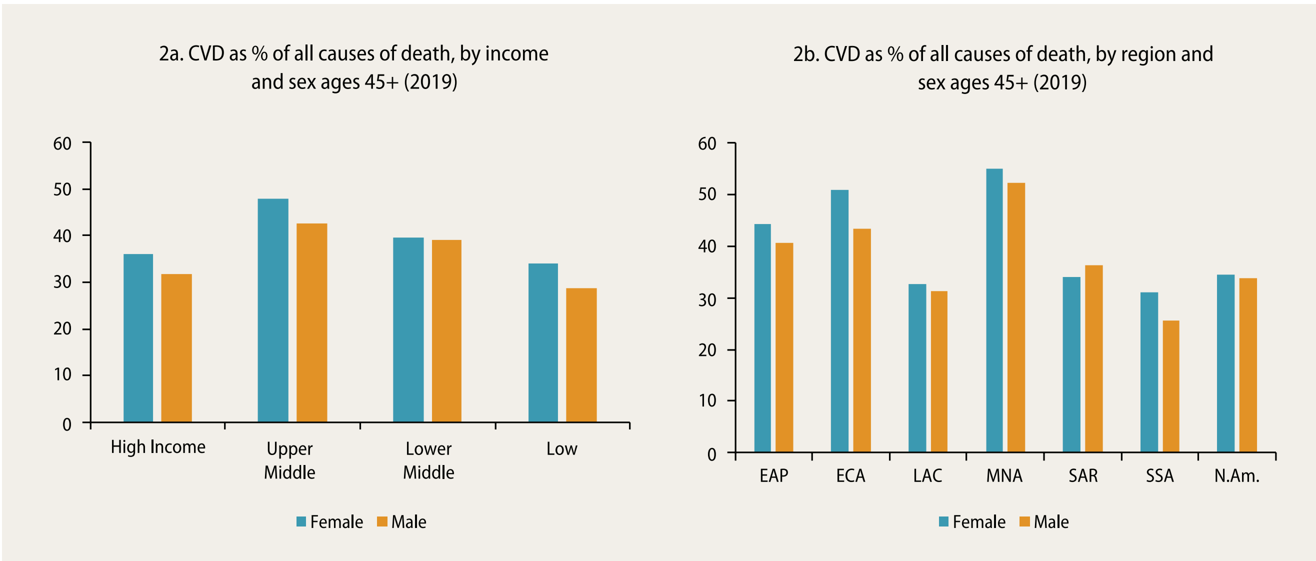
Cardiovascular diseases

Cardiovascular diseases (CVD) are the leading cause of mortality, responsible for roughly 18 million deaths each year (WHO 2021). This is especially the case for older adults, both women and men: in 2019, CVD accounted for 41.6 percent and 38.2 percent of all deaths globally among women and men aged 45 years and above respectively (IHME 2020). The largest burden of CVD deaths is in upper-middle income countries, particularly in the Middle East followed by Europe in Central Asia (Figure 8.2: 2a and 2b), with proportionally larger number of deaths due to CVD among women (when compared to all deaths among women) than men, with the exception of South Asia, which is likely driven by the larger proportion of CVD mortality among males in India, especially for those under age 60 years.[5]

When directly comparing CVD deaths for women and men, the picture is more mixed. Figure 3a and 3b show the ratio of female to male deaths due to CVD by income groups and at the regional level. As Figure 3a shows, in high- and low- income groups the ratio of female to male burden of mortality due to CVD is higher, but for middle income groups, a greater proportion of men than women are reported to have died due to CVD. When disaggregated by regions (Figure 3b), the ratio of female to male deaths due to CVD is especially high for Eastern and Central Europe and sub-Saharan Africa for those aged 45 years and older, while it is at parity in North America. In other regions, at the aggregate level, the ratio indicates a higher burden on men (IHME 2020).

5 IHME 2020. Global Burden of Disease database (accessed 11-16-23)

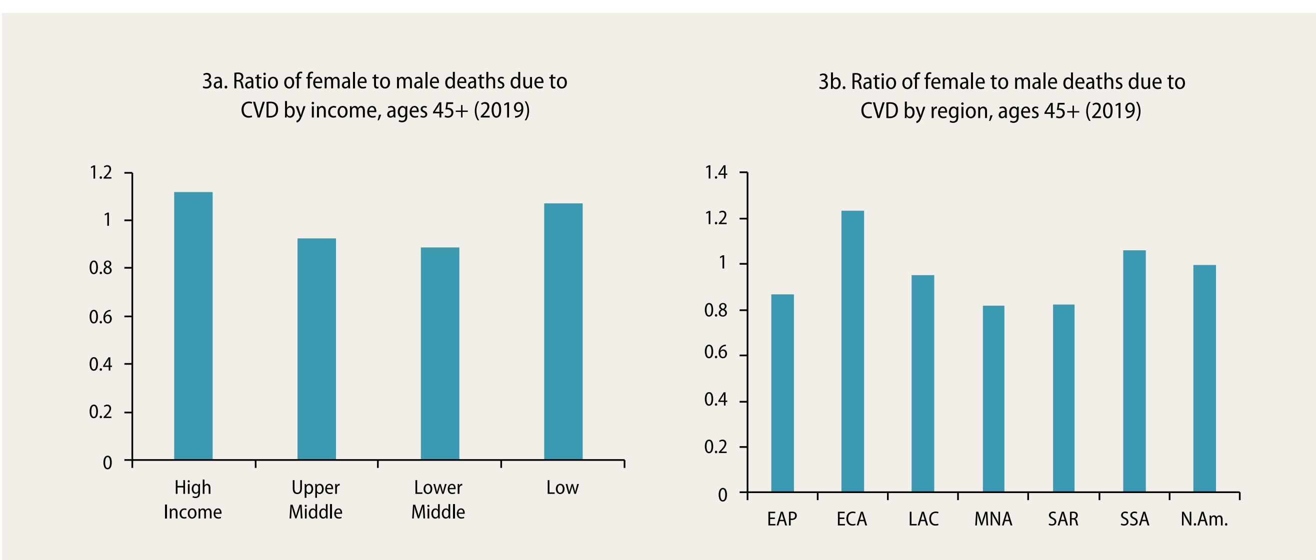
FIGURE 8.2 Cardiovascular Mortality among older adults by regional and income aggregates



Source: IHME Global Burden of Disease 2020

Globally, over 500 million people are estimated to live with cardio-vascular diseases. This represents a nearly a fifth of the total burden of all disease prevalence among older adults (ages 45 years and above), with about 11 women for every 10 men living with CVD. The largest burden is in higher income countries and the North America region followed by Eastern Europe and Central Asia and the Middle East and North Africa regions. In the Middle East and North Africa and South Asia regions, prevalence is higher for men than women, with roughly 8 women for every 10 men living with CVD (ages 45 years and above). On the other hand, in the East Asia and Pacific, there are about 13 women for every 10 men, and in Eastern Europe and Central Asia about 12 women for every 10 men live with CVD (IHME 2020).

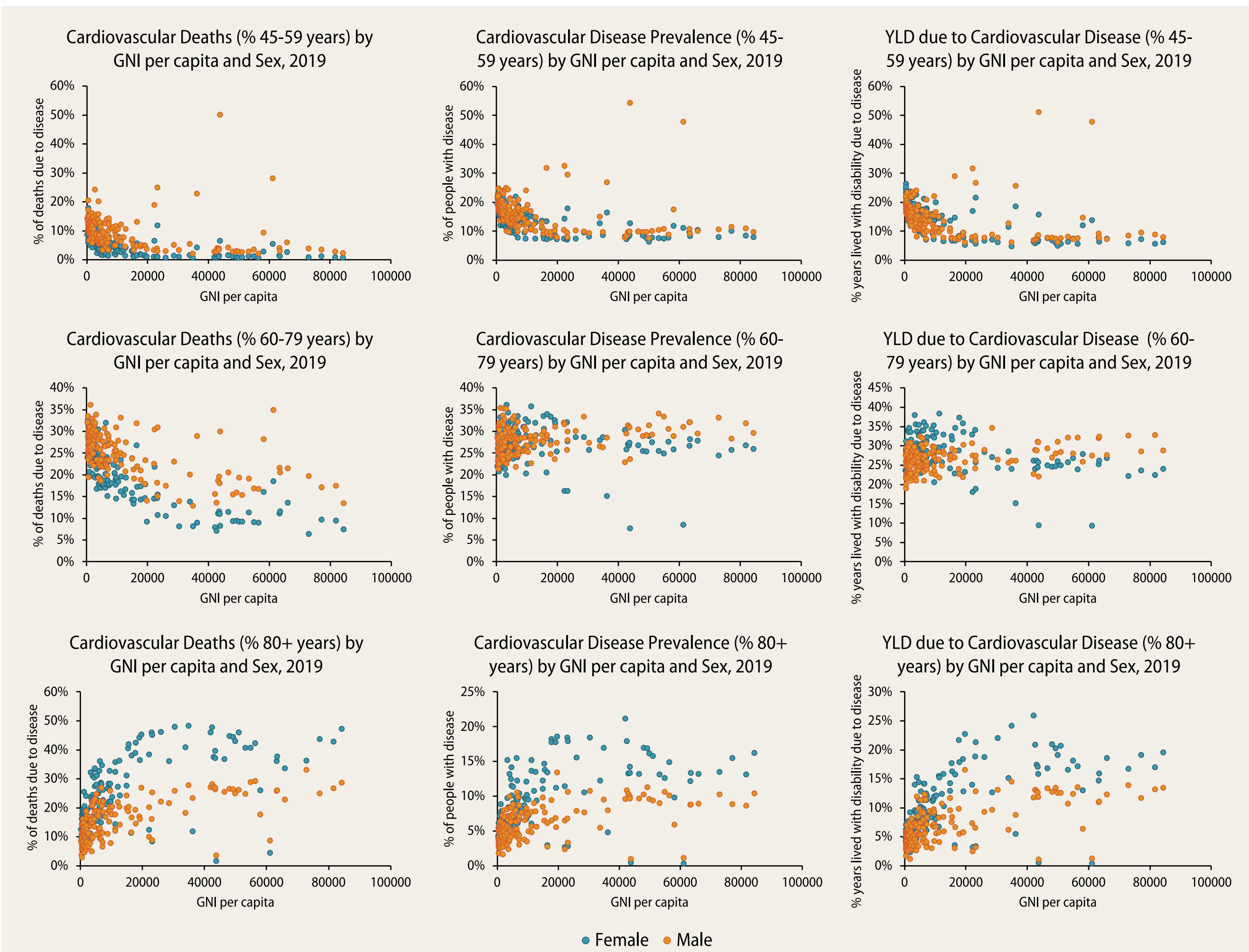
FIGURE 8.3 Ratio of female to male CVD mortality by regional and income aggregates



Source: IHME Global Burden of Disease 2020

When data is disaggregated further by age groups, the story gets more interesting. Figure 8.4 presents the breakdown by three indicators on mortality, prevalence, and years lived with disability (YLD) for CVD by sex (with blue for female and orange for male) and age groups at the country level[6]. The data indicate three things: (1) patterns of CVD prevalence, mortality, and YLD for women and men are fairly similar; (2) for the younger ages 45-59 years, gender gaps are minimal, but there are a handful of countries, particularly in the MENA region where the differences between women and men in terms of CVD mortality are stark, and significantly impact male mortality – the outliers in figure 8.4; and (3) as people age, the burden of CVD prevalence and deaths is greater among women, particularly for the oldest age group.

FIGURE 8.4 Cardio-Vascular Disease by Sex for Older Populations (ages 45 years and above)



Source: IHME Global Burden of Disease 2020; World Development Indicators (WDI) Database

6 Disaggregation by country allows to see the variations within regions which in some cases are driven by a handful of countries.

The figures on YLD indicate a similar pattern as prevalence. However, the gender gap in YLD begins to enlarge during ages 60 - 79 years, with women, especially in lower- and middle- income countries exhibiting higher YLD.

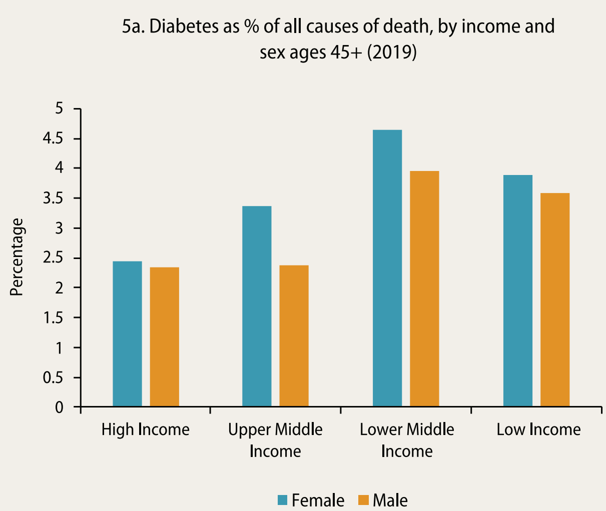
Studies on CVD and gender align with this evidence and indicate the increasing burden of disease on women. For example, Thielke and Diehr (2012) used data on adults aged 65 years and above from the US Cardiovascular Study (n=5888) to understand the probability of transitioning from one state of health to the next or dying. They found that when men were sick, they died more often than women in a similar state, but that they also remained healthier than women while alive and were more likely to recover from being sick. While earlier studies found that heart disease was more prevalent among women at older ages than men (Maas and Appelman 2010), the recent Lancet Women and Cardiovascular Disease Commission indicates that it is also increasing among younger women (Vogel et al. 2021).

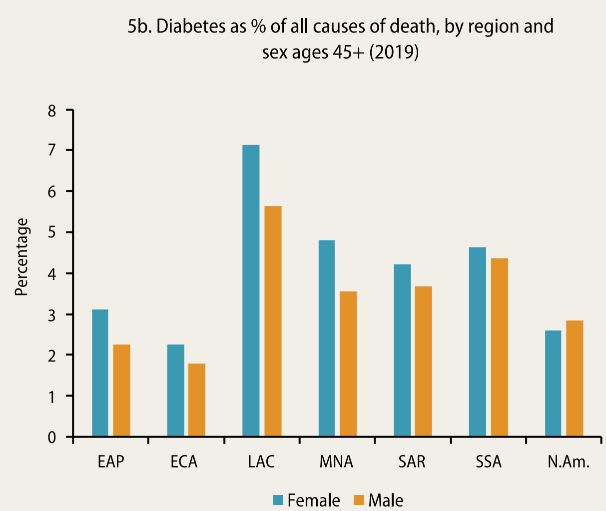
Moreover, women are less likely to receive appropriate diagnosis or care because of misconceptions and poorer understanding of the incidence of disease among women, women's symptoms of heart disease, and other socio-economic and gender-based barriers to care (Papadopoulou and Kaski 2013; Peters and Woodward 2022; Vogel et al. 2021). Fabreau et al (2015) for example, examined the relationship between sex, neighborhood, and other socio-economic factors on acute coronary syndromes among elderly Canadians in Alberta. They found that these factors significantly affected women's access to timely care (measured as receiving cardiac catheterization) but not so for men. They conclude that special attention needs to be paid towards improving the quality of care for women, especially those in lower income groups. The Lancet Women and Cardiovascular Disease Commission also underscored these issues and recommended a 10-point agenda that promotes better data collection and research, inclusion of women in clinical trials, training of healthcare personnel, and heart health services and programs aimed at women in different settings, in poor socio-economic settings (Vogel et al. 2021).

