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HEALTH AND SOCIAL CARE

NATIONAL CARE SERVICE

Scotland's Health and Demographic Profile

This paper provides an overview of Scotland's health and demographic profile, drawing on evidence about life expectancy, healthy life expectancy, the burden of disease and multimorbidity, as well as population projections. It is part of an initial collection of contextual evidence papers, setting out key sources of information about social care and related areas in Scotland, linking to the National Care Service Consultation proposals published in August 2021.

Key findings

- Scotland's population has the lowest life expectancy and widest socio-economic inequalities in health in Western Europe. In 2018-20, life expectancy at birth in Scotland was 76.8 years for males and 81.0 years for females. The gap in life expectancy between the most and least deprived Scottish Index of Multiple Deprivation (SIMD) deciles was 13.5 years for males and 10.2 years for females.

- The estimated healthy life expectancy of a child born in Scotland in 2018-20 was 60.9 (± 0.5) years for males and 61.8 (± 0.5) years for females. While socio-economic inequalities in life expectancy are stark, socio-economic inequalities in healthy life expectancy are even wider. The estimated gap in healthy life expectancy between males and females across the most and least deprived deciles in 2018-20 was 24.4 and 24.2 years, respectively.

- While predicting future demand for social care is extremely challenging, National Records of Scotland project that Scotland's population is expected to age across the coming decades, with a substantial increase in the proportion of the population over the age of 65 years. The trend towards an increasing number of single adult households is also set to continue.

- A recent study found that 93% of people aged over 65 who received social care had two or more medical conditions simultaneously (multimorbidity).

Contents

1. Introduction

Following a brief overview of the drivers associated with demand for social care across the population, this paper provides an overview of the health profile of Scotland's population, including the distribution across the population of indicators such as life expectancy, healthy life expectancy, the burden of disease and multimorbidity. It then draws on projections made by National Records for Scotland (NRS) in relation to health and demographics across the coming decades, laying a foundation for discussion of how these shifts will come to shape demand for social care. Throughout the paper, focus is placed on aspects of population health and demographics which are relevant to the demand for social care. This paper incorporates evidence from both peer-reviewed academic and grey literature, including a number of recent statistical publications from National Records for Scotland (NRS).

This paper forms one of an initial collection of contextual evidence papers, setting out key sources of information about social care and related areas in Scotland, linking to the National Care Service Consultation proposals published in August 2021.

The collection consists of the following 6 papers on social care:

1. Scotland's Health and Demographic Profile
2. People who Access Social Care and Unpaid Carers in Scotland
3. Social Care Support and Service Provision in Scotland
4. Experiences of Social Care and Caring in Scotland
5. The Adult Social Care Workforce in Scotland
6. Adult Social Care in Scotland - Equality Evidence Overview

And papers on:

7. Children's Social Services
8. Justice Social Work in Scotland
9. Learning and evidence from national social care systems in Nordic and Scandinavian countries
10. Integrated Care Studies: The SCFNuka (Alaska) and Canterbury (New Zealand) Models

While the focus of this set of evidence papers is social care, there is an intrinsic link between social care and social work. Social work is a statutory role which involves assessing need, managing risk, and promoting and protecting the wellbeing of individuals and communities. Social care support is an umbrella term for adult, children's and justice services which directly support people to meet their personal outcomes. A social work evidence paper is being prepared for publication in summer 2022.

2. Factors associated with Demand for Social Care

Accurately forecasting demands for social care is highly complex, given that there is a vast range of mental and physical illnesses and conditions associated with need for social care, a range of associated treatments and services, and the factors which interplay with demand are wide-reaching and challenging to predict (including technological developments in healthcare and treatment)[1]. Factors which have been noted as associated with demand for social care in the previous literature include prevalence rates of disease[2], mortality rates[3], cultural attitudes towards social care of older adults[4], future health profile projections[5], living arrangements[6] and the socio-economic profile of the population[7]. However, making projections based on current rates of social care utilisation, or by the current health profile of the population is complex and uncertain.

3. Overview of Scotland's Health Profile

This section provides an overview of the health profile of Scotland's population, placing focus on aspects relevant to the development of a National Care Service. It outlines the country's health profile in terms of overall life expectancy, healthy life expectancy, the burden of disease and multimorbidity. Throughout these subsections, it explores how these indicators are shaped by socio-economic and demographic factors. While some emphasis is placed on measures such as life expectancy, it is important to note that demand for social care is not restricted to those of older age. As noted in the section on multimorbidity and healthy life expectancy, demand for social care is seen across a far wider section of Scotland's population.

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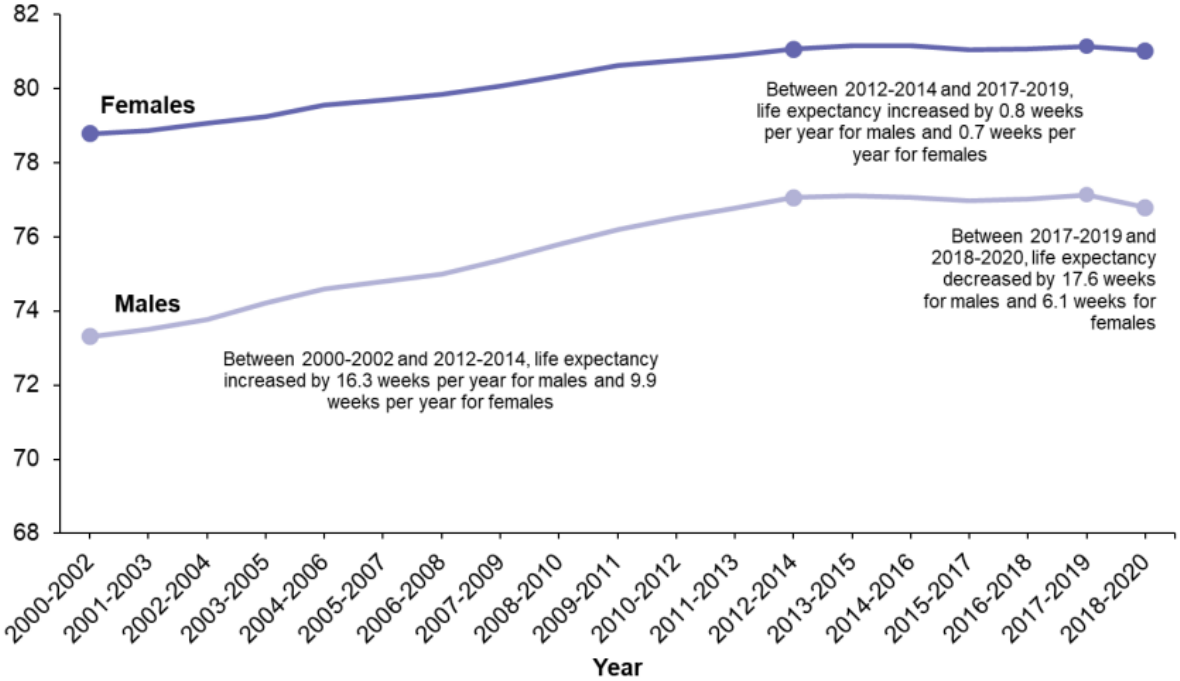
[1] Worral, P. & Chaussalet, T.J. (2015). A structured review of long-term care demand modelling. Health Care Management Science, 18: 173-194.
[2] Macdonald A, Cooper B (2007) Long-term care and dementia services: an impending crisis. Age and Ageing 36(1):16–22.
[3] Comas-Herrera A, Whittenberg R, Pickard L, Knapp M (2007) Cognitive impairment in older people: future demand for long-term care services and the associated costs. Int J Geriatr Psychiatr 22(10):1037–1045
[4] Kim E-Y, Kim C-Y (2004) Who wants to enter a long-term care facility in a rapidly ageing Non-western society? attitudes of older Koreans toward long-term care facilities. J Am Geriatr Soc 52(12):2114–2119
[5] Karlsson M, Mayhew L, Plumb R, Rickayzen B (2006) Future costs for long-term care - cost projections for long-term care for older people in the united kingdom. Health Policy 75(2):187–213
[6] Martikainen P, Moustgaard H, Murphy M, Einio EK, Koskinin S. et al (2009) Gender, living arrangements and social circumstances as determinants of entry into/exit from long-term institutional care at older ages: a 6-year follow-up study of older Finns. The Gerontologist 49(1):35–45.
[7] Henderson, D.A.G.; Atherton, I.; McCowan, C.; Mercer, S.W. & Bailey, N. (2021). Linkage of national health and social care data: a cross-sectional study of multimorbidity and social care use in people aged over 65 years in Scotland. Age & Ageing, 50: 176-182.

