



# Identifying policy options to tackle health inequalities: policy analysis and opportunities for learning for Wales

A report for Public Health Wales

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# **Executive summary**

#### Policy background

Health inequalities are recognised as an issue in most countries around the world and they are a major concern for policymakers. Many countries have taken steps to reduce the differences in health seen across populations with a major focus on tackling socioeconomic health inequalities and this report highlights policy actions across seven high-income countries with similarities in their political systems and policy choices to Wales.

#### International trends in health inequalities

Recent studies show that many high-income countries have experienced a widening in health inequalities. Studies of gaps in adult and infant mortality within a range of high-income countries typically show that the most deprived areas and groups have had a slower rate of improvement in life expectancy compared to the least deprived areas and groups. In the United Kingdom and Germany, data suggests that improvements in life expectancy have slowed in recent years.

#### The policy context for action on health inequalities

A commitment to act on health inequalities requires high-level political will and a strong culture of intersectoral collaboration inside and outside of government. In Wales, the strategic and policy context for action has been strengthened by key pieces of enabling legislation that support a greater focus on prevention and addressing inequalities. However, there are also major challenges and constraints to what policy actions are possible within the powers that the Welsh Government can exercise under devolution.

# The policy context for action on health inequalities

The World Health Organization health equity policy tool is structured around five policy action areas.



We have summarised key examples of policy actions across seven high-income countries of a similar population size and with similarities in their political systems and policy choices to Wales: Finland, New Zealand, Iceland, Slovenia, Scotland, Ireland, and Belgium.

## **Health Services**

Key policy actions were focused on reducing waiting times and collaborative approaches within the health system. The governments in Finland and Ireland have implemented specific policies to reduce waiting times, including legislative changes and significant financial investments. From Slovenia and Iceland, we identified examples of programmes focused on strengthening the role of primary health care providers by engaging with community partners and addressing community health needs through intersectoral collaboration and community partnerships.

# **Income Security & Social Protection**

Interest has grown in providing security through a Universal Basic Income and trials of Universal Basic Income-like policies in Finland and Wales are informing policy development in this area. There have also been renewed calls to review the social security system in Wales. Scotland has used its devolved powers to establish a new social security system, delivering benefits such as child and adult disability payments and the Scottish Child Payment.

# **Living Conditions**

Regional economic frameworks are commonly used to tackle regional inequalities, but in an effort to join up economic development and public health strategies, Public Health Scotland has recently collaborated with the Glasgow City Region to integrate health into regional economic decisions. Ensuring healthy homes and ending homelessness are key policy priorities in many countries aiming to equalise living conditions. New Zealand's Healthy Homes Initiative provides an example of a sustained government-led partnership on housing. Finland is the only European country to have seen a decline in the number of people who are homeless and is considered a world leader in the implementation of the Housing First approach.

# Social & Human Capital

Social and human capital form part of the World Health Organization's four well-being capitals and are considered vital for achieving inclusive and sustainable development. Wales, along with Finland, Iceland and Scotland have all committed to making progress towards a Well-being Economy and moving beyond GDP and economic growth as markers of progress.

# **Employment & Working Conditions**

Labour and employment practices are key factors in the commercial determinants of health and escalating health harms. Government policies can support collective bargaining to improve labour and employment practices, and Belgium, Iceland, Finland, and Slovenia have maintained high rates of union coverage against declines elsewhere. New Zealand's attempt to introduce sector-wide collective bargaining through the Fair Pay Agreements Act provides a further example of government action. Ill health is a large driver of economic inactivity across the UK and there is a need for policy interventions that focus on protecting those at risk of leaving employment for health reasons and helping those who want to return to work. Finland's integrated employment and health services 'one-stop-shop' model provides an example of policy in this area, which is jointly funded by the employment services and local health and social services.

# Early years, Childhood, and Adolescence

In countries including Wales, Scotland, and Ireland, integrated policy frameworks and whole-of-government approaches are a key feature of plans to support child well-being. Early childhood education and care policies are seen as crucial for advancing equity in child health and development outcomes. Slovenia and Finland have recently implemented a legal entitlement to early childhood education and care following the end of paid parental leave and have an integrated approach based on a unitary system.

#### Learning opportunities for Wales

- With the development of the Public Health Wales framework for a system leadership role in healthcare public health (Public Health Wales, 2023), there is the potential to learn from the policy actions in Slovenia, Iceland, and Ireland about the development of health promotion and prevention services at a local level and the structures needed to support intersectoral working.
- There may be opportunities to learn from the collaboration between Public Health Scotland and Glasgow City Region (Winterbottom, 2023) to guide the greater involvement of public health in regional economic policy development and delivery in Wales.
- With the call to co-create a vision for housing in Wales (Future Generations Commissioner for Wales, 2024), there are opportunities to put health at the centre of housing policy.