Diabetes mellitus

Gender based gaps are also clearly visible in diabetes outcomes. Diabetes is among the top ten NCDs globally, accounting for roughly 1.55 million deaths of which 95 percent were among persons aged 45 years and above in 2019 (IHME 2020). Aggregate level data show that slightly more women than men die due to diabetes among the 45 and older age groups (3.6 percent vs. 2.9 percent). When comparing the burden of diabetes proportional to other causes of deaths by sex, the burden is higher among women than men. This is evident among different country income groups and across all regions except for North America (Figure 8.5 – 5a and 5b). The largest burden of deaths from diabetes is in lower mid-

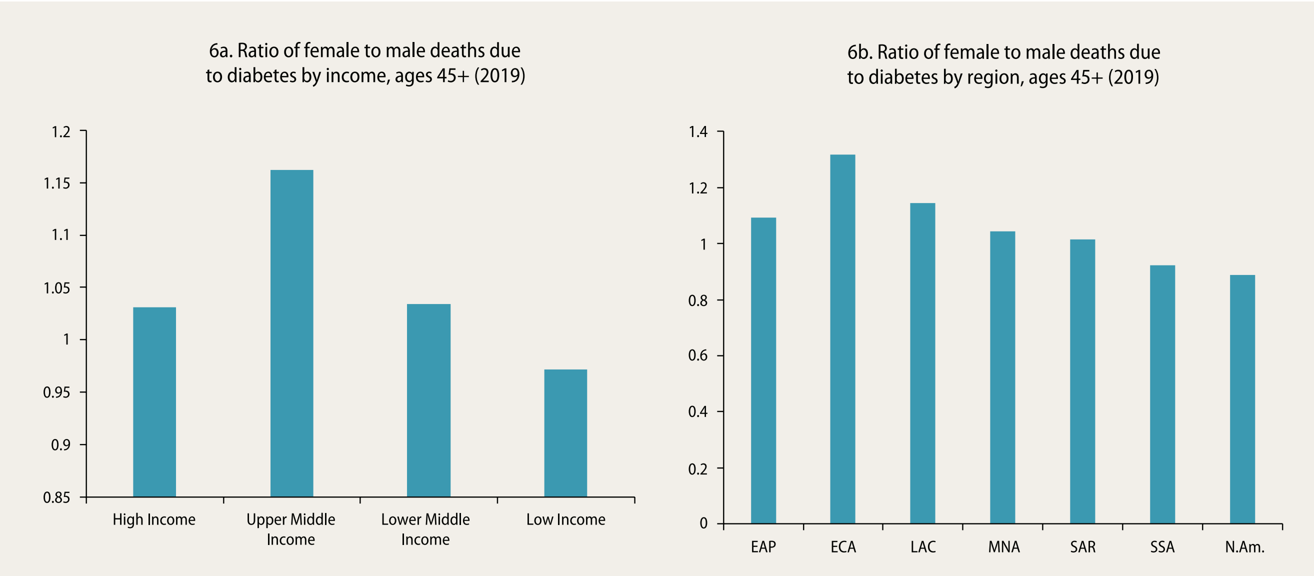
FIGURE 8.5 Deaths due to Diabetes, Ages 45+ (by Income Groups and Regional Aggregates)





Source: IHME Global Burden of Disease 2020

FIGURE 8.6 **Ratio of female to male mortality due to diabetes by regional and income aggregates**



Source: IHME Global Burden of Disease 2020

dle-income countries (4.7 percent for women and 3.9 percent for men), while the largest gender gap is in upper-middle income countries (3.4 percent for women and 2.4 percent for men). At the regional level, the largest gender gap is in the Latin America and Caribbean region (7.1 percent for women; 5.7 percent for men) followed by the Middle East and North Africa (4.8 percent for women; 3.6 percent for men).

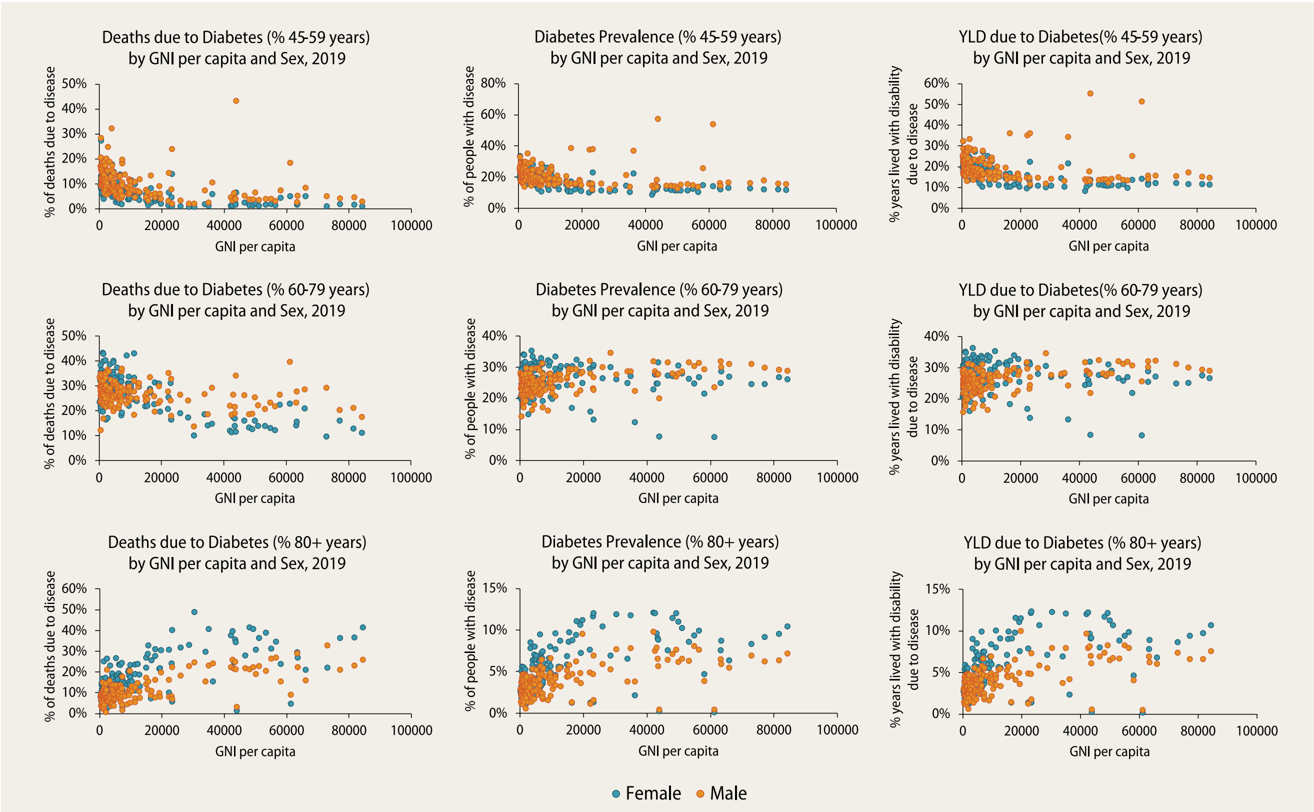
A similar pattern emerges when directly comparing male and female deaths due to diabetes at the aggregate level. Figure 8.6 presents this comparison. Proportionally, nearly 12 women for every 10 men above the age of 45 die due to diabetes in upper-middle income countries (Figure 6a). In other income groups the gaps are not as large and in low-income countries are reversed. At the regional level (Figure 6b), the largest gaps are in the Eastern Europe and Central Asia region with about 13 women for every 10 men over the age of 45 dying due to diabetes. In Sub-Saharan Africa and North America, the gap is reversed with about 11 men for every 10 women dying from diabetes.

Nearly 460 million people live with diabetes globally of which 80 percent are aged 45 years or above. Diabetes accounts for about 16 percent of all the disease prevalence among older adults, with about 97 women for every 100 men living with diabetes. This is mainly driven by a higher prevalence of diabetes among men in North America, South Asia and Middle East and North Africa regions (roughly about 9 women for every 10 men living with diabetes). When aggregated by income groups, a similar gap exists for high income and lower-middle income countries.

However, when further disaggregated by age, the data show growing gender gaps across countries – a patten similar to that for CVD outcomes. Figure 8.7 presents the data on deaths, prevalence, and years lived with disability due to diabetes at the country level for three age groups: 45-59, 60-79, and 80+ years. For each outcome, countries follow a similar trend. For ages 45- 59 years, the burden of disease is mostly similar for women and men, with a few outliers. However, for those between ages 60 and 79 years, a shift begins to happen with gender gaps growing between women and men. While in the oldest age group of 80 years and above there is a clear shift towards a greater burden of disease for women.

These gaps represent the growing vulnerability of women as they age and compound their poorer health outcomes. For instance, older women with diabetes have been found to have higher risk of CVD mortality compared to men (Clemens et al., 2020; Juutilainen et al., 2004; Pan et al., 2011) or lose any biological advantage they may have compared to men in developing a risk of CVD (Wannamethee et al. 2012). Recent evidence on COVID-19 outcomes also suggests that older women's biological advantage for survival compared to men disappeared if they had multimorbidity such as diabetes or heart disease (Kautzky-Willer, 2021). Moreover, in addition to risk

FIGURE 8.7 Gender Gaps in Diabetes for Older Populations (ages 45 years and above)



Source: IHME Global Burden of Disease 2020; World Development Indicators (WDI) Database

factors such as obesity and genetics that can lead to diabetes in both women and men, women face an additional risk from gestational diabetes which can predispose them to developing diabetes after birth or later in life. Women with diabetes are more likely to experience poor physical function due to lower bone strength (Nillson et al 2016). One recent qualitative examination of health-related quality of life for persons with diabetes in Spain, for example, also found that women had a lower quality of life than men, and older women (over 75 years of age) had the worst quality of life (Gálvez Galán et al., 2021).

Socio-economic conditions and gender norms also contribute to these gender gaps that also affect men. For example, in their study in India, Perkins et al (2016) found that while women's health was poorer than men's in general, widowed men had a higher likelihood of developing diabetes within the first 4 years of their wife's death. Social and gender norms are likely to influence behaviors. For instance, older men are more likely to have poor mental health especially after retirement. Gender norms prevalent in most of the world place the task of income generation to men, but when this is no longer the case, they may feel lonely, isolated, or a burden. This - coupled with loss of a partner and poorer social networks (compared to women) this can contribute to poor mental and physical health. In their study of diabetes patients in Germany, Kramer et al (2012), found significant differences in the utilization of healthcare between elderly women and men, with men having fewer visits and prescriptions which the authors ascribe to socio-economic characteristics, and perhaps an over-utilization of health services by women. It may also be an under-utilization of services by men as highlighted in other literature on male behavior, attitudes about masculinity, and use of health services.

In addition, challenges such as financial or mobility barriers can prevent access to timely care. An examination of expenditure data between 2002 and 2011 for diabetes treatment in the United States showed that women paid significantly and consistently more in out-of-pocket payments for prescriptions and office as well as home-based care when compared to men (Williams et al. 2017). While majority of the population is covered by health insurance in the United States, in a lower-middle-income country such as Bangladesh, this can be cost prohibitive where payments are out of pocket and the annual cost of diabetes care is roughly around US$ 865/- (Afroz et al. 2019).

Cancers

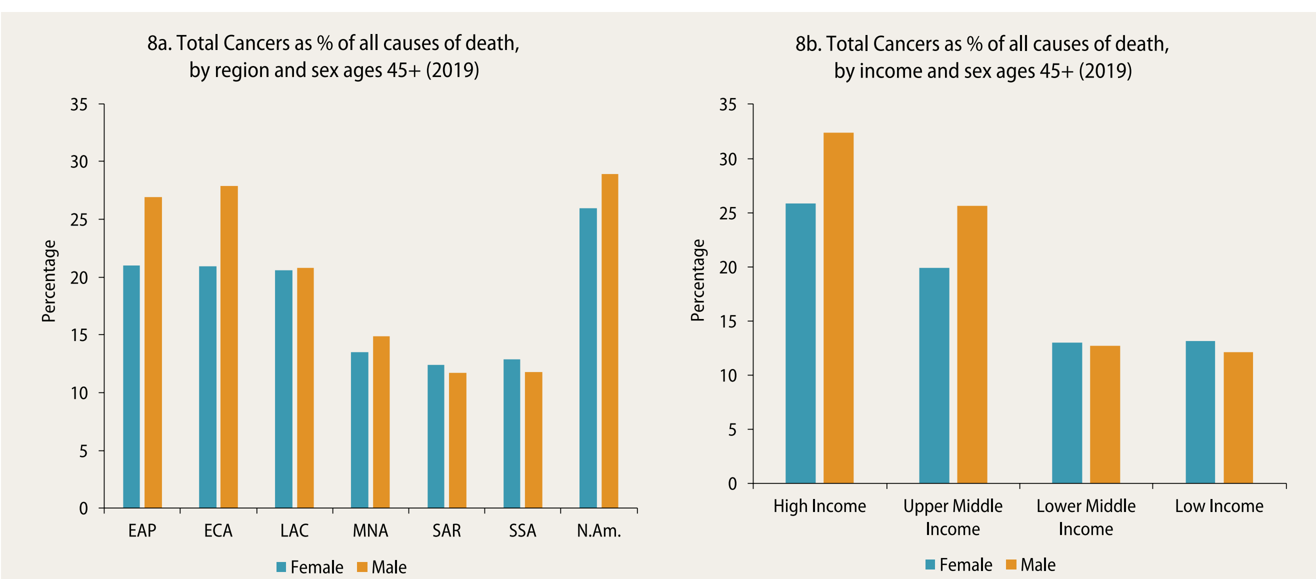
Globally, an estimated 10 million people die of cancers each year (WHO 2022). The myriad of cancers affect men and women differently. Some are unique to women (e.g., breast cancer) or men (e.g., prostate cancer) while others affect both (e.g., lung, skin, thyroid) but to different extents based on genetic, environmental, and behavioral factors (Dorak & Karpuzoglu, 2012; Hatano et al. 2022; Lipsky et al. 2021).