3.1 Life Expectancy

3.1.1 Overview

Scotland has the lowest life expectancy at birth of any Western European country[8,9]. In 2018-2020, life expectancy at birth[10] in Scotland was 76.8 years for males and 81.0 years for females[11]; 2.3 and 1.8 years shorter than across the UK as a whole, respectively.

Figure 1: Trends in life expectancy in Scotland. 2000-2002 to 2018-2020



Source: Life Expectancy in Scotland 2018-2020: Report (nrscotland.gov.uk)

Having increased since the early 1980s, life expectancy in Scotland remained virtually unchanged between 2012-2014 and 2017-2019. Between 2017-2019 and 2018-20, life expectancy across Scotland declined, dropping below the 2012-2014 figure (Figure 1). This represents a decrease of around 17.6 weeks (0.3 years) for males and 6.1 weeks (0.1 years) for females since the previous year's estimates - the biggest annual decrease since the series began. A similar stalling in trends has been seen across the rest of the UK and some other countries including the USA, with life expectancy having fallen over the latest year in all UK countries.

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[8] Eurostat Data browser. Life expectancy at birth by sex

[9] National Records of Scotland (2021) Life Expectancy in Scotland 2018-2020

[10] The life expectancy estimates presented in this report relate to 'period' life expectancy. They are calculated assuming that mortality rates for each age group in the time period (here 2018-2020) are constant throughout a person's life. Given that future changes in factors such as medicine and legislation are not taken into consideration, period life expectancy is not an accurate prediction of how long a person born today will actually live, but is a useful measure of population health at a point in time and is most useful for comparing trends over time, between areas of a country and with other countries.

[11] National Records of Scotland (2021) Life Expectancy in Scotland 2018-2020

In terms of direct causes underlying this decrease, deaths from Covid-19 accounted for the majority, while drug-related deaths and deaths from external causes (including accidents and suicides) also had a negative effect on life expectancy. Wider analyses have suggested that UK Government changes to tax and welfare from 2010/11 have contributed to these trends[12].

3.1.2 Socio-economic Inequalities in Life Expectancy

As well as the lowest life expectancy, Scotland has the widest socio-economic inequalities in health[13] of any country in Western Europe. While life expectancy varies between geographical areas, like local authorities and health boards, the difference in life expectancy is far greater when levels of deprivation are taken into account. In 2018-20, the gap in life expectancy between the most and least deprived Scottish Index of Multiple Deprivation (SIMD) deciles[14] was 13.5 years for males (68.9 – 82.4 years) and 10.2 years for females (75.4 – 85.6 years) (Figure 2). This gap has widened over the past few years, growing by 1.3 years for males and 1.6 years for females since 2013-2015, with life expectancy falling in the most deprived and increasing in the least deprived areas[15].

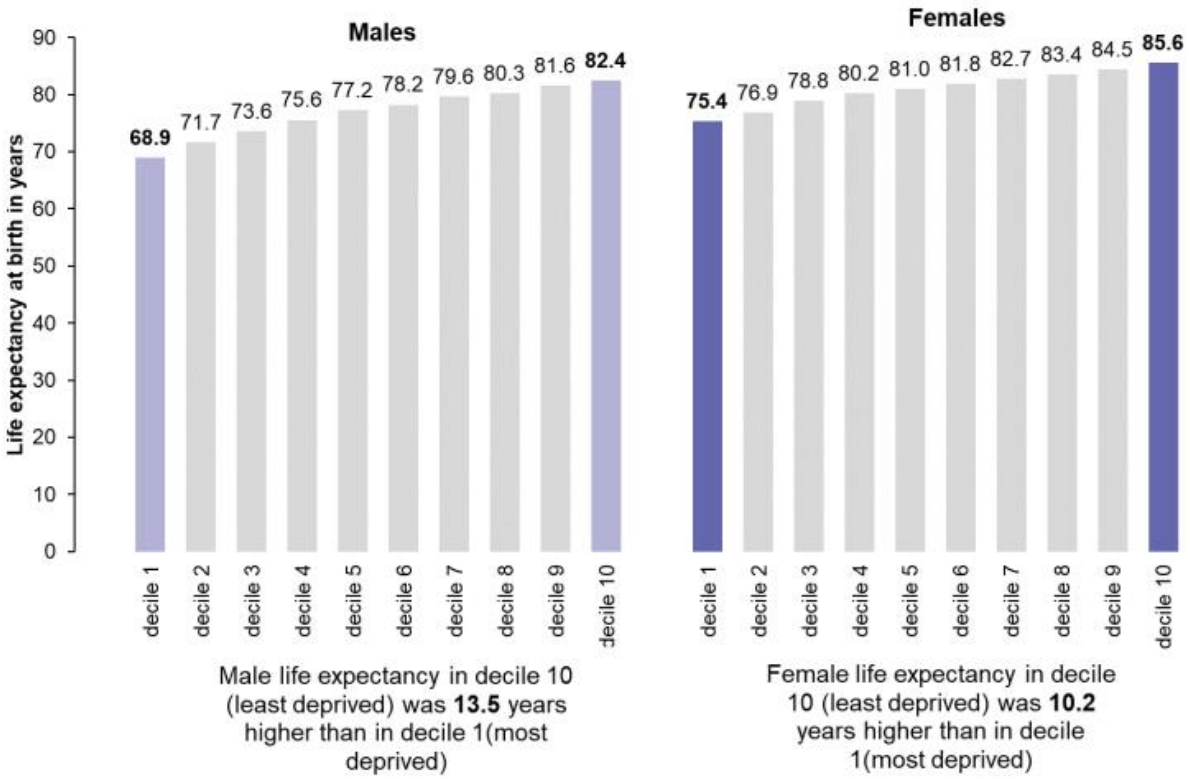
[12] Richardson E, Taulbut M, Robinson M, et al (2021) The contribution of changes to tax and social security to stalled life expectancy trends in Scotland: a modelling study. J Epidemiol Community Health 2021;75:365-370.