#### **Conclusion**

The international data highlights the persistent and complex nature of health inequalities, particularly those driven by socioeconomic factors. Despite various strategies and policies, significant differences in health outcomes remain across population groups in high-income countries, exacerbated by recent challenges such as the responses to the global financial crisis and the COVID-19 pandemic.

The key findings from this report highlight the need for comprehensive and multi-faceted policy approaches to address health inequalities. The evidence highlights the importance of preserving equitable healthcare access, expanding the welfare state, and targeting health-related behaviours through coordinated intersectoral strategies. By learning from international examples and adapting successful policies, Wales can work towards effective actions to reducing health inequalities and improving overall population health and well-being. Addressing health inequalities requires high-level political will, strong intersectoral collaboration, and a commitment to long-term, sustainable policy actions. These efforts will not only improve health outcomes but also contribute to a more equitable and just society.

## 1 Introduction

# 1.1 Policy actions to tackle health inequalities

Health inequalities are recognised as an issue in most countries around the world. They have become a major concern for policymakers in recent decades and many countries have subsequently developed comprehensive strategies to reduce the differences in health seen across populations with a major focus on tackling socioeconomic health inequalities. Through the 2000s, comprehensive national strategies were developed in England, the Netherlands and the Nordic countries (Mackenbach & Bakker, 2003; Mackenbach, 2019). However, despite this growing awareness and progression in action on socioeconomic health inequalities, they continue to persist and have been further exacerbated by the COVID-19 pandemic. While different policy approaches have been proposed to reduce health inequalities and much evidence has accumulated about the factors that contribute to socioeconomic health inequalities, there is a lack of clear evidence about which interventions and policies reduce them (Jones et al., 2023; Mackenbach, 2019).

Researchers have nonetheless attempted to draw out lessons for policy makers. For example, using historical examples of health inequalities being reduced at scale, Bambra (2022) has identified three mechanisms linked to the reduction of health inequalities: welfare state expansion, improved health care access and enhanced political incorporation. Mackenbach (2019) also draws attention to welfare policy suggesting that more should be done in terms of developing conventional welfare policies such as progressive income taxation, social security safety nets, and social housing policies. The 'upstream-downstream' metaphor is widely used in discussions of the policy contexts for acting on health inequalities. The World Health Organization (WHO) emphasises policy proposals aimed at tackling the 'upstream' causes of health inequalities (such as income, education, and employment), but Mackenbach (2019) argues that inequalities in exposure to 'downstream' risk factors, such as specific working and housing conditions and health-related behaviours including smoking and alcohol consumption should also be specifically targeted in policy.

# 1.2 Aims and objectives

This project aimed to consider the differences in policy actions between countries, which have been introduced to reduce socioeconomic health inequalities. Through a policy analysis we aimed to gain an understanding of what policy actions or approaches appeared to be working to reduce socioeconomic health inequalities. To achieve our project aim we addressed the following three objectives:

- Examine international trend data on health inequalities within countries (Section 3). However, with historical and recent trends showing static or widening gaps in health by socioeconomic factors in most countries, it is not currently possible to identify the contribution that different types of policies have made to reducing health inequalities.
- Review the policy context for action on health inequalities (Section 4) across the five domains of the WHO health equity framework in Wales and seven high-income countries of a similar population size and with similarities in their political systems and policy choices to Wales: Finland, New Zealand, Iceland, Slovenia, Scotland, Ireland, and Belgium.
- Carry out a gap analysis (Section 5) against the policy context for acting on socioeconomic health inequalities in Wales to identify what additional policies or approaches might be worth considering in Wales.

# 2 International trend data on health inequalities within countries

#### 2.1 Introduction

To examine international trend data on health inequalities within countries we sought studies that reported trend data on regional or socioeconomic differences within the country on outcomes related to adult or infant mortality. We searched Medline (via Ovid) and Google Scholar in March and April 2024 using the following search string from Lewer et al. (2019): ("deprivation" OR "poverty" OR "income" OR "socioeconomic" OR "inequality") AND ("attributable" OR "years of life" OR "YLL") AND ("mortality" OR "death\*").