Unlike CVD and diabetes, evidence suggests that overall, mortality from cancers is higher for men than women among older age groups. Figure 8.8 presents the data on cancer mortality as a percentage of all-cause mortality among women and men ages 45 years and above. Across regions, the largest gender gaps are in Eastern Europe and Central Asia (ECA) and the East Asia, and the Pacific (EAP) regions followed by North America (Figure 8a). This is also reflected in Figure 8b which shows that across all cancers for ages 45 and above the largest gender gaps are in high- and upper-income countries.

However, in low- and lower-middle income countries (mainly in Sub-Saharan Africa and South Asia), where the burden of cancer mortality is lower, gender gaps are also narrower, with slightly greater mortality among women as a proportion of all causes of mortality for women compared to men (also Figures 8a and 8b). While research on the determinants of gender differences in cancer related outcomes in low and lower-income countries is lacking, a larger share of other diseases, including maternal mortality, as well as known barriers to access to healthcare for women such as availability of cancer screenings and treatment services, lack of information, limited mobility and financial constraints that create barriers and may account for reversed gender gaps in these regions (Black, Hyslop, and Richmond, 2019; Getachew et al. 2019; Mascara & Constantinou 2021; Okoronkwo et al. 2015; Rivera-Franco & Leon-Rodriguez, 2018).

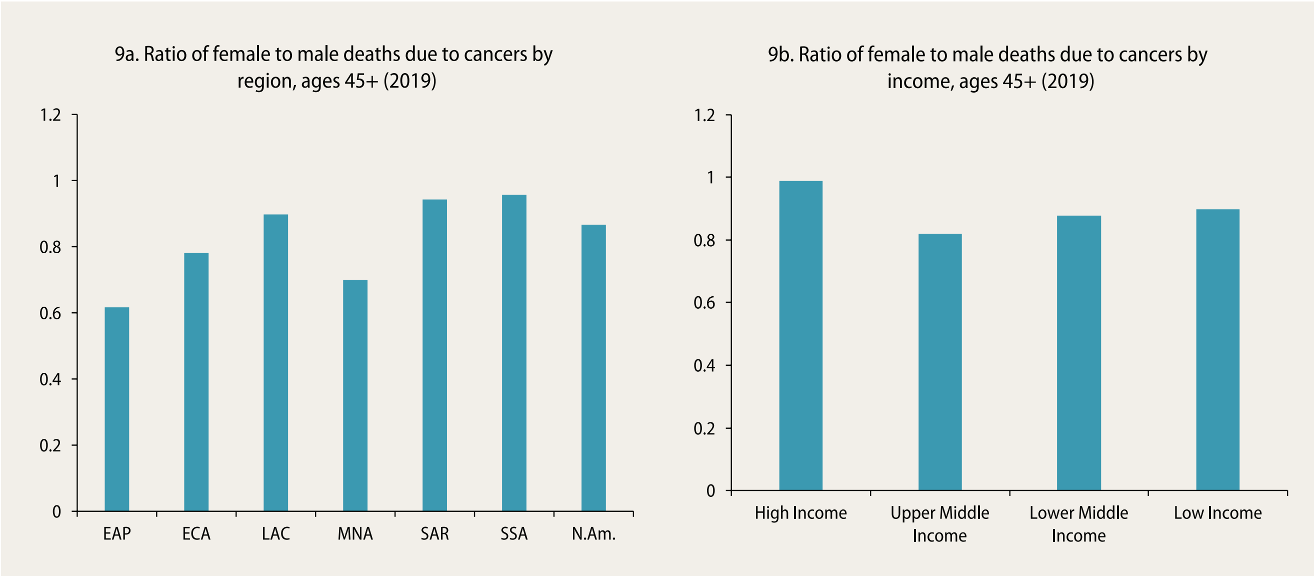
When comparing the number of deaths for women to that of men directly at the global level, there are 134 men for every 100 women above the age of 45 years that die from cancers (IHME 2020). Figure 8.9 shows the breakdown of gender gaps by region and income group when comparing the deaths due to cancers among women and men in absolute numbers, which shows near parity in high income countries where in other income groups, gender gaps increase with a greater burden of deaths for men. When comparing geographical regions, gender gaps are most significant in East Asia and the Pacific and the Middle East and North Africa regions, where for every 100 women there are roughly 162 and 142 men respectively that also die from cancers.

FIGURE 8.8 Deaths due to Cancers, Ages 45+ (by Income Groups and Regional Aggregates)



Source: IHME Global Burden of Disease 2020

FIGURE 8.9 Ratio of female to male mortality due to cancers by regional and income aggregates



Source: IHME Global Burden of Disease 2020

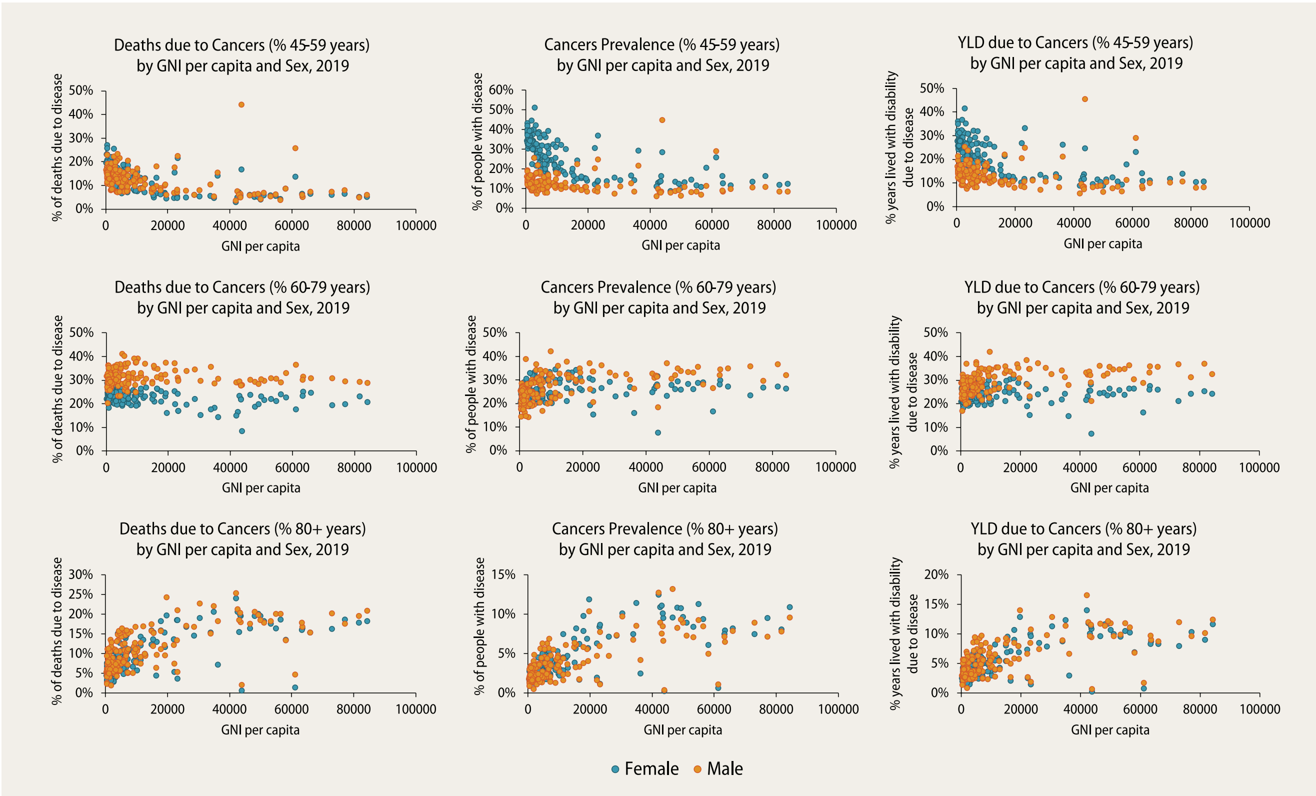
Interestingly, when the data is further disaggregated to the country level by sex and age groups, a consistent cross-country pattern emerges. The burden of cancer related mortality is relatively low, and similar for women and men aged 45 to 59 years, especially for LMICs. Gender gaps appear in mortality from cancers in the 60 to 79 age group, as cancer mortality increases (Figure 8.10), with a larger proportion of death among men compared to women across all countries. However, for the oldest age group (80 + years) the gaps close again, but mortality (as expected) is especially high for all but low-income countries, likely because of the lower (albeit growing) burden of NCDs and a lower life expectancy in low-income countries.

On the other hand, global prevalence of cancers and years lived with disability (YLD) presents a slightly different pattern, but again with some consistency in gender outcomes across three age groups of older adults. Globally, 103 women for every 100 men live with cancer. Gender gaps exist among the 45 to 59 years age group with clearly higher prevalence and YLD among women compared to men (Figure 8.10, last column). These gaps tend to close for older populations, particularly among LMICs. In upper-middle income countries men begin to exhibit higher prevalence and years lived with disability compared to women among the 60 to 79 years age group. However, for those aged 80 years and above, gender gaps not only minimize but also reverse as the prevalence rates among women reach similar levels as that of men, particularly in upper-middle income countries.

Female cancers make up nearly 60 percent of the cancers prevalent among women aged 45 and above. This includes breast, uterine, ovarian, and cervical cancers, with breast cancer being the most prevalent (44.7 percent) and leading cause of mortality (27 percent) from cancer among women (IHME 2020). By far the largest burden of these cancers is in the 45-59 years age group (68 percent) i.e., towards the end of woman's reproductive cycle. The prevalence drops to 45 percent for those ages 80 years and above. On the other hand, cancers such as prostate and testicular cancers make up around 30 percent of the cancers prevalent among men over 45 years, with the largest prevalence among men 60-79 years (IHME 2020). This includes breast cancer, which although rare among men, can occur. Annex 8.1 presents the breakdown of mortality and prevalence of cancers by type among women and men.

Gender gaps in prevalence and mortality for cancers that are common to both sexes are complex. Bronchial, Tracheal, and Lung cancers together are the leading cause of cancer-related mortality for men (25.5 percent of total cancers among men aged 45 years and above) but responsible for only 9.6 percent of cancers among women in the same cohort (IHME 2020). Similarly, 2 men for every 1 woman have oral cancer (Lipsky et al. 2021). Men's more frequent use of tobacco and alcohol, poorer oral hygiene, and delayed care-seeking compared to women as well as higher

FIGURE 8.10 Gender Gaps in Cancers among Older Populations (ages 45 and above)



Source: IHME Global Burden of Disease 2020; World Development Indicators (WDI) Database

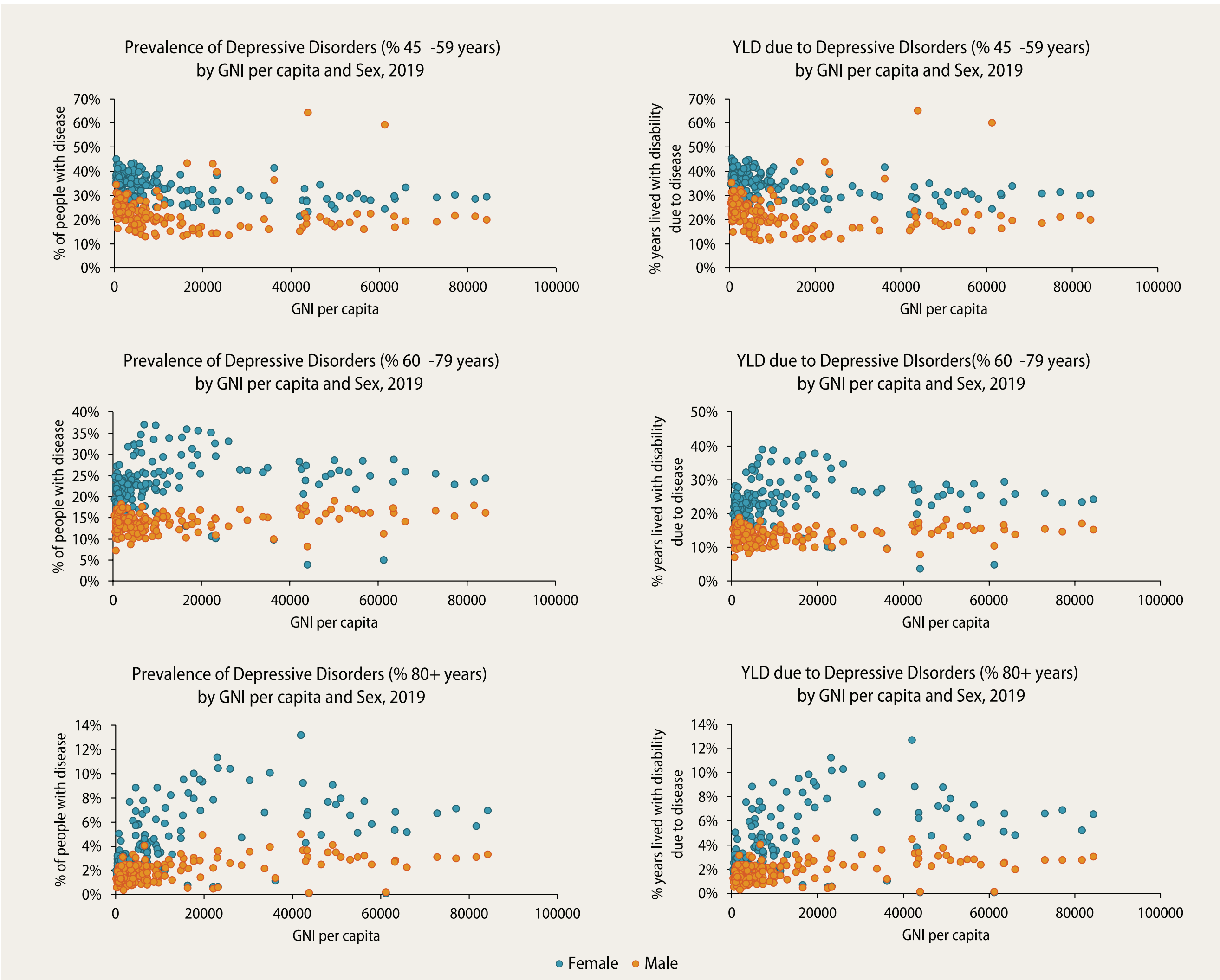
likelihood of multimorbidity are well-documented risk factors behind these outcomes (Dorak & Karpuzoglu, 2012; Jha 2020). On the other hand, women who smoke are 3 times more likely to develop it than men who smoke (Barta, Powell, and Wisnivesky 2019). Thyroid cancers are also more prevalent among women than men (2.2 vs. 1.1 percent of all cancers for those ages 45 years and above), which may be linked to post-menopausal changes in women's metabolism and weight gain (Cui et al. 2021; Dorak & Karpuzoglu, 2012; Rahbari et al. 2010; Suteau et al. 2021).