[13] Popham F. and Boyle, P. (2011) Assessing Socio-Economic Inequalities in Mortality and Other Health Outcomes at the Scottish National Level: Final Report. Scottish Collaboration for Public Health Research and Policy

[14] The Scottish Index of Multiple Deprivation (SIMD) is a measure of how deprived an area is. A score is given to all of Scotland's datazones (small area geographies) based on several indicators of deprivation. The datazones are then ranked 1 to 6,976 based on their score. The rankings are split into 10 equally sized groups for SIMD deciles and five groups for SIMD quintiles. More information can be found on the Scottish Government website: Scottish Index of Multiple Deprivation 2020 - gov.scot (www.gov.scot)

[15] Walsh D, McCartney G, Minton J, et al. Changing mortality trends in countries and cities of the UK: a population based trend analysis. BMJ Open 2020;10:e038135

Figure 2: Life Expectancy at birth by SIMD decile, 2018-2020



Source: Life Expectancy in Scotland 2018-2020: Report (nrscotland.gov.uk)

3.1.3 Geographic Inequalities in Life Expectancy

There are also substantial geographic inequalities in health across Scotland, largely reflecting socio-economic inequalities between areas. Across council areas, female life expectancy at birth was highest in East Renfrewshire (84.0 (±0.6) years) and lowest in Glasgow City (78.3 (±0.3) years). Male life expectancy at birth was highest in Shetland Islands (80.6 (±1.3) years) and lowest in Glasgow City (73.1 (±0.3) years); this represents 5.7 fewer years of life for females and 7.5 fewer years of life for males compared with East Renfrewshire and Shetland Islands respectively. The rate of growth in life expectancy has slowed or stalled in the majority of Scotland's local authority areas since 2012-2014 and many areas now have decreasing life expectancy, with Inverclyde, Dundee City and South Ayrshire experiencing some of the biggest decreases.

Life expectancy also varies by rurality across Scotland. People living in more rural areas generally live longer and spend more years in good health than those in more urban areas[16]. For males, life expectancy was highest in 'Accessible Rural' areas at 79.4 (±0.3) years and lowest in 'Large Urban' areas (75.7 ±0.2 years). For females, it was highest in 'Remote Rural' areas at 83.2 (±0.3) years and lowest in 'Other Urban' areas (80.2 ±0.1 years). This is

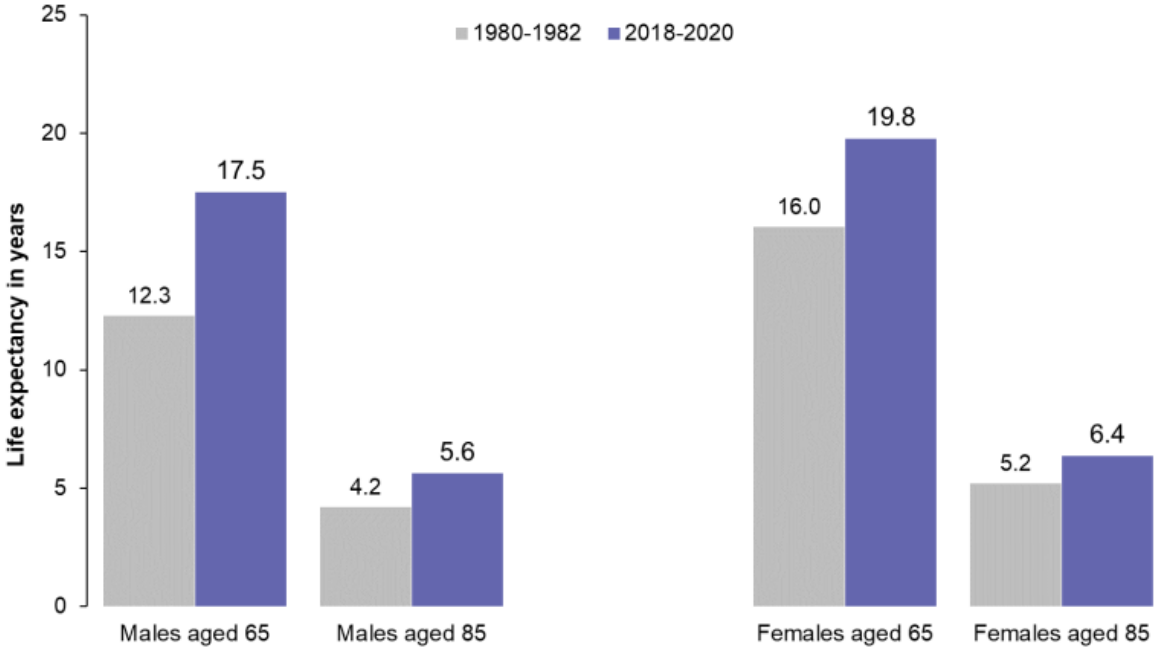
[16] Further information on the Scottish Government's Urban Rural Classification can be found on the Scottish Government website

relevant to the development of a National Care Service given the challenges associated with rural services, which may require greater service costs, stemming from reduced opportunities for economies of scale, higher travel costs and time, and challenges relating to staffing, training, development and partnership working[17].

3.1.4 Life Expectancy at Older Ages, and 'Time to Death'

Another relevant measure of life expectancy estimates the number of years individuals aged 65 years can expect to live. In 2018-20, 65 year old males and females could expect to live another 17.5 and 19.8 years, respectively. For 85 years old males and females, life expectancy in 2018-20 was 5.6 years and 6.4 years, respectively. Figure 3 shows how life expectancy at older ages has changed since 1980-82. Life expectancy for males aged 65 has increased by 5.2 years across this time series, and by 3.7 years for females. For those aged 85, life expectancy for males has increased by 1.4 years, and 1.2 years for females, between 1980-1982 and 2018-20.