# 2.2 Inequalities in adult mortality

A total of 16 studies from high-income countries published since 2018 were identified. A summary of these studies is provided in Table 4 in Appendix 1. Of the 16 studies, two included more than one country. A recent article by Chen-Xu et al. (2024) published in the Lancet Public Health reports on a time trend analysis of age-standardised all-cause years of life lost (YLL) rates at a sub-national level across 32 countries within the European Economic Area (EEA). The study by Brønnum-Hansen et al. (2021) examined changes in life expectancy and lifespan variability in Denmark, Finland, Norway, and Sweden over two decades. The majority of the other studies were done in single countries, including Norway (Clarsen et al., 2022), Denmark (Jensen et al., 2023), Belgium (Otavova et al., 2024), Italy (Petrelli et al., 2024), Finland (Suulamo et al., 2021), Canada (Shahidi et al., 2020), Germany (Tetzlaff et al., 2024), and the United Kingdom (Currie et al., 2021; Currie et al., 2023; Lewer et al., 2019; Seaman et al., 2019; Steel et al., 2018; Walsh et al., 2020). One study (Buajitti et al., 2020) was done in the Canadian province of Ontario.

In their analysis of 32 EEA countries, Chen-Xu et al. (2024) found that YLLs were lower in 2019 than 2009 in almost all subnational regions within the countries. However, small geographical relative and absolute inequalities persisted in YLLs. Table 1 summarises within-country changes in geographical inequalities across NUTS 2-level regions between 2009 and 2019. It is common for health inequalities to be measured in these two separate ways. Chen-Xu et al. (2024) evaluated relative inequalities in YLLs using the Gini coefficient, with a Gini coefficient of 100% representing complete inequality and 0% indicating complete equality. Absolute inequalities in YLLs were measured with the slope index of inequality, representing the average absolute difference in YLLs between the most advantaged and most disadvantaged regions within each country. Many countries did not see a significant change in relative or absolute geographical inequalities in YLLs, but Poland experienced small reductions in both relative and absolute geographical inequality among men and in absolute geographical inequality (but not relative) among women. Denmark also experienced reductions in both relative and absolute geographical inequality among men. However, there is no further discussion by Chen-Xu et al. or potential explanations for why Poland and Denmark experienced these reductions.

Opposing trends for relative and absolute inequalities were also observed (e.g., for males in Belgium) but this is not uncommon when absolute and relative measures of inequalities are compared over time (Mackenbach, 2015; Office for Health Improvement & Disparities, 2023).

Further, a narrowing of relative inequalities is rarely seen against a backdrop of declining mortality, whereas a narrowing of absolute inequalities is not uncommon (Mackenbach, 2019). As such, conclusions about changes in inequalities over time may differ depending on how the underlying mortality rate is changing (Keppel et al., 2013). As Chen-Xu et al. note "absolute inequalities generally reduce with lower YLLs because the overall impact of YLL is reduced. Conversely, relative inequalities seem more pronounced or prominent in comparison to absolute inequalities, especially when YLL levels are lower".

Table 1. Time-trend analysis of geographical inequalities in 32 EEA countries, 2009 to 2019 (Chen-Xu et al., 2024)

|                | Relative in           | equalities*           | Absolute ine          | qualities**           |
|----------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                | Females               | Males                 | Females               | Males                 |
| Austria        | $\longleftrightarrow$ | $\longleftrightarrow$ | $\longleftrightarrow$ | $\longleftrightarrow$ |
| Belgium        | $\longleftrightarrow$ | Increased †           | $\longleftrightarrow$ | Reduced ↓             |
| Bulgaria       | $\longleftrightarrow$ | $\longleftrightarrow$ | $\longleftrightarrow$ | $\longleftrightarrow$ |
| Czechia        | $\longleftrightarrow$ | $\longleftrightarrow$ | $\longleftrightarrow$ | Reduced ↓             |
| Denmark        | $\longleftrightarrow$ | Reduced ↓             | $\longleftrightarrow$ | Reduced ↓             |
| Finland        | $\longleftrightarrow$ | $\longleftrightarrow$ | $\longleftrightarrow$ | $\longleftrightarrow$ |
| France         | $\longleftrightarrow$ | $\longleftrightarrow$ | $\longleftrightarrow$ | Reduced ↓             |
| Germany        | Increased 🕇           | $\longleftrightarrow$ | Increased †           | Reduced ↓             |
| Greece         | $\longleftrightarrow$ | $\longleftrightarrow$ | $\longleftrightarrow$ | $\longleftrightarrow$ |
| Hungary        | Increased 🕇           | $\longleftrightarrow$ | Increased †           | $\longleftrightarrow$ |
| Italy          | <b>←→</b>             | $\longleftrightarrow$ | $\longleftrightarrow$ | <b>←→</b>             |
| Netherlands    | <b>←→</b>             | ←→                    | $\longleftrightarrow$ | $\longleftrightarrow$ |
| Norway         | <b>←→</b>             | $\longleftrightarrow$ | $\longleftrightarrow$ | <b>←→</b>             |
| Poland         | $\longleftrightarrow$ | Reduced ↓             | Reduced ↓             | Reduced ↓             |
| Portugal       | $\longleftrightarrow$ | $\longleftrightarrow$ | $\longleftrightarrow$ | Reduced ↓             |
| Romania        | ←→                    | Increased †           | Reduced ↓             | Increased †           |
| Spain          | $\longleftrightarrow$ | $\longleftrightarrow$ | $\longleftrightarrow$ | Reduced ↓             |
| Sweden         | $\longleftrightarrow$ | $\longleftrightarrow$ | $\longleftrightarrow$ | $\longleftrightarrow$ |
| Switzerland    | $\longleftrightarrow$ | $\longleftrightarrow$ | $\longleftrightarrow$ | $\longleftrightarrow$ |
| United Kingdom | $\longleftrightarrow$ | $\longleftrightarrow$ | Increased †           | $\longleftrightarrow$ |