Men's and women's lived experience with cancer can also be different. A study that looked at sex differences in the prevalence of physical and emotional symptoms as well as loss of functioning in 5339 cancer survivors in the Dutch PROFILES registry, identified gender gaps with female survivors experiencing greater net loss in physical and cognitive functioning and male survivors with greater net loss in role and social functioning when compared to an age and sex matched reference population. Female patients in the cohort were also less likely to be employed (20% vs 24%, $p < 0.01$), received less formal education; and were less likely to have a partner (70% versus 83%, $p < 0.01$) (Oertelt-Prigione et al. 2021). Hatano et al. 2022 highlight the differences in end-of-life experiences for women and men in a sample of patients in palliative care in East Asian countries (n=1632). Their findings show that men were more likely to have multiple diseases and experience illness such as bronchitis and fever compared to women (43% vs 36%, $p=0.05$; 42% vs 30%, $p<0.01$), while women stayed longer in palliative care units than men (28 days vs 21 days, $p<0.01$). Understanding these types of differences can help to design more responsive/effective policies and interventions to provide care for women and men.

Mental health and self harm

One in five persons globally suffers from a mental health issue. Among these, depressive disorders are the most common and merit special attention among aging populations. As figure 8.11 shows, prevalence levels of depression and the years lived with disability (YLD) due to depressive disorders are consistently higher for women compared to men. This gap persists across all countries, for all ages 45 years and above and income groups. While there are variations in these gaps, in some countries such as Viet Nam, Ukraine, and Pakistan the female burden of major depressive disorders is up to double that of men, and these gaps persist in older age groups. Two outliers to this overall trend are United Arab Emirates and Qatar, where for ages 45 to 59 years, the prevalence of depressive disorders is considerably higher than that of women in these countries, as well as the prevalence rates globally. However, these decline for older age groups and are among the lowest for ages 80 years and above. On the other hand, among those aged 80 years and above, Japanese women have the highest rates of depressive disorders compared to other countries, and this is roughly three times that of depression among men in this age group in Japan (13.17% vs. 4.96%)- (IHME 2020).

FIGURE 8.11 Gender Gaps in Depressive Disorders among Older Adults

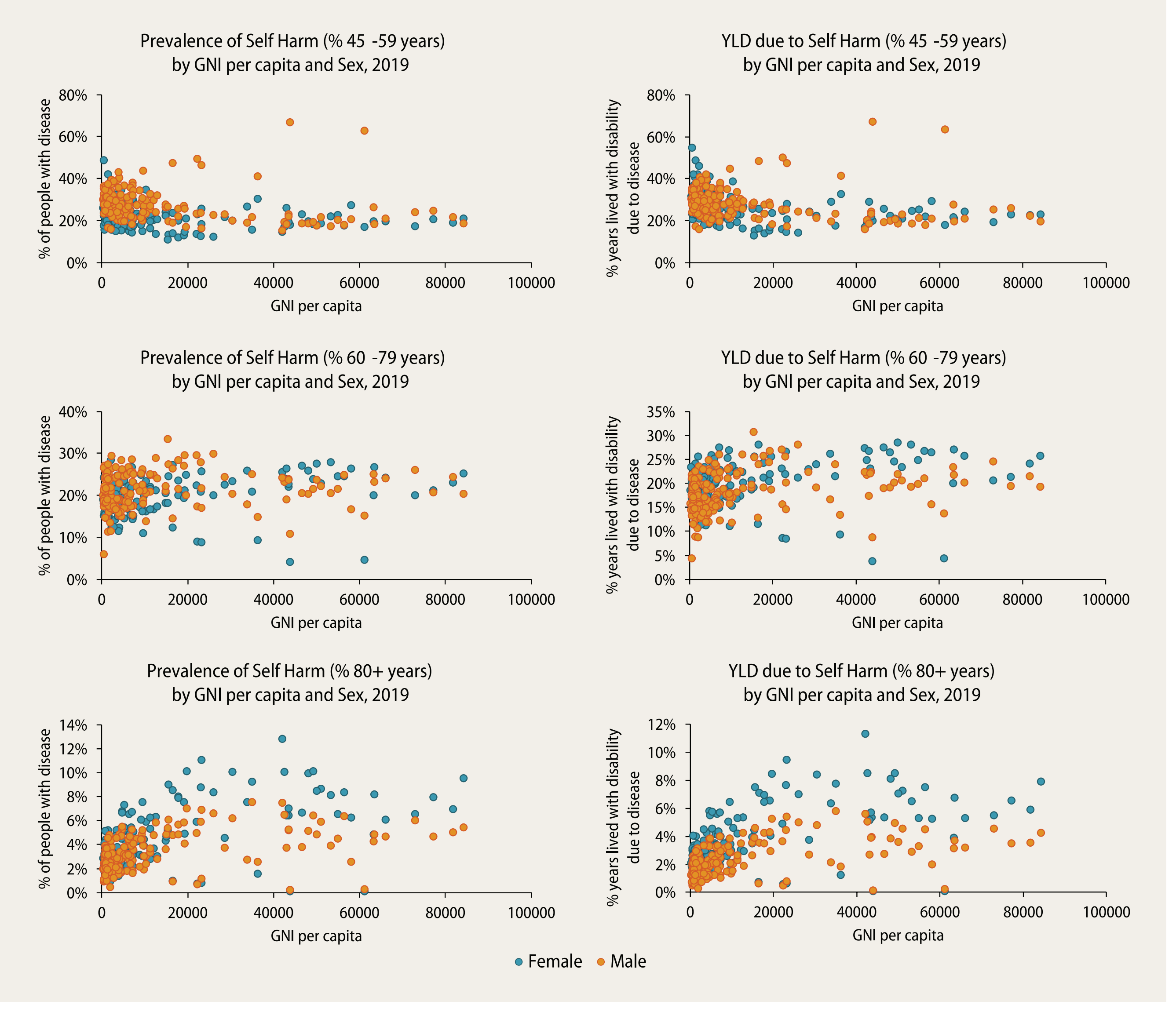


Source: IHME 2020; WDI

While women tend to have higher rate of depressive disorders than men, the rate of deaths due to self-harm among older men is higher. As a proxy for deaths related to depressive disorders, male deaths due to self-harm significantly outpace those among women, although the gaps begin to close those over 80 years of age in lower income countries (Figure 8.12, first column, bottom graph). In some cases, particularly in Middle Eastern countries, the mortality from self-harm among men is extremely high, even higher than that of males in other countries (Figure 8.12). This is likely because of more violent methods of self-harm that men employ which are more likely to result in death than women. As epidemiological studies on middle eastern (and other) countries point to higher numbers of suicides attempts by women (El Halabi 2020; Mergl et al. 2015).

Self-harm takes various forms, and not all end in death. Data also show that prevalence of self-harm (e.g., cutting or burning of one's own skin) is equally prevalent among older women and men, with some exceptions (Figure 8.12, middle column), and in fact increases for women ages 80 years and above. The years lived with disability (Figure 8.12, last column) follow a similar pattern as prevalence, except for those aged 60-79 years where for middle income countries, the years lived with disability for women are slightly higher than those of men.

FIGURE 8.12 Gender gaps in self-harm among older adults (ages 45 and above)



Source: IHME 2020; WDI

Gender norms likely contribute to how women and men approach mental health and seeking support to address their depression, or stress. The roles men and women engender during their lifecycles and the social support systems they can access, and use contribute to their mental health and well-being (Adams et al. 2015; Cheung and Mui 2021; Mudege and Ezeh 2009; Obuobi-Donkor, Nkire, and Agyapong 2021; Treviño-Siller et al. 2006). A recent study in India, for example, found that 56 percent of older adults who were widowed and living alone were significantly more likely to suffer from depression [AOR: 1.56; CI 1.28,1.91] compared to those who were married and living with others (Srivastava et al. 2021). In often cases, this is women (Perkins et al. 2016; Pilania et al. 2019) and is a global experience (Beutel et al. 2018; Keily, Brady, and Byles 2019; Lin et al. 2021).

Although genetics can predispose people to depressive disorders, women's lived experiences also contribute to their higher rates of the disease. One in three women for example have experienced intimate partner violence in their lives (WHO 2021b). Exposure to rape has been found to contribute to the development of psychological problems, such as depression, dissociation, substance abuse, feelings of guilt and shame, and suicidal ideation (Covers et al. 2021). Childbirth can also contribute to depression in women and girls. One study found that new mothers of low socioeconomic status were 11 times more likely to develop postpartum depression symptoms than women of higher socioeconomic status (Carberg 2019). Gender norms that contribute to unequal power dynamics and inequalities such as limited control over finances or limited decision-making power, often beginning during adolescence, can lead to depression (Bone, Lewis, and Lewis 2020; Rungreangkulkij et al. 2019).

In a similar vein, the negative effect of male perceptions on their value may be linked to men's greater propensity for self-harm leading to suicide (Rivera and Scholar 2020). For example, results from the *Australian Longitudinal Study on Male Health* (Ten to Men, n = 13,884) found that "self-reliance" was the dominant dimension of masculinity linked to suicidal ideation (AOR 1.34; 95% CI 1.26–1.43) among men aged 18 to 55 years (Pirkis et al. 2017). For older adults, after retirement or loss of job men are more likely to feel isolated and less valuable as members of society. Earlier work by Dhar (2001) in India found that social and familial support was linked to better health, especially among men. Kendig et al. (2014) find that Australian men perceived low social activity as linked to aging poorly. Some studies suggest that as women's roles tend to be more complex than men's, and go beyond the labor markets, their ties within their communities can be beneficial in overcoming social isolation. While women face persistently greater barriers in access to healthcare and their quality of life is often lower than that of men (Carmel 2019; Griffin, Loh, and Hesketh 2012), their ability to cope with social and individual changes that come with aging may an important factor in their lower rates of suicides compared to men (Carlo et al. 2019).

AGING, GENDER, AND DEMAND FOR SERVICES

Older women's access to healthcare services

Access to health services refers to the ease with which an individual can get the healthcare they need. On the demand side, a key question is how the distributional effects of factors such as income, mobility, distance, and availability of services affect access to health services for aging populations, and especially women. As people age, their reliance on others to help care for them is expected to increase, especially if they have a disability or their health deteriorates. In addition, they may depend on other household members for financial support or transport, especially in the case of women.

One of the ways to estimate access to healthcare is through delays in health seeking behavior. Evidence on gender differences in seeking healthcare among aging populations is mixed. While some studies find evidence of higher utilization of health services, most often in higher income countries (Bertakis et al. 2000), others find just the opposite results (Cameron et al. 2010; Song and Bian 2014; Azad et al. 2020). All evidence however points to women's lower economic status and higher costs for healthcare (Azad et al. 2020; Bertakis et al. 2000; Cameron et al. 2010). Several studies focusing on higher income countries highlight wealth/income as having a greater role in determining delays to accessing and using healthcare than gender. Relatively lower gender inequality, health insurance coverage, and longer employment histories may contribute to this. However, there are other disparities that can be overlooked (Cameron et al. 2010). For example, even though in their study on older adults in Japan, Murata et al (2010), find that income and time are more relevant to health seeking behavior than gender, they also report that significantly more men had a regular source of health care compared to women (~ 23% compared to 17%). This is likely because of more regular employment (e.g., women may step out of the labor market for childbirth of care provision). It may then be argued that gender differences in income or wealth then do tend to play a role in how women and men seek and use health services differently. Income inequalities across the life course can compound over time, and in the absence of equitable social protection, making it more costly to access healthcare for older women.

Literature on women's access to healthcare focuses mainly on younger populations or minority groups. Few studies examine the pathways and barriers to access for older women beyond financial issues. Transportation, or the lack of it, is one of the key challenges for women in general, and especially older women. Women's experiences point to multiple transportation challenges such as availability of suitable transport, especially in rural areas, cost of the transport, safety, or poor infrastructure making travel difficult (Hamiduzzaman et al. 2017; Naud et al. 2019). Women's care giving responsibilities for example can limit their mobility. While this may especially be a challenge in lower income countries, evidence points across the board barrier, with older women from diverse countries such as Viet Nam and Switzerland experiencing transportation barriers (Hamiduzzaman et al. 2017). One study of female veterans in the United States (n=3,608), for example, found that while there were considerable gender gaps in access to healthcare, measured as delays in health seeking behavior, transportation was the leading cause among women over age 65 years for such delays (36 percent), followed by childcare or other responsibilities (18 percent), and affordability (11.5 percent) - (Washington et al. 2011). Another systematic review in the United States attributed the transport gap as a barrier for 3 to 21 percent of the older population, across different settings in the country (Syed et al. 2013).

At the same time, women's burden of care influences their own access to, and utilization of health services. For instance, as Albertini (2016) points out, adult women are the risk of becoming "sandwiched" between caring for the young and the elderly. Using data from three waves of the SHARES survey in Europe (n=79359) the study also finds, rather counter-intuitively, that being more educated and having higher market incomes increases the risk of women to be "caught in between the care needs of the younger and the older family members" and leaving the labor market. Certainly, evidence from Eastern Europe highlights the social pressure on women to fulfill this role (Bussulo, Koettl, and Sinnot 2015). This is also highlighted in evidence from East Asia, where the "provision of family-based care [by women] is associated with fewer working hours and a higher probability of exit from the workforce". Similarly, in China, 28 percent of people aged 45 + years (mainly women) provide care for grandchildren, and 14% provide care for the elderly (World Bank 2016).

Often as people age, their need for reliance on family and other sources of support increases. In low- and lower-middle income countries, it is not uncommon for elderly to live with their adult children and their families or to rely on them financially. This is especially the case for older and widowed women, who may rely on their families for residential, financial, or other support. Due to women's lower labor force participation, gender-based pay gaps, and often limited autonomy, they are relatively more likely to be dependent on family for their residence, mobility, and accessing the health sector or informal care. While this intergenerational support has benefits, it can also erode the agency of elderly persons, and can lead to foregoing the healthcare needs of elderly to save resources for other, younger members of a household, especially in poorer households (Hossen and Westhues 2010; Lena et al. 2009), direct neglect or abuse (Jamuna 2003; Mansur et al. 2010), or stress from being in state of dependence on children or other relatives (Jeon et al. 2013). For instance, in their study of 9615 adults from seven States in India, Perkins et al. (2016) find that widowed women were more likely to have poor health outcomes compared to married women. This was linked to hypertension and stress. Widowhood had no similar effect on men. Another study in Karnataka (n=415) found that the elderly in the study suffered from hypertension followed by arthritis, diabetes, asthma, cataract, and anemia. In terms of attitudes, about 48 percent felt they were not happy, and 68 percent said that elderly were often neglected (Lena et al. 2009).

Social and gender norms also play a role in setting different expectations from and for women and men, which contribute to their limitations. While for women, gender-based socio-economic constraints such as limited decision-making power, norms that limit their mobility and/or financial resources may be larger barriers to access, norms surrounding masculinity tend to be greater barriers to men in seeking help or treatment.