Figure 3: Life Expectancy at older ages in Scotland, 1980-1982 and 2018-20



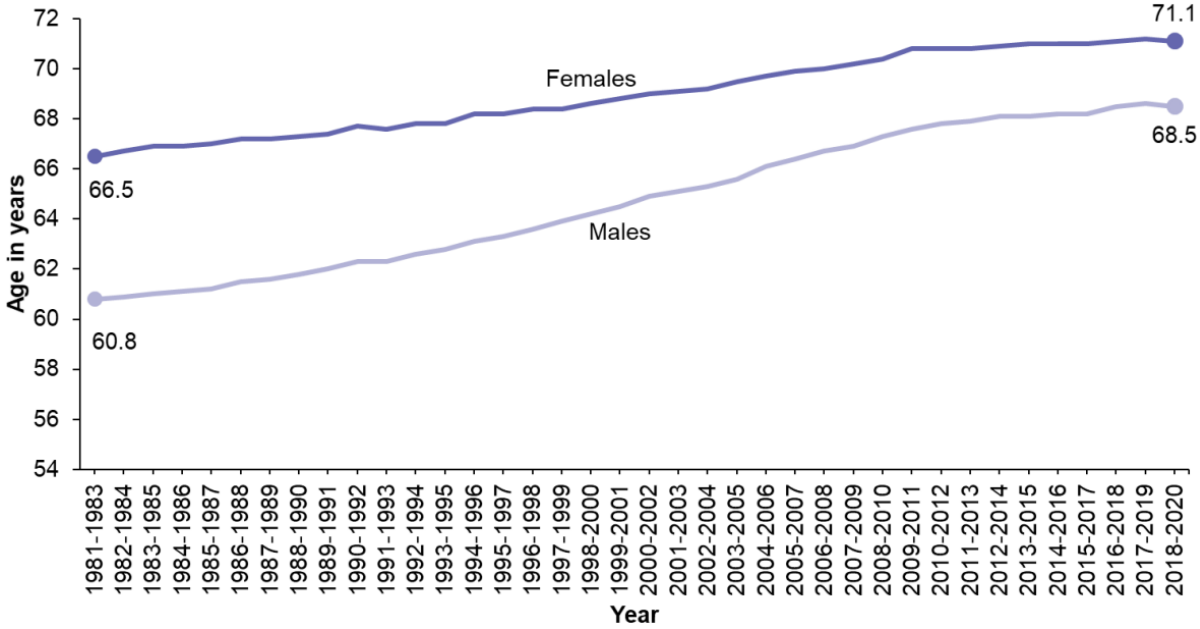
Source: Life Expectancy in Scotland 2018-2020: Report (nrscotland.gov.uk)

Life expectancy estimates can also be used to look at population ageing. As life expectancy increases, the age at which a person is 'elderly' or approaching death changes. This definition is important, as we define the 'elderly' population as those aged over 65. However, studies show that a lot of the health problems related to old age are more closely associated with how

[17] Asthana, S. and Halliday, J. (2004), What can rural agencies do to address the additional costs of rural services? A typology of rural service innovation. Health & Social Care in the Community, 12: 457-465.

long someone has left to live, rather than how long they have already lived. This means it may be more useful for health and social care policy to look at how many people have only 15 years of life expectancy remaining, rather than the number of people aged 65 and over. Figure 4 shows the average age at which males and females in Scotland have only 15 years of life remaining. This age has risen from 66.5 in females in 1981-1983 to 71.1 in 2018-2020. For males, the average age at which 15 years of life remains has risen from 60.8 to 68.5 over the same period.

Figure 4: Age at which a person has 15 years remaining life expectancy in Scotland, 1981-1983 to 2018-2020



Source: Life Expectancy in Scotland 2018-2020: Report (nrscotland.gov.uk)

3.2 Healthy Life Expectancy

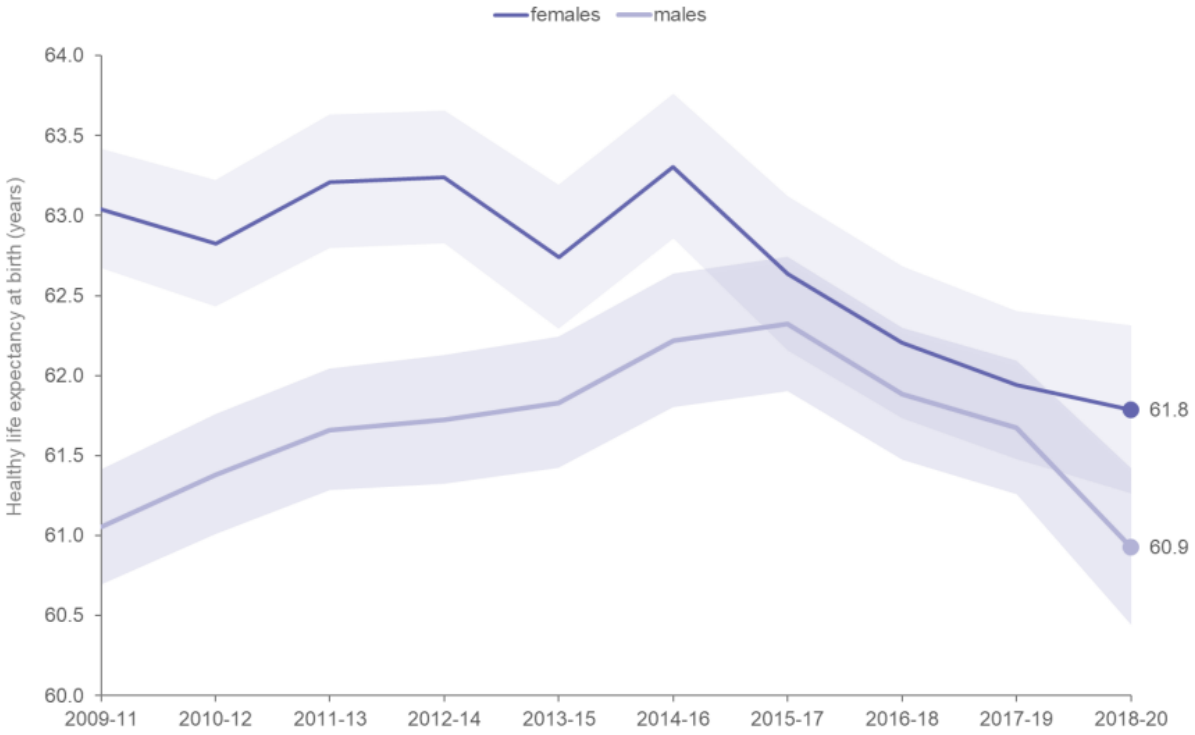
3.2.1 Overview

Healthy life expectancy (HLE) is an estimate of the number of years lived in 'very good' or 'good' general health, based on how individuals perceive their state of health at the time of completing the annual population survey (APS)[18]. The estimated healthy life expectancy of a child born in 2018-20 was 61.8 (± 0.5) years for females, and 60.9 (± 0.5) years for males[19]. For males, HLE at birth increased between 2009-2011 and 2015-2017, but has decreased since and is now lower than in 2009-2011. Female HLE at birth was relatively stable between 2009-2011 and 2014-2016 but has since decreased each year (Figure 5).

[18] For further information, see NRS Methodology: https://www.nrscotland.gov.uk/files//statistics/life-expectancy-15-17/le-methodology-feb-19.pdf
[19] National Records of Scotland (2022). Healthy Life Expectancy in Scotland, 2018-2020

Although both life expectancy and HLE have fallen for males in recent years, HLE has done so at a faster rate. This means that a greater proportion of life will likely be spent in poor health than in previous years. Life expectancy at birth for females has experienced relatively little change since 2010-2012 although it has fallen by a larger amount over the past year. HLE has consistently been higher for females than males but by a much smaller margin than overall life expectancy and in the last few years the difference has not been statistically significant. This means that a greater proportion of life for females is spent in poor health compared to males. The proportion of life spent in good health has also been decreasing more rapidly for females than males.

Figure 5: Healthy life expectancy at birth in Scotland, 2009-2011 to 2018-2020



* The shaded area shows the upper and lower 95% confidence intervals.