 $<sup>\</sup>Rightarrow$  = no statistically significant change in inequality; Increased = statistically significant increase in inequality; Reduced  $\downarrow$  = statistically significant reduction in inequality.

NUTS = Nomenclature of Territorial Units for Statistics.

<sup>\*</sup>Based on average percentage change in relative inequalities using the Gini coefficient of subnational regions (NUTS 2) YLLs from 2009-2019, per sex and country and across all EEA regions.

<sup>\*\*</sup>Based on average annual change in absolute inequalities using the slope index of inequality (SII) of subnational regions (NUTS 2) YLLs from 2009-2019, per sex and country and across all EEA regions.

Across the studies done in individual countries, many found similar patterns to the Chen-Xu et al. (2024) study. There were overall decreases in mortality, but a persistent and, in some countries, an increasing gap based on socioeconomic deprivation. This was observed across both area-level and individual-level measures of inequality. Many studies found that the gap between the least and most deprived had widened over the periods studied, including in Denmark (Jensen et al., 2023), England (Lewer et al., 2019), Wales (Currie et al., 2021; Currie et al., 2023) and the other countries of the United Kingdom (Walsh et al., 2020), Belgium (Otavova et al., 2024) and Germany (Tetzlaff et al., 2024). Studies done in Germany and the United Kingdom observed that improvements in mortality had slowed down in the periods after 2009 in Germany (Tetzlaff et al., 2024) and after 2011/2013 in England and Scotland (Walsh et al., 2020). Further, Walsh et al. (2020) reported that the data suggest a slight increase in mortality among males in Scotland in the period between 2015 and 2017. One exception was Norway, with Clarsen et al. (2022) finding that small regional differences in life expectancy observed in 1990 had decreased by 2019. Overall, levels of inequality between counties in Norway were observed to be low (Clarsen et al., 2022). Suulamo et al. (2021) also found relatively stable municipal-level variations in age-adjusted all-cause mortality in Finland. However, an analysis of life expectancy and lifespan variation across the Nordic countries (Norway, Finland, Sweden and Denmark) by Brønnum-Hansen et al. (2021) identified a social gradient by income in all four countries.

Two studies (Seaman et al., 2019; Brønnum-Hansen et al., 2021) examined differences in lifespan variation. Life span variation is a complementary measure to life expectancy, which can be used to provide an indication of the amount of heterogeneity in age at death across the population (van Raalte et al., 2018). Seaman et al. (2019) found that more deprived areas of Scotland experienced higher lifespan variation than more advantaged areas, with area-level differences observed to widen between 1981 and 2011. Lifespan variation for males in the most deprived areas in 2011 was 12.8 years compared with 9.9 years for the least deprived. The analysis by Brønnum-Hansen et al. (2021) found differences in lifespan variation by income quartiles across the Nordic countries. Lifespan variation increased in the lowest income quartiles among men and women in Denmark and Finland, and among women in Sweden. No change in lifespan variation was seen in the lowest income quartile for Swedish men and Norwegian women. Norwegian men in the lowest income quartile experienced a decrease in lifespan variation.

Differences in health-related behaviours such as smoking, alcohol consumption, dietary patterns and physical activity, contribute to socioeconomic health inequalities. Currie et al. (2023) carried out a decomposition analysis to explore the contribution of avoidable causes to inequalities in life expectancy in Wales. For females, the leading avoidable contributions were circulatory disease, cancers, respiratory disease and alcohol- and drug-related deaths. For males, they were circulatory disease, alcohol- and drug-related deaths, cancers, respiratory disease and injuries. The top four conditions which contributed to inequalities were the same among men and women, although the ordering within the top four was slightly different. The avoidable causes were chronic obstructive pulmonary disorder (first largest contributor among women and third largest contributor among men), ischaemic heart disease (second largest contributor among women and fourth largest contributor among men) and drug disorders/poisonings (fourth largest contributor among women and second largest contributor among men).