Affordability of health services for older women

A main barrier to access to healthcare, especially among the aging is the high cost of care. Research, especially in high income countries, has shown that poverty is a main barrier to access. Those with lower incomes tend to have a higher level of illness, either self-assessed or otherwise. This is likely the result of avoiding health care services because of the costs involved. For example, using data from the Aichi Gerontological Evaluation Study (AGES, n=15,302), Murata et al. (2010) found that low-income older persons (aged 65 and above) experienced more illness that required medical attention (such as hypertension) than their richer counterparts. They also had lower levels of self-perceived health than those in high income groups. Although the study did not find any gender differences, poverty seemed to be the driving factor for access to healthcare, with low-income group 1.4 times less likely to complete needed treatments compared to those in the high-income groups.

Poverty is clearly linked to health outcomes for the elderly, evidence on gender differences in outcomes is often mixed. This is likely because of the extent of interaction with other socio-economic factors. Prus and Gee (2003), in their study of elderly in Canada found that socio-economic status significantly affects women's health but not men's. Szanton et al (2008) find that elderly women in the US, ages 70-79 years who reported financial stress were 60% more likely to die within the next 5 years compared to those who did not. More recently, Palta et al. (2015) found that among older women, financial stress was linked to higher oxidative stress. Earlier studies in Brazil and US found that socioeconomic inequalities across the life course contribute to higher levels of disability among older women compared to men (Guerra, Alvarado and Zunzunegui, 2008; Thorpe et al. 2008).

Women, especially in lower income settings, tend to face greater financial constraints to health services compared to men, making it harder to seek appropriate and timely healthcare. In India, widowhood is significantly associated with women's use of lower cost public health services in older ages but not so for men or married women, who are more likely to use higher quality and more expensive private healthcare (Hossain et al. 2021). As highlighted earlier, dependency on others particularly financial and tradeoffs such as care for other household members often play into these decisions. Evidence from a small-scale study (n=152) in seven urban settings in Europe highlighted that while poverty is a barrier for access to prescribed medication, it is significantly more so for women than men (Stankuniene et al. 2015). The interaction of race or ethnicity with gender and other socio-economic characteristics exacerbate women's poor health outcomes. In their study of bladder cancer survival among Floridians, Brookfield et al. (2009) found that while white, non-Hispanic men with higher incomes had the highest survival rates, being from poor communities, female, and African American had the lowest survival outcomes (n=31,100).

Evidence shows that overall wealth, and not just income, is an important indicator of health outcomes for older adults. People with more material wealth also report a higher level of subjective health (Adena and Myck 2014; Hornby-Turner, Peel, and Hubbard 2017; Nummela et al. 2007). Adena and Myck (2014), for example, examine the effect of poverty over a 4-to-5-year period among Europeans aged 50+ from 12 countries using the Survey of Health, Ageing and Retirement in Europe (SHARE). They found that while relative income had no effect on changes in health, broader measures of poor material conditions, such as subjective poverty or low wealth, significantly increased the probability of transition to poor health and reduced the chance of recovery from poor health. Using a sample of Medicare recipients in the US, Fitzpatrick et al. (2004) found that women perceived higher barriers to healthcare access compared to men independent of other factors such as poverty and race.

Women's quality of life as they age can deteriorate considerably due to illness and lack of resources. Control over financial resources and access to care are two important dimensions of healthy aging (McMaughan, Oloruntoba, and Smith 2020; MIszkurka et al. 2012; Read, Grundy and Foverskov 2015). For women, this is also rooted in their voice and agency. Traditionalism, negative attitudes towards aging, and stigma can also contribute to self-perceived lower quality of life (Sun et al. 2022). For example, a recent Finnish study found that in the aftermath of COVID-19 women reported more symptoms and a lower quality of life than men (Lindahl et al. 2022). With a significant proportion of the population over the age of 60 by 2050, including in sub-Saharan Africa, women will also constitute a larger proportion of the elderly.

Interventions that empower women across their life course and support their access to resources such as income, social protection measures, and health insurance that enable them to take control over their lives are pivotal for strengthening their capacity to seek, access, and use health service.

Simultaneously, it is important to ensure health and other data systems are not gender neutral. Women especially in lower income and more traditional communities may be left out of formal markets and social systems because of the lack of proper documentation and non-reporting. For example, in communities with more stereotypical gender norms such as those that promote female seclusion or *'purdah'*, not all female births and deaths are recorded in civil registration and vital statistics (CRVS) systems. This excludes women from formal spaces and social protection programs due to lack of appropriate identification papers. Similarly, health information and management systems may underreport on women's and men's health when data are not sex-disaggregated and when collection is incomplete (Muñoz et al. 2020).

SUPPLY OF HEALTH AND CARE SERVICES FOR AGING POPULATIONS

The following section examines issues related to the supply of care services. Although broader health system issues are of relevance for the aging, as they are for all age groups; the availability, cost, and quality of long-term care in particular is important in understanding their health and well-being as populations age. Moreover, long term care is inclusive of the medical and healthcare needs of the elderly. In this vein, this section focuses on the supply of care for aging population from the perspective of long-term care.

Availability of services

The current majority of aging economies are high- or middle- income countries, with considerable variation in the quality and availability of services. In higher income countries of Western Europe and North America, there is generally greater availability of key health services and long-term care arrangements compared to middle income countries. Availability of health services is dependent on a number of factors such as availability of health insurance, adequate supply and distribution of the health workforce, how essential and specialized healthcare is provided, and availability of essential drugs and medicines.

Policy decisions on how health and other services are organized affects women's access to these services. For instance, availability of health services may be limited due to sub-optimal distribution of physicians across regions or clustering of service delivery infrastructure (Chan et al. 2005; Mobley et al. 2006), which may contribute to access barriers for older people, and women in particular. Integrated primary healthcare (PHC) that brings services closer to the populations they serve have the potential of addressing some of these challenges. Several studies also show that this can also reduce the cost of care (Hou, Sharma, and Zhao 2023; Rocks et al. 2020), another key barrier for elderly, especially women. Models of bringing care closer to women, such as community-based nutrition programs aimed at pregnant and lactating mothers and their children, and provision of door-to-door family planning services have played an important role in improving maternal and child health outcomes in low- and middle-income countries (Cortez et al. 2014; Kuruvilla et al. 2014).

Similarly, at the country level, long-term care (LTC) arrangements are varied, depending on government policy as well as social norms (Ngai and Pissarides, 2009) and influence how and when women and men access and use these services - the way that LTC is defined, how LTC is arranged and who is responsible for its delivery. It should be noted that the aim of LTC is to prevent deterioration and adjust to stages of decline and is broader than medical or acute care. Whereas the primary goal of medical or acute care is to return an individual to a previous functioning level or to at least ease the burden of pain, the goals of LTC are much more complex and encompass social and emotional well-being. This necessitates a broader array of services and arrangements for care provision.

LTC services can be organized in a broad variety, ranging from family care, public institutions, private residences and assisted-living environments depending on the needed level of care (Frank 2012). "Some countries (Denmark, Finland, Norway, or Sweden) chose to frame care provision as a societal task rather than a private matter where comprehensive care provision is done through public care providers, both in institutional and in social care. This public responsibility is funded through general taxation and social insurance contributions. Under this Scandinavian care regime, characterized by predominance of public care services, families who can provide care would be recompensed for doing so. In contrast, Southern European countries (Cyprus, Greece, Italy, Malta, Portugal, or Spain) would represent the other extreme, with almost exclusively family care provision, saving on public expenditure through the continuation of traditional caregiving roles by the family" (Hoff, Feldman, and Vidovicova 2010).

BOX 8.3 Understanding Long-Term Care Arrangements

In May 2016, at the World Health Assembly, 194 countries agreed that every country should have a long-term-care system (WHO 2017a). Yet, many countries are far from instituting any formal LTC arrangements. Many countries, especially the lower income ones, are mostly reliant on informal family care; in other countries social norms contribute to the same reliance. Larger cohorts of younger populations and family networks that can provide this care, also facilitate family care. In other countries, particularly higher income ones, with larger cohorts of aging populations, and declining working age populations, there are also publicly and privately funded formal long-term care arrangements that aim to support the needs of elderly populations.

However, to date there is no formal systematic method to categorize and compare LTC systems cross nationally. Applebaum (2013) building on previous work by Colombo et al. (2011) and Kraus et al. (2010), offers a five-category typology to classify approaches to LTC services and support arrangements, combining issues of financial and functional disability requirements with the supply, balance, and array of long-term services available (Table 8.2 below). This classification approach draws heavily on the OECD financial categories —universal versus means-tested or mixed—availability of services and the amount of out-of-pocket expenditures by individuals. In addition, they have combined these factors with additional delivery system indicators, such as the availability of residential care and the balance of formal and informal LTC services.

TABLE 8.2 Typology to Classify a Country's Long-Term Care Services and Supports System

Group 1	Group 2	Group 3	Group 4	Group 5
Public insurance funding available for long-term care-services	Mixture of public insurance and means-tested funding available	All funding for long-term services is means-tested	Funds are means tested but quite limited in availability	No public funds are available for long-term care-services
HCBS (home- and community-based services) widely available	HCBS widely available	HCBS commonly available	HCBS are of limited availability	HCBS not available
Institutional care widely available	Institutional care widely available	Institutional care widely available	Institutional care somewhat available	Institutional care rarely available
Housing with services widely available	Housing with services widely available	Housing with services available	Housing with services is of limited availability	Housing with services not available
Cash payments often available for long-term services	Cash payments generally available	Cash payments available on a limited basis	Cash payments not available	Cash payments not available
Informal care is one component of the system	Informal care is an important part of the system	Informal care is a critical element of the system	Very heavy reliance on informal care	Exclusive reliance on informal care
Examples: Germany, Japan, Korea, the Netherlands	Examples: Australia, France, Ireland, Spain, Switzerland	Examples: Estonia, Italy, Poland, Romania, United States	Examples: Argentina, Brazil, China, Egypt, India, Mexico, South Africa, Thailand	Examples: Bangladesh, Ghana, Kenya, Nepal

Source: OECD 2011

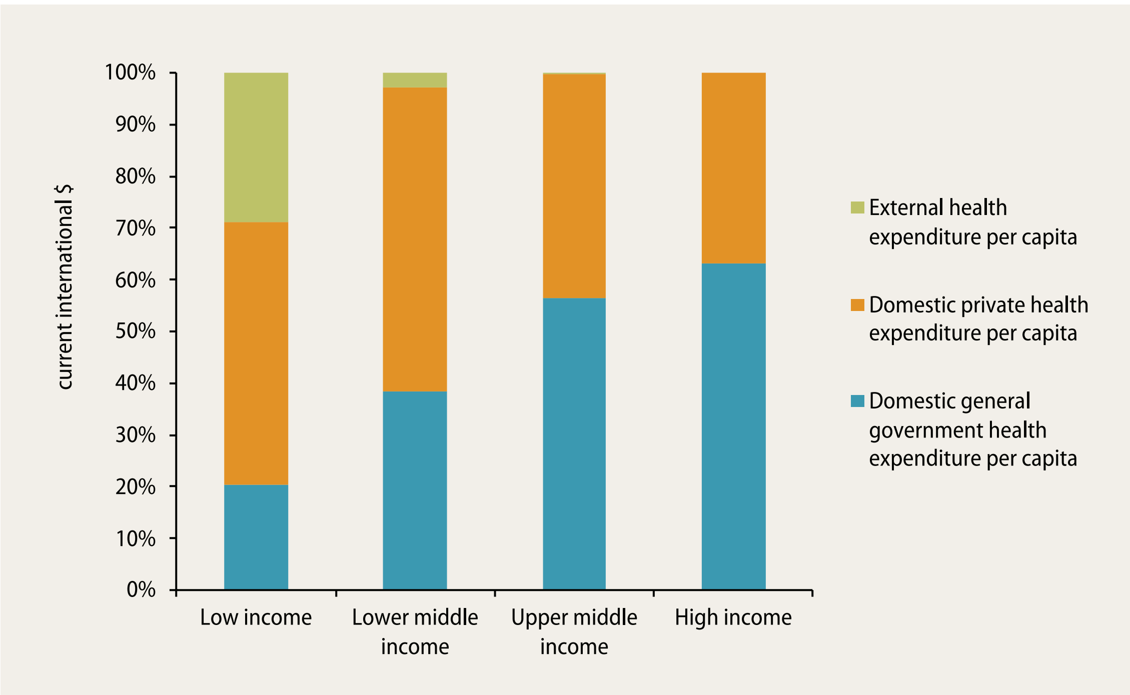
These various approaches reflect the contrasting solutions to the dilemma of growing demand for care with ultimate responsibility for caregiving assigned to different societal actors. The differences in interpretation of whether LTC issues should be relevant to the public sphere vs. the private sphere have implications in terms of development of long-term care systems (OECD 2011). Regardless of these differences, the form this system takes varies, depending on each country's context, available resources and societal choices about the distribution of the overall costs of care.

The cost of health and LTC services: supply and affordability

Availability of services is tied to the public and private spending on health care. Decisions about healthcare financing and the mix of public and private healthcare spending depend on factors such as GDP growth, social protection, and private insurance, health infrastructure and technologies, and demographics such as life expectancy, infant mortality, the age structure of the population, and the evolution of its health status. Affordability of healthcare, then, is dependent on these national level decisions, and household wealth which influence the level of out-of-pocket payments for different services. Given the high burden of NCDs for older populations, affordability of services plays an important role in the type of services the population 45 and older receives.

Health and other social sector expenditures generally form a very small proportion of public expenditures in lower income countries, with higher out of pocket payments for health care. Figure 8.13 shows the breakdown of health expenditure by source. In high income countries majority of healthcare is covered through domestic public expenditures, whereas for countries in lower income groups, private expenditures make up the larger proportion of expenditures, and the health system (particularly in low-income countries) is also dependent on external resources. This has implications for availability of health services and their affordability for those who are poorer and more vulnerable. As discussed earlier, in majority of the cases, this puts women at a disadvantage since they lack similar resources and opportunities as men.