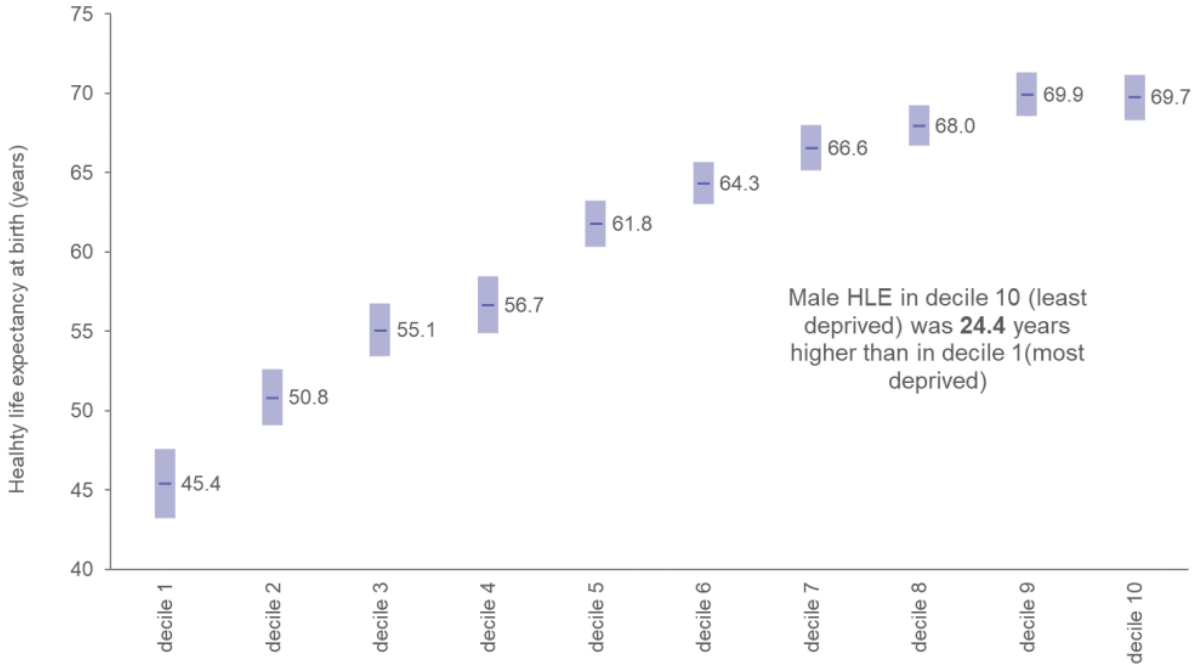
Source: Healthy Life Expectancy 2018-2020 (NRS)

3.2.2 Socio-economic Inequalities in Healthy Life Expectancy

Socio-economic inequalities in healthy life expectancy are wider than inequalities in life expectancy. Using SIMD deciles[20], males born in the most deprived decile were estimated to have an HLE of 45.4 (±2.2) years, compared to 69.7 (±1.4) years for males in the least deprived decile; a difference of 24.4 years (Figure 6). Females born in the most deprived decile were estimated to have an HLE of 48.6 (±1.9) years, compared to 72.9 (±1.4) years for females in the least deprived decile; a difference of 24.2 years (Figure 7).

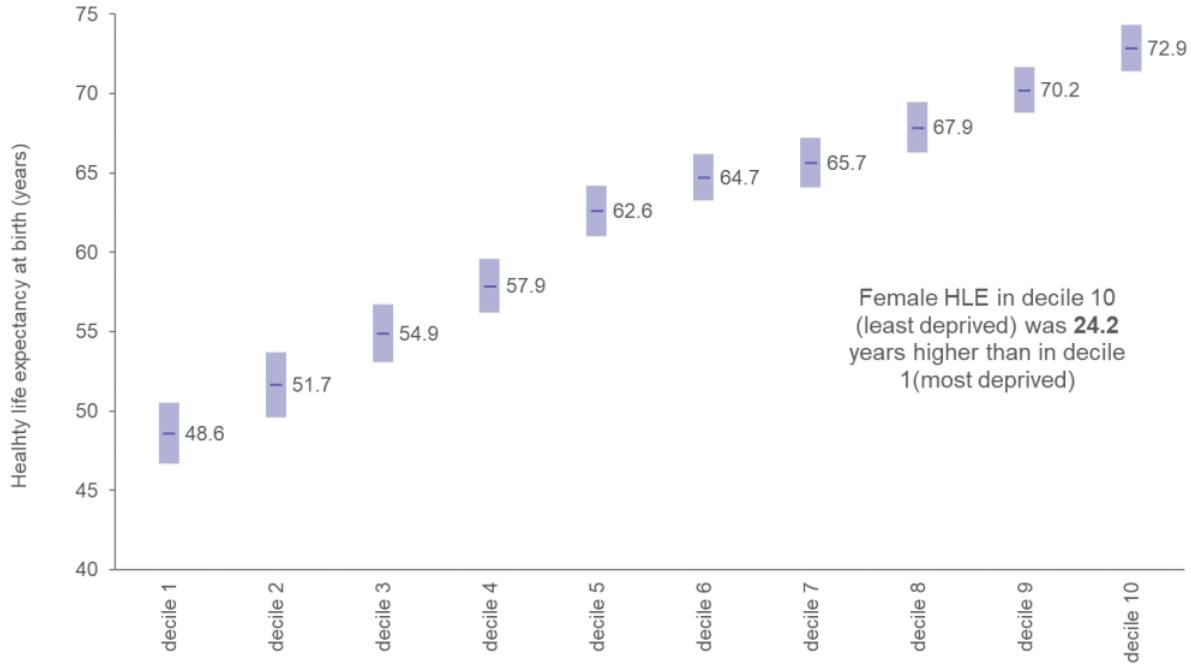
[20] See footnote 14 for further information.

Figure 6: Healthy life expectancy at birth by SIMD decile with 95% confidence intervals, 2018-2020, males



Source: [Healthy Life Expectancy 2018-2020 (NRS)]

Figure 7: Healthy life expectancy at birth by SIMD decile with 95% confidence intervals, 2018-2020, females



Source: [Healthy Life Expectancy 2018-2020 (NRS)]

Males in the least deprived areas are expected to spend 84.6% of their life in good health compared with 65.8% in the most deprived areas. Females in the

least deprived areas are expected to spend 85.2% of their life in good health compared with 64.5% in the most deprived areas.

For both males and females, the difference in HLE between the most and least deprived areas is much larger than the difference in LE. The result of this is that people in the most deprived areas not only have shorter life expectancy and lower HLE, but they also have a smaller proportion of life spent in good health.

3.2.3 Geographic Inequalities in Healthy Life Expectancy

There are also wide regional variations in HLE, again largely rooted in socio-economic inequalities. For males in 2018-20, HLE at birth was highest in Orkney Islands (71.2 (±5.1) years), East Renfrewshire (68.7 (±1.8) years) and Na h-Eileanan Siar (68.3 (±3.1) years). For females in 2018-20, HLE at birth was highest in Orkney Islands (77.5 (±3.6) years), Na h-Eileanan Siar (67.5(±3.8) years) and East Renfrewshire (67.0 (±2.7) years). In comparison, for males in 2018-20, HLE at birth was lowest in Inverclyde (54.4 (±2.8) years), Glasgow City (56.0 (±1.8) years) and Dundee City (56.1 (±2.3) years). For females in 2018-20, HLE at birth was lowest in North Ayrshire (54.0 (±2.5) years), North Lanarkshire (55.5 (±2.4) years) and Glasgow City (57.4 (±2.2) years)[21].

The difference between the HLE expectancy estimates in the most urban and most rural areas is 6.9 years for males and 3.6 years for females. The rural categories show the highest HLE estimates whilst the urban areas have the lowest in both males and females.

3.2.4 Healthy Life Expectancy at Older Ages

Another measure is HLE at 65 years. In 2017-19, the estimated HLE at 65 years was 10.7 (± 0.3) years for females and 9.9 (± 0.3) years for males.

Over the last decade, male HLE at 65 has experienced an increase whilst female HLE at 65 has remained relatively unchanged since 2009-2011. Due to an ageing population, this means females are estimated to spend a greater proportion of their life in bad health than previously experienced, as the healthy life expectancy at 65 is not increasing in line with the increasing life expectancy.

[21] Some of the island council areas are amongst those with the highest recorded HLE estimates, however they also have the widest confidence intervals because they have small populations and this makes their HLE estimates less reliable. Further information is available in NRS Healthy Life Expectancy 2018-2020

3.3 Burden of Disease

Burden of disease is a measure of the health of the population. It aims to quantify the difference between living to old age in good health, and the situation in which healthy life is shortened by illness, injury, disability and early death[22]. The latest data on the burden of disease across Scotland come from ScotPHO, whose Scottish Burden of Disease (SBoD) study team have produced comprehensive estimates of Scotland's disease, condition and injury burden for 2016[23].

The health problems which cause the most non-fatal burden (proportion of the year lived with disability – YLD), include disability associated with anxiety, depression and dementia, along with diseases linked to health-related behaviours (in relation to diet, exercise, tobacco, alcohol and drugs[24]), and those caused by our living longer. Figure 8 displays the leading causes of disability in Scotland. ScotPHO note that there were more person-years[25] lived in less than ideal health due to depression in 2016 than there were lost to early deaths from lung cancer, and more person-years lived in less than ideal health due to low back and neck pain than lost to early deaths from stroke.

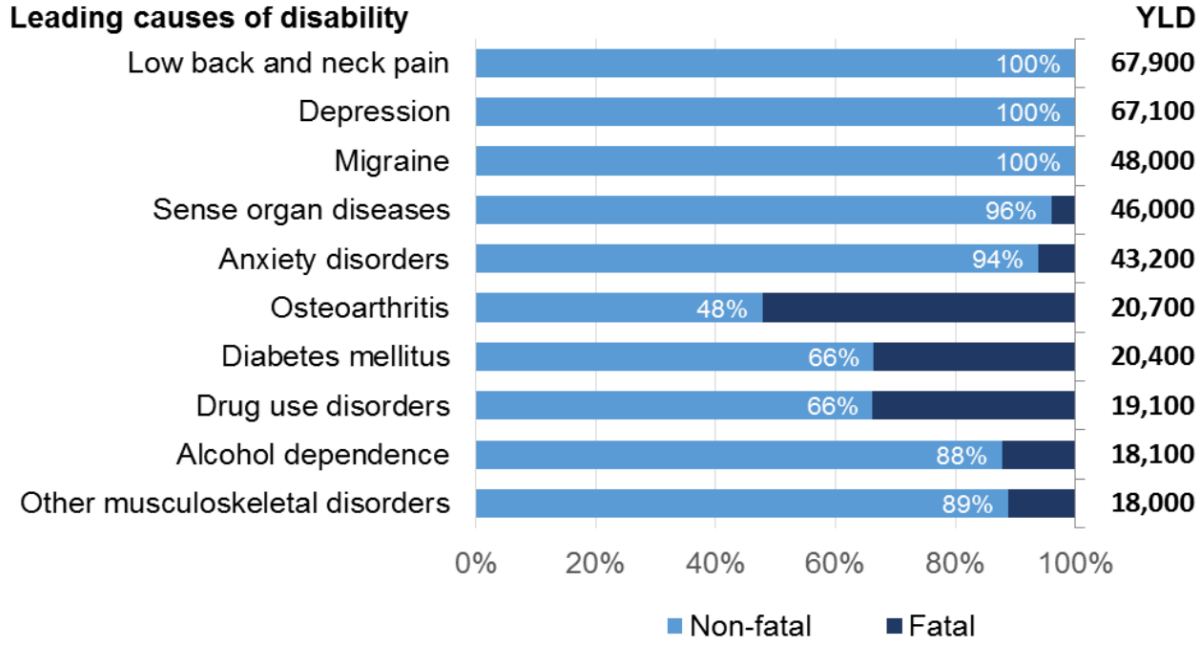
[22] Burden of disease studies use a single measure which combines fatal burden [i.e. years lost because of early death – years of life lost (YLL)] and non-fatal burden [i.e. years lost because they are lived in less than ideal health – years lived with disability (YLD)]. The measure used to describe the overall burden of disease is called the disability-adjusted life year (DALY).

[23] ScotPHO Archive - Scottish Burden of Disease (SBoD)

[24] It is important to note that a vast body of epidemiological and sociological research highlights that health-related behaviours are shaped to a large degree by structural determinants, and that socio-economic inequalities in health persist even when these behaviours are controlled for statistically. See: Katikireddi, S.V.; Higgins, M.; Smith, K.E. & Williams, G. (2013). Health inequalities: The need to move beyond bad behaviours. Journal of Epidemiology & Community Health, 67(9): 715-716.

[25] Person-years is a measure of incidence of a particular condition. It refers to the number of years times the number of members of a population who have been affected by a certain condition.

Figure 8: Leading causes of disability (total years of life with disability: YLD), Scotland, 2016



Source: ScotPHO (2016) The Scottish Burden of Disease Study, 2016: Overview Report

There are wide inequalities in the burden of disease by socio-economic deprivation. Overall, 1,305,000 disability adjusted life years (DALY) were lost due to ill health or early death in Scotland in 2016[26]. This ranged from around 184,000 (14.1% of the total) in the most deprived areas to 88,000 (6.7%) in the least deprived areas of Scotland[27]. Total burden increased with increasing levels of deprivation. An estimated 32.9% of these DALY are 'excess'; the total burden that would have been avoided if all deprivation deciles had the same rate as the least deprived areas in Scotland. Over 50% of the total burden in the most deprived decile was excess, in comparison with the least deprived.

3.4 Multimorbidity

Discussion of multimorbidity is relevant here as it has multiple implications, including mortality, unplanned hospital admissions[28], primary care consultations, polypharmacy, and the need for care[29]. The proportion of individuals who have two or more medical conditions simultaneously (referred to as 'multimorbidity') has risen across high income countries, including the

[26] ScotPHO (2016) The Scottish Burden of Disease Study, 2016: Overview Report
[27] ScotPHO (2016) The Scottish Burden of Disease Study, 2016: Deprivation Report
[28] Payne RA, Abel GA, Guthrie B, Mercer SW. (2013). The effect of physical multimorbidity, mental health conditions and socio-economic deprivation on unplanned admissions to hospital: a retrospective cohort study. Canadian Medical Association journal; 185(5): E221 -8
[29] Palmer, K.; Marengoni, A.; Forjaz, M.J.; Jureviciene E.; Laatikainen, T.; Mammarella, F. et al (2018). Multimorbidity care model: Recommendations from the consensus meeting of the Joint Action on Chronic Diseases and Promoting Healthy Ageing across the Life Cycle (JA-CHRODIS). *Health Policy,* 122(1): 4-11.