FIGURE 8.13 Breakdown of Health Expenditure per capita in PPP, 2019



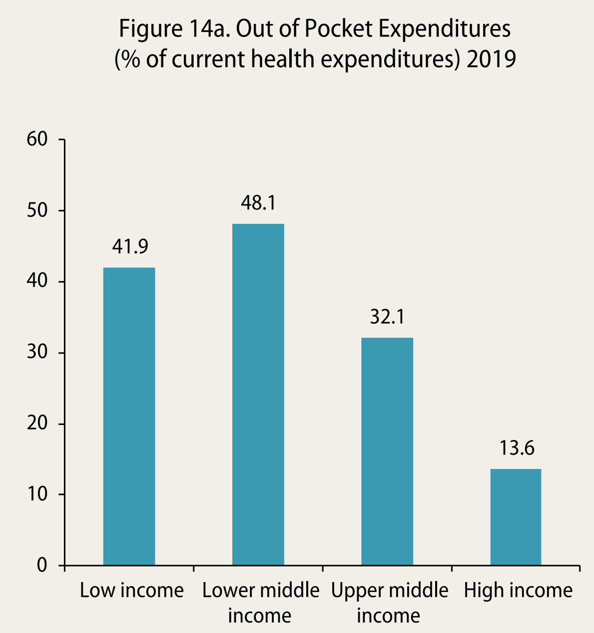
Source: World Bank, Health Nutrition and Population Statistics 2019 (Accessed December 15, 2022)

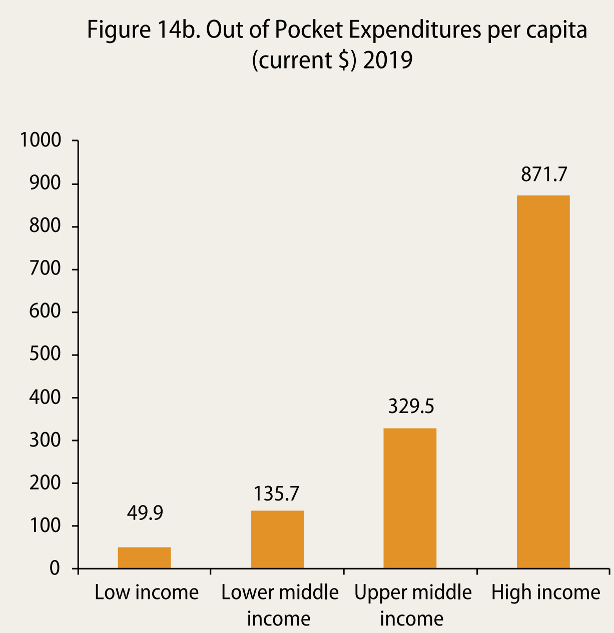
Figure 8.14 shows pre-COVID out of pocket healthcare expenditures as a percentage of total health expenditures and per capita. While the per capita expenditure in lower income countries is low (Figure 14b), the proportion of out of pocket is considerably high at 42 percent of the total health expenditure. On the other hand, in higher income countries, which also have a higher prevalence of NCDs and larger cohorts of older populations, the per capita cost of healthcare is relatively very high but because of greater public expenditure and availability of private health insurance, the out-of-pocket expenditures are considerably lower (13 percent).

Affordability of long-term care services also varies dramatically. Although data are limited to aging economies, mainly of the OECD, there is considerable variation between them. Public spending on long-term care ranges from more than 4% of GDP in the Netherlands to less than half a percent of GDP in countries such as Israel, Latvia, and Poland (OECD n.d.[7]) This variability is reflected in the supply and quality of care, as well as the variations in out-of-pocket payments for those seeking LTC care.[8]

The cost of LTC is generally high relative to the income of individuals. Formal LTC, especially, is often unaffordable in the absence of social protection. All OECD countries have some form of social protection for LTC, but even where coverage is comprehensive, people pay some of the cost out of pocket (OOP). In Germany and the United Kingdom, for example, OOP payments amount to approximately 25 and 30 percent of total LTC expenditures, respectively (Kraus 2016). Moreover, formal coverage for home care for moderate or severe needs is often insufficient and expensive. This contributes to large OOP payments. Levels of difficulty with daily tasks was found to be strongly associated with unmet needs. Compared with recipients of spousal care, men receiving care from one non-spousal caregiver, and men and women receiving care from any other configuration, had higher odds of unmet needs (Potter 2017). Unless there are familial or other arrangements for in-

FIGURE 8.14 Out of Pocket Expenditures, 2019





Source: World Bank, Health Nutrition and Population Statistics Database (Accessed December 15, 2022)

7 http://www.oecd.org/els/health-systems/long-term-care.htm

8 Comparing LTC expenditures is a difficult since National LTC systems differ widely in terms of eligibility criteria, level of benefits, institutional variety and regional heterogeneity (Geyer, 2020).

formal care, many people are unable to afford LTC in their own home, leaving them with unmet needs or at risk of early institutionalization (Muir 2017).

In lower income countries with less developed social protections systems and limited coverage for LTC, OOP tend to be even higher, with many families depending on more traditional, home-based family care. A 2016 global study found that almost two out of three older citizens live in a country where families rather than governments have the legal duty to provide LTC services for older family members who cannot cover their needs on their own. While in several Asian countries the nuclear family is held responsible, in many African countries a more widely defined family is obligated (Scheil-Adlung 2015). However, these requirements can overlook the capabilities of family caregivers and increase pressure on them in terms of physical and emotional stress, limiting social interactions, and increasing financial obligations, especially for women (Glinskaya et al. 2023). Chapter 14 on adequacy pensions and healthcare provides additional discussion on financial coverage for health and long-term care."

Improving the quality of services

the quality of health and long-term care services is crucial to the quality of life of people who rely on these services. Quality of healthcare is defined as, "*the extent to which health care services provided to individuals and patient populations improve desired health outcomes. In order to achieve this, health care must be safe, effective, timely, efficient, equitable and people-centred*" (WHO). The WHO also conceptualizes the quality of LTC as "*care that achieves gains in health, and is responsive to the legitimate expectations of LTC recipients*" (Brodsky et al. 2003). Quality of care, as perceived or experienced, can affect its use. Quality of care is affected by a multitude of factor from provider skill, knowledge, and behavior (Box 8.4) to supply chain interruptions, old and malfunctioning equipment to poor infrastructure. Thus, if the quality of public healthcare is perceived as poor, people will avoid it and prefer to use other sources such as private sector providers if they can. Whether for health services or LTC, it is important that systems are safe, effective, and meet the needs of their users so that these expectations are met.

BOX 8.4 Provider behaviors and access to care for older adults

Healthcare providers are a crucial part of service delivery and play an important role in influencing peoples' health seeking behaviors. Poor patient-provider communication can for example, affect the quality of care. A handful of studies also point to the lack of communication or limited discussion about subjects that may be considered intimate or taboo such as sexual health or incontinence among older, middle-aged women and their providers. While women's socio-economic characteristics play a role in women themselves approaching the topic with their healthcare providers, the limited evidence that exists also suggests that providers very seldom initiate the discussion (Bergeron et al. 2017; Chapman et al. 2019; Hughes and Lewinson 2015).

Provider behaviors and attitudes towards specific groups of older women may also put them at a disadvantage. Research identifies a consistent pattern of gender bias in diagnosis and clinical treatment for the same illnesses. One population-based study on trauma treatment found that when adults surviving trauma arrived at hospitals, women were more likely to be directed towards non-trauma care compared to men, indicating a potential gender bias, although the authors could not rule out other factors (Gomez et al. 2016). In Sweden, hospital level data on waiting times and triage priority for older adults (mean age 54 years, n = 135,417) indicated presence of gender bias in combination with age and socioeconomic status (Roberston 2014). Using data from primary care practices associated with two academic medical institutions Madonis, Skelding, and Robert (2017) note that women are less likely to receive an early diagnosis of CVD than their male counterparts. In addition, they are less likely to receive appropriate, timely interventions despite having worse outcomes than men after acute coronary syndromes and higher postintervention complications (Cook et al. 2009; Pagidipat and Peterson, 2016; Vaccarino et al. 2009). In a similar vein, Fitzpatrick et al. (2004) reported that physician attitude was a greater barrier to seeking healthcare rather than transport or cost among the elderly in their study of Medicare beneficiaries in the United States. Fabreau et al. (2015) also point towards a need for improving the quality of care for women, especially those with low incomes.

Recognizing these challenges and taking steps such as provider education to reduce bias, periodic skills training and refreshers, and ensuring that health information is available and clearly communicated to patients can counter this gap in quality of care.

Ensuring quality of care achieves these ideals necessitates standardized protocols, appropriate regulation, and accountability. For example, regulatory standards guiding accreditation of care homes and qualification requirements for care providers can improve quality of formal LTC services. Certainly, Regulatory oversight and quality assurance is more visible and rigorous in institutional care settings, while home or community-based care settings are subject to little or no regulation (OECD/European Union 2013). When available, a 2022 study found that the complex process of achieving care: the functional fragmentation and geographical dispersion of care institutions made the care-seeking process challenging and confusing for older adults to access (Gong et al. 2022). Similarly, trained physicians, nurses, and other hospital staff, that can provide comprehensive health services in a timely manner can improve the quality of care. A recent study on treating elderly in Japan for instance found that elderly patients with pneumonia admitted to a hospital had better quality of care compared to those not at the hospital. From a service provision perspective, the care was both cost effective and timelier (e.g., administration of drugs or change of IV tube) as compared to that for elderly not admitted to hospital (Hamada et al. 2019).

However, few countries systematically measure whether their LTC systems are safe, effective, and centered around the needs of service users. Indicators of LTC quality, including measures of clinical quality, user satisfaction or quality of life surveys are useful for assessing service provision. However, because of the costs and logistics involved, only a few countries measure quality of care; and where measures are available, they only capture narrow aspects of clinical quality rather than providing a complete profile of the quality of life experienced by LTC users. This leaves space for quality of care to decline, especially when issues such as negative provider attitudes (discussed earlier), or treatment of elderly in LTC homes or institutions are not captured in data or addressed in practice. This is especially of concern for countries where implementation of quality controls is already weak.

OECD countries, where aging is a reality today, have taken different pathways to improving the quality of care, and offer examples of how to bridge the quality gap. Quality oversight especially related to institutional care – and incentives to improve quality are the most common. To bridge the gap between clinical care quality and quality of life of the

BOX 8.5 Improving Quality of Care through Standards and Practice in the OECD

Compulsory accreditation of LTC facilities – Although all countries have legislation regarding adequate and safe care, only in two-thirds of OECD countries, accreditation or certification of care facilities is compulsory or common practice (e.g., England, Spain, Ireland, France, Australia, Germany, Portugal, the United States, Switzerland). Some countries (e.g., Poland) issue certificates for care establishments where minimum standards are often used as evaluation criteria for the authorization of provision. However, enforcement of standards has often lagged behind, given the difficulties and costs ·entailed for both the authorities and providers to supervise/comply with them (Chawla, Betcherman, and Banerji 2007).

Standards to normalize care practice - Standardized assessment tools can be helpful to develop care plans and interventions, promote consistency in care and prevent adverse events. Examples include: the Resident Assessment Instrument (RAI) used in Belgium, Canada, Finland, Iceland, Italy, the United States, and Spain; the Autonomie, Gérontologie, Groupes Iso-Ressources (AGGIR) scale in France*; and the Katz Index of Independence in Activities of Daily Living in Belgium and elsewhere. Public reporting on LTC quality is also mandatory in some countries, such as the United States, Japan, England, Germany, Portugal, the Netherlands, and Canada. Evidence about the effectiveness of such tool to encourage providers to improve their standards is however mixed (Yeh 2021).

Australia set up a new quality system, including a review of accreditation procedures for providers, improved monitoring and dealing with complaints. The Czech Republic and the Slovak Republic implemented oversight policies, authorization, and compliance of providers' quality, while Germany enhanced quality supervision and aims at enhancing quality management of providers, together with improved consumer voice. Ireland published in 2009 the National Quality Standards for Residential Care Settings for older people, while Austria produced a handbook on dementia and Luxembourg has installed a committee on quality of care (OECD 2011).

* The AGGIR grid is designed to assess an elderly person's degree of dependence or autonomy.

end user, a third of the countries employ market incentives for providers and users, allow users to make decisions on service provision, for example through cash benefits. The Netherlands implements a Care Innovation Platform, aimed at the development, structural dissemination, and implementation of innovations in (long-term) care provision. In some countries, caregivers are offered the possibility of further education, training and professional growth courses are provided within the nursing home care. New caregivers go through a training where they are assessed on specific caregiver assessment criteria including aptitude for teamwork, attitude to elders, empathy, commitment, and independence. Box 8.5 highlights some ways in which the OECD is addressing quality of care for the elderly.

WOMEN AS LONG-TERM CARE PROVIDERS

With population aging, especially in middle- and high- income countries, the need for long-term care (LTC) is growing. This is a labor-intensive sector comprised of a formal workforce as well as family care givers. Care arrangements across countries vary, with greater reliance on informal, family-based care in lower income countries, and a greater mix of formal and informal arrangements in higher income ones. In all cases, women form a large proportion of the care providers. In 2020, a study that focused on LTC workers found that essential long-term care workers commonly held second jobs and double- or triple-duty caregiving roles (Van Houtven, DePasquale, and Coe 2020).

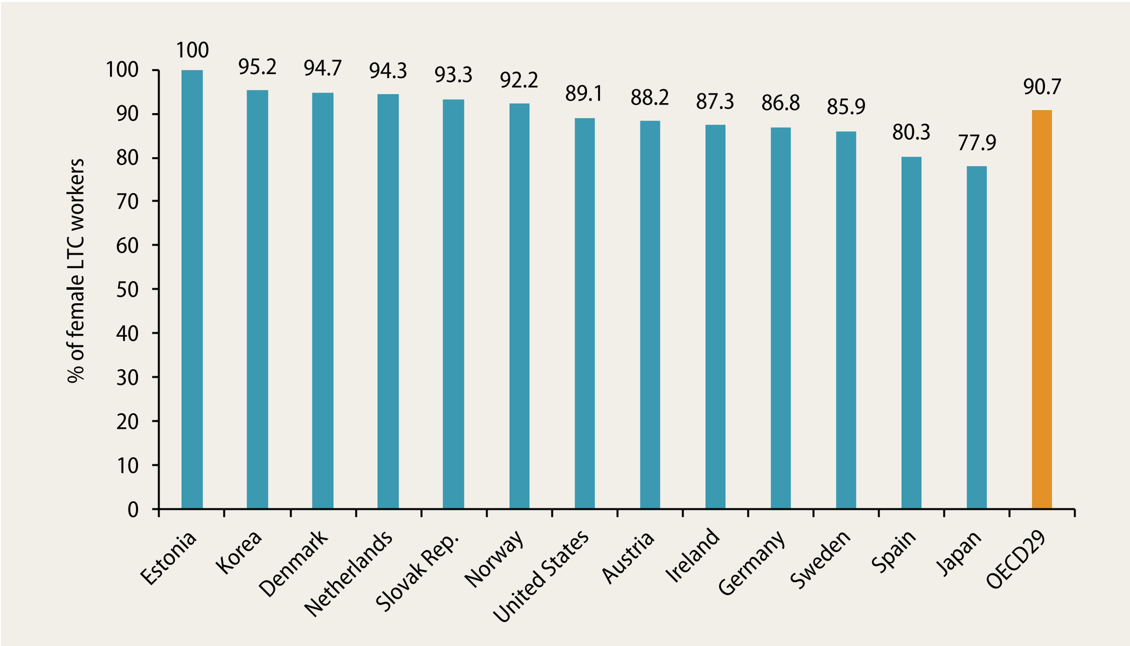
Information on female long-term caregivers however is limited in scope. While data exist on women's burden of caregiving for the elderly in several countries, in most cases these are higher income countries and formal caregiver. Less is available on the impact of caregiving on the lives of these women, or the types of support they need. The little evidence that exists however, points to increase in vulnerability of female caregivers, particularly informal caregivers. This section highlights some of the key issues that have been identified in the literature review on female caregivers in the context of LTC.