UK[30], partly reflecting increases in life expectancy across recent decades. Projections suggest that this trend is set to continue[31]. While these trends reflect the ageing profile of populations, it is important to note that multimorbidity is not restricted to older people.

A recent cross-sectional study which linked national health and social care data to explore multimorbidity and social care use in those aged over 65, found that 93.3% of those receiving social care had multimorbidity, and that 16.2% of those with multimorbidity had received social care, compared with 3.7% of those without[32]. This study also explored how a number of factors – age, deprivation and gender – affected the likelihood of receiving social care. Age showed the largest margin of effect; compared with those aged 65-69 years old, the probability of receiving social care increased by 2.2% in the 70-74 age group, to almost 50% for those aged over 95 years. Those in the most deprived SIMD decile were 5.5% more likely to receive social care compared with those in the least deprived. Small gender differences were apparent too, with women having a 3.2% increased probability of receiving social care than men.

While now a decade old, a nationally representative study of almost 1.8 million people in Scotland derived from primary care electronic records found a multimorbidity prevalence rate of 24%, with the majority of people over the age of 65 years having multimorbidity[33]. Again, this study also found inequalities in multimorbidity across Scotland, with people living in the most deprived areas having higher rates of multimorbidity, with onset 10-15 years earlier, than those living in the least deprived areas. The combination of mental and physical health problems is most common in deprived areas, although pain and depression are in the top five conditions in people with multimorbidity of all ages, and across all deprivation levels[34].

A recent study also demonstrated inverse care from GPs in relation to multimorbidity in Glasgow; despite the greater need of patients with multimorbidity in deprived areas, the study found longer consultation length, higher GP patient centeredness and higher perceived GP empathy in less deprived areas of the city[35].

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[30] Academy of Medical Sciences (2018) Multimorbidity: A Priority for Global Health Research.
[31] Whitty C J M, MacEwen C, Goddard A, Alderson D, Marshall M, Calderwood C et al. Rising to the challenge of multimorbidity
[32] Henderson, D.A.G.; Atherton, I.; McCowan, C.; Mercer, S.W. & Bailey, N. (2021). Linkage of national health and social care data: a cross-sectional study of multimorbidity and social care use in people aged over 65 years in Scotland. Age & Ageing, 50: 176-182.
[33] Barnett K, Mercer SW, Norbury M, Watt G, Wyke S, Guthrie B. (2012). Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study. Lancet; 380(9836): 37-43.
[34] McLean G, Gunn J, Wyke S, et al. (2014). The influence of socio-economic deprivation on multimorbidity at different ages: a crosssectional study. The British journal of general practice. The journal of the Royal College of General Practitioners, 64(624): e440-7.
[35] Mercer, S.W.; Zhou, Y.; Humphris, G.M.; McConnachie, A.; Bakshi, A.; et al. (2018). Multimorbidity and Socio-economic Deprivation in Primary Care Consultations. Ann. Fam. Med., 16(2): 127-131.

4. Projections

This section briefly explores a number of projections which have been made, primarily by NRS, which are relevant to the development of a National Care Service. Population projections have limitations. A projection is a calculation showing what happens if particular assumptions are made. The population projections are trend-based. They are, therefore, not policy-based forecasts of what the government expects to happen. Many social and economic factors influence population change, including policies adopted by both central and local government. The relationships between the various factors are complex and largely unknown. Nonetheless, projections of the number of adults (particularly older people) are usually more reliable than those for children because they are based on people who are already living in Scotland.

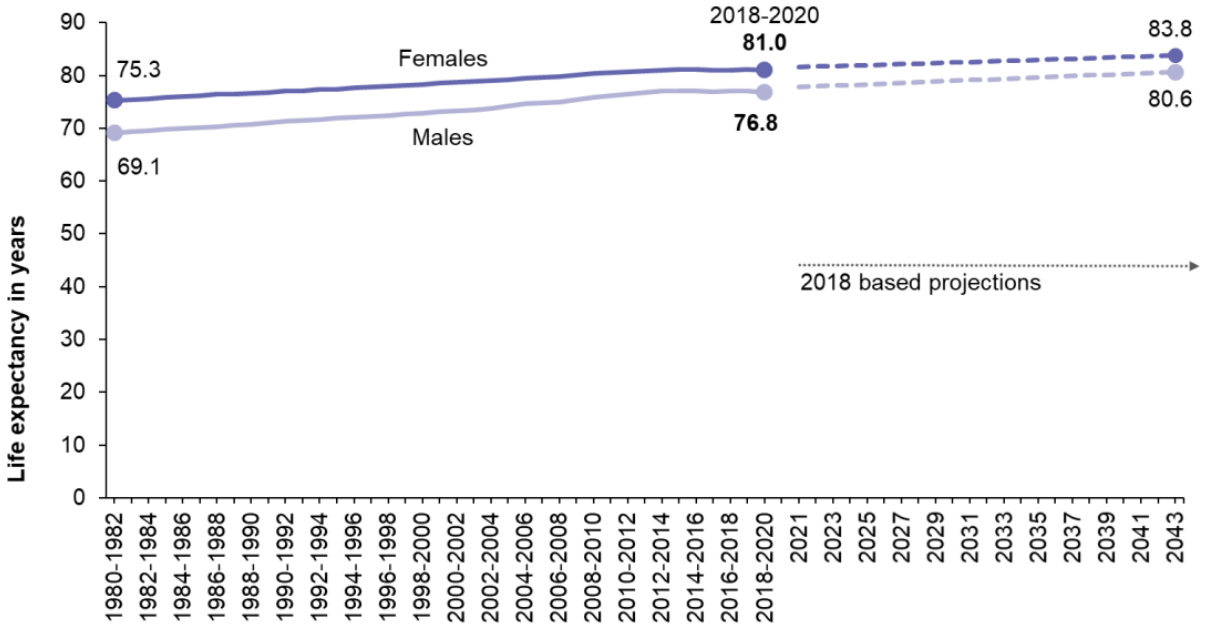
4.1 Life Expectancy

As noted, life expectancy in Scotland had been increasing steadily for decades. However, since 2012-14, improvements in life expectancy have stalled. NRS projections show life expectancy increasing again, but at a slower rate than previous projections (Figure 9).

However, it is important to note that life expectancy and healthy life expectancy trends in Scotland have not improved since around 2012, with life expectancy having been decreasing for those living in the most deprived 40% of areas[36]. The best available evidence indicates that this is largely due to economic factors impacting on the whole population, but particularly on those living in the most deprived circumstances. These trends reflect the impact on health of an array of social determinants; socio-economic circumstances, including poverty, housing and education that together influence health throughout the life-course. The future course of life expectancy and healthy life expectancy are dependent on future decisions around these key social determinants.

[36] ScotPHO (2021) Recent Mortality Trends

Figure 9: Life expectancy at birth, Scotland, 1980-1982 to 2043



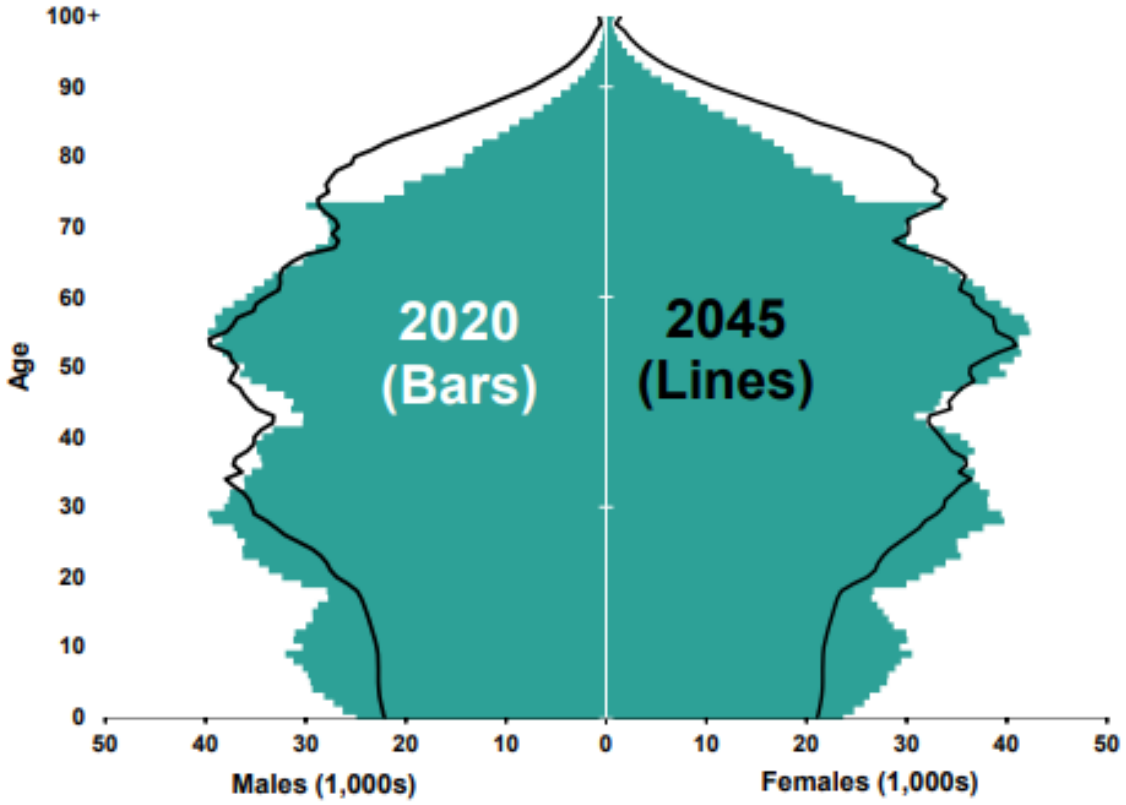
Source: Figures to 2018-20 are from National Life Tables for Scotland (NRS) based on 3 years of data. Figures from 2021 are projected single year life expectancies (2018 based, NRS). Life Expectancy in Scotland 2018-2020: Report (nrscotland.gov.uk)

4.2 Ageing Population

The age composition of the population is particularly important in this context, given that it shapes demand for health and social care services. Projections by NRS suggest that Scotland is likely to have more older people and fewer younger people in mid-2045 than in mid-2020[37]. The current (mid-2020) population structure includes a sharp peak at around age 73 (post-war baby boomers, born 1946-47), and a large bulge with people in their mid-50s (born during the 1960s baby boom). As these generations age, with higher life expectancy than in previous generations, they are projected to make up a growing proportion of the population. Also, as female life expectancy is higher than for males, more females are projected to live into older age. These projections suggest that the number of people aged 65 and over will grow by nearly a third by mid-2045 to make up 25.4%, with the number of children falling by over a fifth to 13.3% of the population. The population aged 16-64 years is projected to remain relatively stable and is projected to make up 61.3% of the population by mid-2045. Most of the changes are the result of the ageing population.

[37] National Records of Scotland (2022) Projected Population of Scotland (2020-based)

Figure 10: Population structure of Scotland by age and sex, mid-2020 and mid-2045



Source: Projected Population of Scotland (Interim) 2020-based, Report (NRS) (nrscotland.gov.uk)

Scotland's age-structural shift is also projected to contain increasing numbers of people aged in, what demographers refer to as, the 'oldest old' age categories. For example, NRS projects that the number of people aged 90 and over in Scotland will double between 2020 and 2045 from 43,749 to 85,354.

4.3 Increase in Single-Person Households

Another key NRS projection, relevant here, is the continuation of trends towards estimated increase in single-person households across Scotland. In 2019 more than a third of households were single person households[38]. The largest projected increases between 2018 and 2028 (in number and percentage terms) is in households containing one or two adults only. The number of one person households is projected to increase further by 8% (to 965,100 households); and the number of households with just two adults is projected to increase by 7% (to 830,600 households)[39].

Importantly here, people are more likely to live alone as they become older. In 2018, an estimated 113,800 men aged 65 and over were living alone. This is projected to increase to 139,500 in 2028 (an increase of 23%) and to 161,400

[38] National Records of Scotland (2021) Estimates of Households and Dwellings in Scotland, 2020
[39] National Records of Scotland (2020) Household Projections for Scotland (2018-based)

by 2043 (an increase of 42% compared with 2018). The number of women aged 65 and over living alone is projected to increase from 229,200 in 2018 to 245,900 in 2028 (increase of 16%) and to 326,900 by 2043 (an increase of 43% compared with 2018). The number of men aged 85 and over living alone is projected to increase by just over a quarter (26%) between 2018 and 2028, increasing from 17,600 to 22,100; and to nearly double to 33,700 by 2043 (an increase of 92% compared with 2018). The number of women aged 85 and over living alone is also projected to increase from 49,700 in 2018 to 59,400 in 2028 (an increase of 20%) and then to 90,900 by 2043 (an increase of 83% compared with 2018). In 2028, 65% of women in this age group are projected to live alone, compared to 39% of men. The substantial projected increase in the number of older households, in particular of older people living alone, has implications for services and policies aimed at supporting older people.

5. Conclusion

This paper has outlined aspects of Scotland's current and projected national health profile and demographics which are of relevance to the development of a National Care Service. It has highlighted that Scotland's population has the lowest life expectancy and widest socio-economic inequalities in health in Western Europe, as well as socio-economic inequalities in healthy life expectancy. Geographic inequalities exist too – including between urban and rural areas – but to a lesser degree, and largely shaped by these socio-economic inequalities.

While forecasting demand for social care is extremely challenging, a number of projections made by NRS are of relevance here. The country's population is expected to age considerably across the coming decades, with a substantial increase in the proportion of those over the age of 65. The trend towards an increasing number of single-adult households is also set to continue.

How to access background or source data

The data collected for this publication:

☒ is available from The National Records of Scotland.

The views expressed in this report are those of the researcher and do not necessarily represent those of the Scottish Government or Scottish Ministers.

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