Whether through formal or informal arrangements, women are often the providers of long-term elderly care. According to one estimate about 67 percent of the healthcare workforce globally is comprised of women (WHO 2017b). About 60 percent of informal healthcare providers in OECD countries are women (OECD 2013), and a much higher proportion (90.7 percent) of LTC providers are women (Figure 8.14). An earlier study found that up to 80 percent of all health care and 90 percent of HIV/AIDS related illness care was provided at home, with little recognition of, or support for the care provider (Östlin 2009). Women's concentration in caregiving is related, at least in part, to the underlying gender-based division of labor and social norms that assign certain tasks, activities, and occupations as more suitable for one gender or the other. Occupations such as nursing and caregiving have thus been viewed as more suitable for women.

In many cases, women provide this care as they are aging themselves. Albertini et al. (2016) document that the largest amount of intergenerational time transfers are provided by middle-aged (45–65 years old) women to both the younger and older generations within the family in OECD countries. In China, an estimated 14 percent of people aged 45 years and over provide care for the elderly, with an additional 28 percent engaged in providing care for grandchildren. While women assume a crucial role in intrafamily care services, constituting the chief contributors of long-term care and childcare, their care contributions at home are not recognized as "social achievements" and are not monetarily compensated by the Chinese welfare state (Wang and Liu 2020). Women aged 55-59 years provide about 16 percent of elderly care, with another 45 percent providing childcare (World Bank 2016). In Colombia, Indonesia, and Poland, women aged 40 to 59, are 2 to 3 times more likely to provide care for older parents than men (Gatti et al. 2024). In the United States, the majority of care providers are also women, with a mean age of 46 years (Stone and Dawson 2008; Yamada 2002; Montgomery et al. 2005). Many are even older, with the proportion of home care workers over 65 years, roughly triple the mean age in other industries (Montgomery et al. 2005).

With population aging, the demand for LTC is expected to increase. According to estimates, by 2050, there will be roughly 1.5 billion persons aged 65 years or above (United Nations 2019). This is going to contribute to increase in the demand for formal and informal LTC arrangements. For example, in the United States about 71 percent of long-term care providers are direct care workers. It is estimat-

FIGURE 8.15 Share of female LTC workers in select OECD countries (% of total, latest available year)



Source: Adapted from OECD 2019.

ed that with population aging, the demand for their services will increase by 48 percent by 2030 if all else remains the same (U.S. Department of Health and Human Services 2017). In China, the demand for LTC services has already increased dramatically due to the aging population with an increase in population over 65 years from 96 million in 2003 to about 150 million in 2018. New studies examining disability patterns in 23 lower- and middle-income countries predict that the rate of severe activity limitations among older adults will remain relatively stable over the next three decades. Nevertheless, the total number of individuals facing activity limitations is expected to rise due to the significant growth in the older population (Glinskaya et al. 2024).

Given the trend for female employment in this field, it is likely that increased demand will draw more women into the care economy. Comprising nursing assistants, home health aides, personal care aides, and psychiatric aide, direct care workers play a crucial role in providing the majority of paid hands-on care, including supervision, medication administration and emotional support to the elderly and disabled. Notably, they are responsible for 8 out of every 10 hours of care provided (Dawson and Surpin 2001). An ILO study of 2020 confirmed that although in all countries women continue to be overrepresented in occupational categories associated with nursing and less-skilled health- and care-related functions (ILO/WHO 2022).

One of the key features of the care economy is its draw on migrant labor to provide care services. There are significant flows of care workers from low- and middle-income countries to high-income countries globally. For instance, 20 percent of care providers in the United States were migrants, mainly of Hispanic or Latino origin (Montgomery et al. 2005). Similarly, in Italy 83 percent of care providers were migrants (Polverini and Lamura 2004). Several countries are both, countries of origin and destination for the flow of migrant care workers. For instance, while Polish care workers have migrated for work across Europe (in particular, in Germany, Ireland, Italy, Sweden, and the United Kingdom), the country - at least the metropolitan area around Warsaw - has also experienced an influx of migrant care workers from Belarus and the Ukraine (Hoff 2011). These flows have also resulted in subtle changes in the gendered experience of migration: while in the past migration was typically associated with young male workers, increasing numbers of contemporary migrants are female working in eldercare (Leeson and Harper 2006).

While elderly care is a source of employment for women, it is generally associated with low waged work. In Japan, the United Kingdom, and the United States, caregivers typically earn between 50-70 percent of the average wage. Similarly, work-related benefits for LTC workers, such as pension or childcare benefits, tend to be limited (Hickey, Sawo, and Wolfe 2022). In addition, caregivers are frequently subject to long and irregular working hours, while their working situations are often precarious since part-time and short-term employment contracts are common (Witters 2011). Almost half (45 percent) of LTC workers in OECD countries work part-time, over twice the share in the economy as a whole (OECD 2020).

In Europe, where more information on LTC is available, evidence points to a high turnover of care providers. Difficult working conditions such as long shifts; having to manage complex health and physical care needs of elderly and providing end of life care to patients, which can take a mental and physical toll on the care giver, as well as being exposed to illness or aggressive behaviors from patients with mental health conditions such as dementia, combined with and low pay often generate high turnover among workers, and create difficulties in attracting highly motivated, highly qualified care staff. Overall, labor intensity in the LTC sector varies widely throughout Europe. Sweden and Germany have the highest ratio of formal workers against service users (1.1 and 1.0 respectively), compared with 0.19 and 0.15 in Estonia and the Czech Republic where formal LTC is still relatively under-developed. Moreover, qualification levels tend to be lower on average in relation to the healthcare sector overall, and the ratio of nurses to care workers is also low (Witters 2011). Poor job quality limits retention in LTC with a large body of evidence suggesting that shift work is associated with a wide range of health risks, such as anxiety, burnout, and depressive disorders (OECD 2020).

Stressful work conditions contribute to caregiver absenteeism. For example, in the US, it is estimated that this absenteeism is responsible for US$ 25.2 billion in lost productivity for the economy based on the average number of workdays missed per working caregiver, assuming US$200 million in lost productivity per day (Witters 2011).

The gap in care supply is often made up through the provision of informal supply by family and friends. The size of the informal family care workforce is at least double that of the formal care workforce in Denmark for example, and in some cases, it is estimated to be more than ten times the size of the formal-care workforce such as in Canada, New Zealand, United States, and The Netherlands (ENNHRI 2017). In fact, when formal services are unable to meet the demand for care because of high costs, or because of unavailability of services, it often falls on the shoulders of women in the household to provide care (e.g., Chawla, Betcherman, and Banerji 2007). Home-based support relies greatly on informal care provision (Sunwoo 2017), many older adults receive care from one or more family caregiver, and some caregivers may help more than one older adult. The circumstances of individual caregivers and the caregiver context are extremely variable with either family caregivers living with, nearby, or far away from the person receiving care. Nevertheless, the family caregiver's involvement is determined primarily by a personal relationship rather than by financial remuneration. The care they provide may be episodic, daily, occasional, or of short or long duration and can be provided in a variety of settings such as nursing homes, residential care facilities, and individual homes, and can include a variety of tasks.[9]

The balance between informal and formal care differs substantially from country to country and changes over time within countries as it is connected to particular political, economic, demographic, and cultural factors. In southern European countries, informal care remains the dominant source of home care. Without the work of these unpaid care givers, home care would be totally unsustainable, and many acute needs would remain unattended. The situation is different in northern European countries where informal care is less common because municipalities provide extensive personal care and domestic services (such as home help in Denmark, although private organizations may provide this with municipal funding), and informal care tends to focus on providing companionship and social support.

While the care economy has given a boost to women workers and female migration, several studies also find that care workers are also vulnerable to specific risks. In Europe for instance, care policies have exposed women migrants to three interconnected levels of inequalities through: (a) the

9 The scope of services ranges from in kind service provided to family members on a non-paid basis to bathing, eating, dressing, running errands, help with medication management, paying bills, transportation, meal preparation, and health maintenance tasks and managing financial affairs.

gendered and racialized everyday experiences of migrant women workers; (b) the polices of national welfare states to find ways of reducing the care costs associated with increased women's employment and an ageing society; and (c) in a transnational political economy of care in which big business and states drain poorer countries of their care resources by drawing on their labor force (Williams 2011).

Care work is labor intensive and has consequences for the care provider. One estimate puts the mean hours of informal care at 46 hours per week and the mean length of time spent on care related tasks is 60 months. Most often this care is provided by adult daughters or daughters in law, who may have to forego their own employment to provide the care (Albertini 2016; Karpinska et al. 2016; World Bank 2015). In 2018, the ILO estimated that at this pace, it will take 210 years to close the gender gap in unpaid care work (ILO 2018). Women may also make alternate work arrangements such as part-time or less demanding jobs. Evidence from the US suggests that compared to their male counterparts, women caregivers are more likely to make alternate work arrangements: taking a less demanding job (16% women vs. 6% men), giving up work entirely (12% women vs. 3% men), and losing job-related benefits (7% women vs. 3% men).[10]

In fact, informal care can be a major constraint to female labor force participation. A large body of evidence from different countries indicates that intensive (i.e., 20+ hours per week) informal care work has a negative impact on the likelihood of staying in the workforce (OECD 2011; Schmitz and Westphal 2017). A study conducted in Poland, Colombia, Egypt, and Indonesia reveals that there is a notable decrease in the likelihood of employment among both men and women who provide parental care, with the impact being more pronounced for women, in particular (Gatti et al. 2024). Women may face higher barriers to labor market entry or re-entry because of ageism or may be more likely stay out of the labor force to cater to the needs of children (or grandchildren) and elderly relatives - the so-called "sandwich generation". Indeed, this peak of inelastic care responsibilities usually coincides with women's most productive middle-age years. This has consequences for their present and future income as well as affecting their potential for qualifying for pensions and the size of these pensions when they are eligible to receive them. In turn, this has implication for their economic wellbeing. Stepping out of the labor market can reduce their lifetime income significantly and the amount of pension they qualify for. Moreover, those engaged in elderly care lack predictability in timing, duration, and intensity that comes with care, making it more difficult to negotiate a care and paid employment, particularly full-time employment (Keck and Saraceno 2009).

For those women who remain in employment while engaged in informal care, productivity (and thus, earnings) can be substantially reduced through different channels, such as change in choice of employment to accommodate care demands, including informal jobs that are less stable and offer lower wages and impacts on physical and mental health. Even timing of retirement is moderated by gender. For example, wives caring for their husbands have retirement odds 5 times greater than women who are not caregivers, whereas husbands caring for their wives are substantially slower to retire (Dentinger and Clarkberg 2002). Changes in the labor force participation of women do not appear to alter their caregiving responsibilities. In fact, time-demanding support obligations are more likely to fall on the shoulders of women, requiring them to multitask regardless of whether or not they were employed (Moen, Robison, and Fields 1994).

Female caregivers also suffer health challenges and other hardships due to caregiving. In low- and middle-income countries, despite having received inadequate attention health risks among informal caregivers were found to result in greater health burdens, particularly mental health, for women that were more prominent and manifested in more diverse ways for women relative to men (Bhan, Rao, and Raj 2020). For example, the prevalence of mental health issues is 20 percent higher in caregivers than in non-caregivers. Caregivers, especially those caring for men, were often distressed, and remained so over time (Li et al. 2022). This is partly because older men have more health, functional and behavioral problems that require more care, and partly because their caregivers are more likely to be their spouse and living together. Similarly, caregivers experience more hypertension, stress related chronic illness, and physical injuries since very often they

10 National Alliance for Caregiving and AARP. (2009). Caregiving in the U.S.: https://www.aarp.org/pri/topics/ltss/family-caregiving/caregiving_09.html [Accessed: December 8, 2022]

are untrained themselves and may lack sufficient support networks. Family members who spend long hours caring for older relatives with advanced dementia, for example, are especially at risk. Caregivers may lose income, Social Security and other retirement benefits, and career opportunities if they have to cut back on work hours or leave the workforce. This is especially true for caregivers with lower education. They may also incur substantial out-of-pocket expenses that may undermine their own future financial security. Certainly, earlier evidence from the US showed that single women caring for their elderly parents are 2.5 times more likely than non-caregivers to live in poverty in their own old age (Wakabayashi and Donato 2006).

However, overall data on these issues appears to be limited. While studies found that female caregivers (working or not) may suffer a particularly high level of economic hardship due to caregiving, none will address how these choices were made or whether they benefited from a support system (whether emotional, financial or network support). Women caregivers above 49 years fall in the intersectionality trap of menopause and caregiving. These women have specific reproductive health needs of their own. Although there are studies that focus on women as caregivers, there was limited information on menopause related health needs and support for caregivers for example. A 2019 study surveyed residents that recognized important knowledge gaps with regards to menopause, provision of comprehensive and compassionate care and definite room for improvement (Berga and Garovic 2019). Usually, when and if studied, mature women are done so often in the context of informal care or in the realm of dementia and their ability to deal with the stress of LTC of mentally ill patients. The choices these caregivers face at pivotal moments of their lives and the type of support available to them or lack thereof are not documented.

Women need cross-cutting support when they step into the care giving role – support to not only provide care to the elderly (e.g., training and awareness about resources), but also to take care of themselves (e.g., social protection). Thus, as also highlighted in literature, there is a necessity for policy makers and program planners to work together to provide accessible, affordable, and innovative support services and programs to support caregivers, especially women.

DISCUSSION

Men and women tend to experience aging differently, not just because of their biological differences, but also the socio-economic environment. This affects their health needs, demand, and access to health services. While there is a considerable body of literature that examines gender differences in health outcomes, few examine the structural and socio-economic factors behind these gender differences, particularly among aging populations. For instance, considerable attention is paid to certain reproductive health issues such as female and male cancers and menopause, but mainly in terms of clinical research. There is less focus on the socio-economic aspects or the quality of care for women as they exit their reproductive years. There is scope for further work in terms of access to healthcare services and barriers to health seeking behaviors among older women and men.

While each country has its own story to tell, gender differences exist in the prevalence of major non-communicable diseases such as CVD and diabetes, as well as in the burden of deaths. While the mortality from CVD is higher among men overall, for older age groups, the gap narrows among women and men, and the burden of deaths increases for women in the oldest age group (80 years and above). A similar pattern can be observed for diabetes. On the other hand, as women live longer, they also live longer with multimorbidity. It is important to recognize these differences and the implications of prolonged prevalence of diseases among women in terms of policy and practice. Interventions that bring services closer to women and make them more affordable for them, for example are necessary to ensure that older adults receive appropriate and timely care. At the same time, such approaches can also support healthy decisions and health seeking behaviors across the life course delaying onset of NCDs as discussed in other studies in the healthy longevity series.

Women's burden of depression is considerably higher than of men across the globe. On the other hand, a higher number of men die of self-harm (e.g., suicide). Some studies suggest that women's social lives, which are more integrated within their communities compared to men's, act as a buffer against self-harm and suicide among the older populations. On the other hand, studies also suggest that aging women face greater risks in terms of neglect or abuse due to their dependence on others and epidemiological studies suggest similar if not higher rates of attempted suicides as men. Addressing these issues necessitates not only availability of affordable and accessible mental health services (e.g., through different channels including online therapy) but also social and behavior change interventions that promote healthy behaviors and normalize the use of these services. This is particularly important for men, who often will avoid seeking help due, in part, to norms around masculinity and strength.

Women's vulnerabilities tend to exacerbate over time, especially in lower income settings and where social and gender norms create barriers to women's financial and social empowerment. Many women tend to rely on their families for support including their residence, mobility, and accessing health services or other formal or informal care. Although aging men also experience a growing dependence on others, they are less financially vulnerable compared to women. In higher incomes countries, these differences are less magnified, especially in the presence of some form of health insurance or social protection that both women and men have access to. However, affordability issues remain forefront, with mixed evidence on gender-based differences. This is likely due to the particular contexts of the countries being studied in terms of social norms, women's employment, and their access to social protection and health insurance.

A similar case can be made for access and affordability of health and long-term care (LTC) for the elderly. While informal, family-based care may still be the norm in many low-income countries, medical costs remain a barrier to appropriate care for the aging, particularly women (for all the reasons discussed earlier). In middle- and higher- income countries with more options for formal LTC, affordability is still a critical issue. Since women have lower labor force participation and employment rates or may drop out of the labor force early to provide care for family members (children, elderly), they are less likely to have adequate savings or social protection coverage compared to men. This puts them at a disadvantage.

When people do not have access to, or cannot afford, formal care, and when their families cannot or will not support them, LTC needs remain unmet. This leaves the elderly without the support they need for daily tasks such as washing and getting dressed. This can have a catastrophic effect their quality of life and contribute to early death. However, it is hard to discern the true extent of the problem, as highlighted by the OECD, since people who do not benefit from LTC are often outside formal systems, and may not have a voice because of their vulnerable position (OECD 2011).

Moreover, there are gendered considerations related to the supply of LTC, primarily due to the large proportion of women who provide care services. Female caregivers are more likely than males to make alternate work arrangements, for instance; or taking up fewer demanding jobs, or even giving up work entirely and losing job-related benefits.[11] Very little attention has been paid to the impact care giving has on their own health or their resources as they age, while caring for others. Although several studies have found that female caregivers (working or not) may risk economic hardship due to caregiving (e.g., Albertini 2016), more work is needed to understand how these decisions are made, their impact on women's overall health, and what type of support systems (whether emotional, financial or networks) if any, women benefit from.

This is also important for future policy making in an era of global aging. As it stands, women represent an invaluable underutilized reservoir of labor and productivity for countries. Ensuring their continued engagement in the labor markets, access to finance, and participation in social safety nets can improve their future access to health and long-term care. At the same time, women are an important human resource for LTC, both formal and informal. Policies and programs that support their roles as care givers and provide them with platforms for standardized training or other support, are important for improving the quality of care as well as enhancing the quality of life of care providers. While it is true that country contexts matter, and interventions may differ based on the specific policy environment, this is an important aspect to consider within these frameworks. Especially with the changes in family values and the international migration movements that leave aged parents behind and alone, making family care more difficult and increasing the demand for care offered by the government.

At the same time, quality of care matters. While standardized protocols and regulations are at the crux of quality control, their implementa-

11 Ibid.

tion varies. Unconscious bias may enter into standards and protocols of care for example because of a poor understanding of the age and sex differences in illness progression and treatment needs such as appropriate dosage. Similarly, implicit gender biases may exist in the treatment of patients, which in turn, can contribute to delays in women receiving appropriate care at the appropriate time. Elderly patients are also more likely to experience abuse at the hands of care givers, yet it can go unnoticed and unaddressed. While there has been some progress, better representation of women in clinical trials and in medical texts is still needed. On the latter, focus on provider training to improve their understanding of signs of abuse and reduce their own biases in service provision can go a long way in improving the quality of care for older adults.

All these issues indicate the need for examining gender differences further and making concerted efforts to address any gaps at the policy and programmatic levels in ensuring access to care, and provision of services. The findings are relevant for the World Bank and other organizations for strengthening country level work on human development. First, health is an important consideration in building human capital. As the findings indicate, there are gender differences in prevalence and mortality from NCDs especially in older age groups, as well as in access to and use of health care. It is crucial to recognize and address gender-based challenges, including for LGBTQ, when considering health policies and programs. This requires a systematic approach to examine, define, and include the needs of health care provision for the aging populations, focusing not only on currently aging societies but also younger countries such as in Africa where there is a dual burden of communicable and non-communicable diseases. This is especially relevant for the World Bank as it works with countries to implement Universal Health Coverage (UHC). The existence of UHC alone may not be a guarantee that people receive the services they need as the above discussion highlights. UHC too needs to be implemented as part of larger reforms within the health sector that aims to close gender gaps and reduce biases in service delivery as well as multi-sector interventions that reduce social and other access barriers to healthcare.

Second, the findings underscore the importance of addressing gender gaps in social protection and labor markets especially when considering 'retirement income' or pensions i.e., social security. Women's limited access to and use of health services is often to them being 'locked out' of formal systems, have disrupted employment, and lack financial resources, especially when they are old. The feminization of aging and poverty (i.e., there is a greater concentration of women in older age groups due to their longer life spans and limited financial capacity) exacerbates their vulnerability. Continued work on expanding labor market opportunities for women and strengthening social protection systems will be one key area for reducing the gender gaps in the healthcare sector and expanding women's access to health services. Earlier analytical work on aging by the World Bank (Brodmann, Coll-Black, and Von Lenthe 2023; Chawla, Betcherman, and Banerji 2007; Miglena, Arribas-Banos and DeMarco 2023; World Bank 2016) and in this HLI series (DeMarco et al. 2024; deSilva and Santos 2024) point to opportunities that can address these challenges such as reducing gender gaps in retirement age, exploring alternative pension schemes such as non-contributary pensions, promoting pay equity, and expanding women's opportunities in formal job markets. This also requires a paradigm shift on aging and older populations that recognizes them as active participants in the community and fosters their abilities for continued contribution to society.

Finally, good data is an important precursor to policy and programmatic intervention. The HLI has developed pilot dashboards that present key indicators relevant to measuring healthy longevity within the context of a country's priorities along the life course (Haldane et al. 2024; Wu et al. 2024). These indicators should be, to the extent possible, sex-disaggregated, and where necessary gender specific indicators should be added. However, the strength of these dashboards is only as good as the available data. Often data is incomplete and only disaggregated for a handful of indicators, especially in lower income countries with weak systems. Therefore, it remains important that HMIS and CRVS systems are strengthened and ensure wider coverage and collection of sex-disaggregated data.

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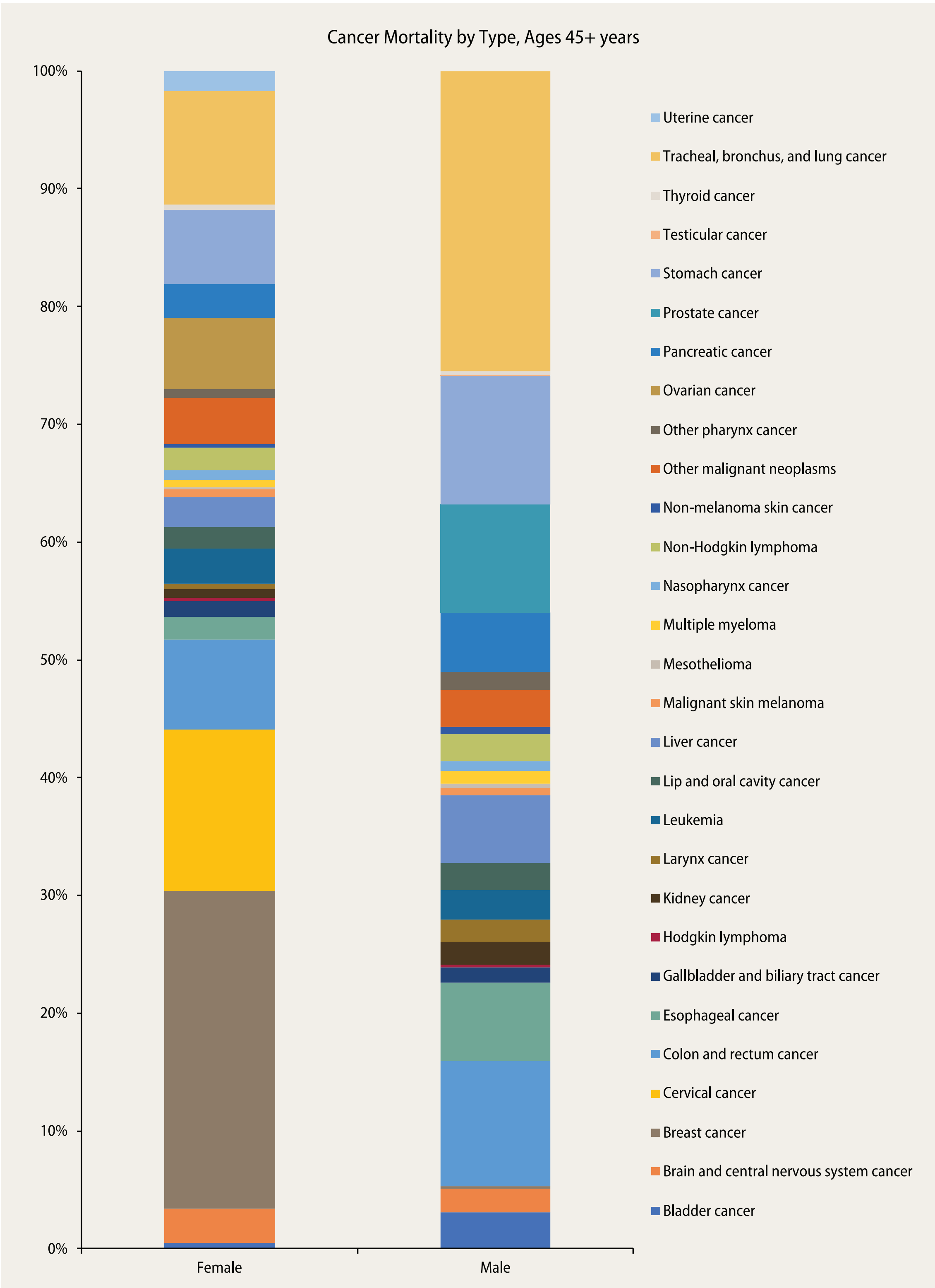
ANNEX 8.1

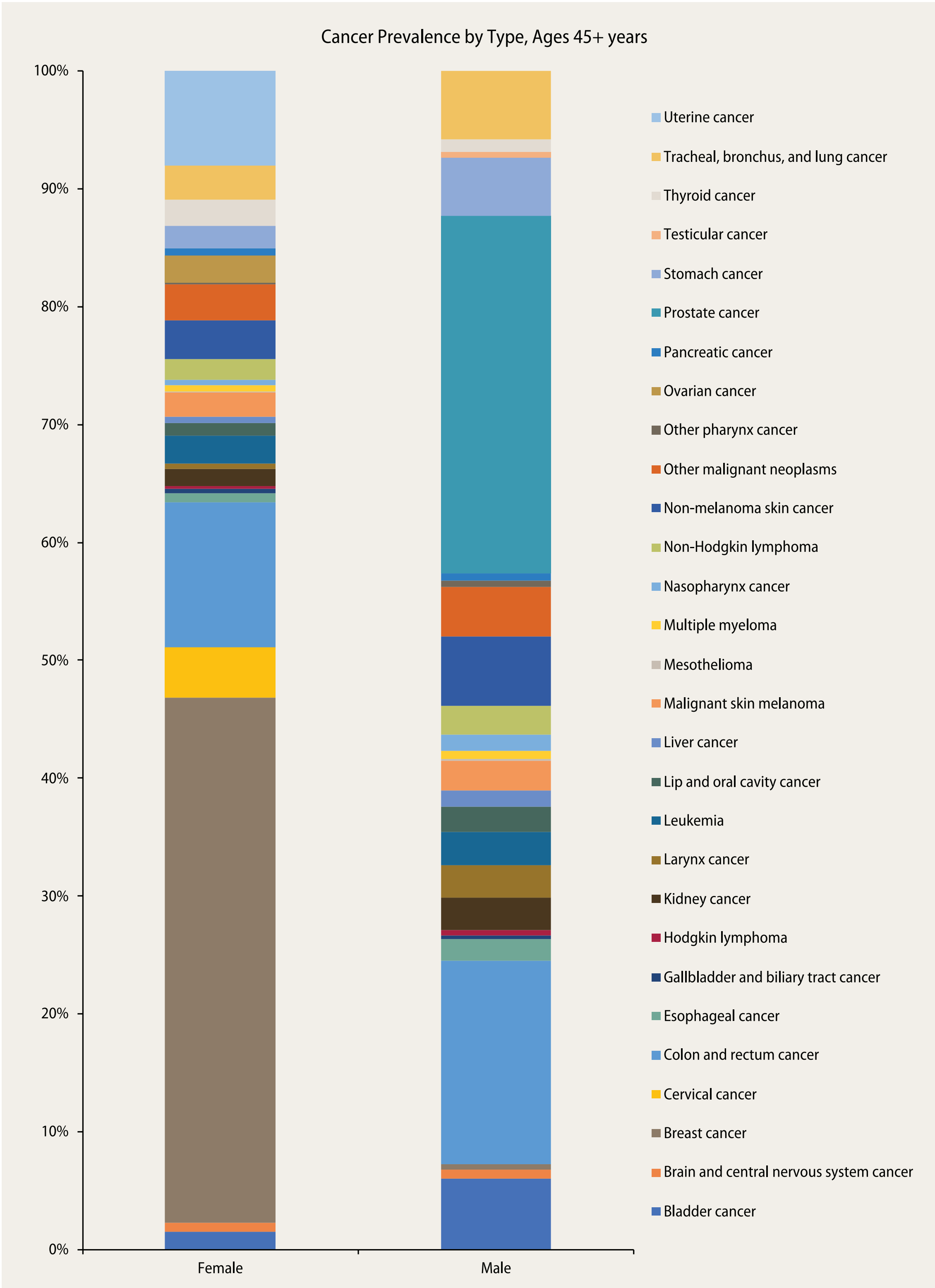
Cancer mortality and prevalence by type for older women and men

FIGURE 8A.1 **Cancer Mortality by Type, Ages 45+ years**



Source: IHME 2020

FIGURE 8A.2 Prevalence of Cancer by Type, Ages 45+ years



Source: IHME 2020