# 2.3 Inequalities in infant mortality

Seven studies from high-income countries published since 2018 were identified. A summary of these studies is provided in Table 5 in Appendix 1. All seven studies were done in single countries, including the United Kingdom (Best et al., 2019), Scotland (Harpur et al., 2021), England (Robinson et al., 2019), the USA (Pabayo et al., 2019; Singh & Yu, 2017) and Italy (Simeoni et al., 2019; Simeoni et al., 2024). Most studies examined area-level measures of inequality, with only one study (Singh & Yu, 2019) examining an individual-level of inequality based on maternal level of education. The primary child health outcome of interest was infant mortality, defined as death within the first year of life. Four studies done in the UK (Best et al., 2019), the USA (Pabayo et al., 2019) and Italy (Simeoni et al., 2019; Simeoni et al., 2024), respectively, also reported neonatal and post-neonatal mortality rates. Two UK studies (Best et al., 2019; Harpur et al., 2021) examined stillbirths.

Studies done in Scotland (Harpur et al., 2021) and the USA (Singh & Yu, 2019) reported that there had been overall declines in infant mortality rates between 2000 and 2018 and 1986 and 2016, respectively. However, like the findings for adult health outcomes, across all three countries (the UK, USA and Italy) there were persistent inequalities in infant mortality. Two studies done in the UK (Best et al., 2019; Harpur et al., 2021) showed that more deprived areas experienced higher rates of infant mortality. Harpur et al. (2021) also reported that trends in infant mortality had changed among the most deprived quintiles since 2016, after which they showed a rising trend. This pattern was also shown in a US study (Singh & Yu, 2019), as mothers with less than a high school education experienced a significantly higher risk of infant mortality than women with a college degree. Another US study (Pabayo et al., 2019) found that although state-level income inequality (based on the Gini coefficient) was not significantly associated with an increased risk of infant mortality, infants born in states that had experienced a greater increase in income inequality since 1990 had a higher risk of death than those that were born in states with a smaller increase. Two studies done in Italy (Simeoni et al., 2019; Simeoni et.al, 2024) found that inequalities persisted between regions in the north and south of the country over two periods of analysis.

Two UK studies (Harpur et al., 2021; Robinson et al., 2019) examined changes in inequality over time. Robinson et al. (2019) examined inequalities in infant mortality across three periods, before, during and after the implementation of the English health inequalities strategy by the UK government in 1999. Harpur et al. (2021) examined change across two 8-year periods before and after the introduction of the UK government's austerity programme in 2010. Robinson et al. (2019) found that the English health inequalities strategy was associated with a decline in inequalities between the most deprived local authorities and the rest of England. However, Harpur et al. (2021) did not find strong evidence of a change in inequalities following the introduction of austerity policies.

# 3 The policy context for action on health inequalities

# 3.1 The policy context in Wales

Like other countries within the UK and across Europe, Wales has experienced persistent inequalities in life expectancy into the 21st century. However, as shown in the data reviewed in Section 2, improvements in life expectancy have also slowed across the UK since 2010 (Steel et al., 2018), and both absolute and relative gaps in life expectancy have increased in Wales in recent years (Currie et al., 2023). The population in Wales is older on average than the UK population (Office for National Statistics, 2024) and has more complex health needs. The scale of the challenge in addressing socioeconomic health inequalities therefore remains great and progress in taking action on health inequalities has been affected by the twin impacts of austerity and the pandemic.

# 3.2 Key strategies, policies and approaches for tackling health inequalities in Wales

The role that the Welsh Government can play in tackling health inequalities is significant, but the powers that it is able to exercise under devolution both now and in the future pose opportunities and challenges (Malcheva et al., 2024). The Welsh Equity Solutions Platform was used to review policies and strategies that have been implemented in Wales (see Appendix 2).

#### 3.2.1 Overview of key strategies and policies

A long-term strategy for public health in Wales was published by Public Health Wales in 2024 (Public Health Wales, 2024a) and it highlighted that the strategic and policy context for public health has been strengthened by several key pieces of enabling public health legalisation that challenge public sector bodies to consider the long-term impact of decisions, and which support a greater focus on prevention and addressing inequalities.

#### The Well-being of Future Generations (Wales) Act 2015

The Well-being of Future Generations (Wales) Act was introduced into legislation in 2015. The Act contains seven goals for 'A healthier Wales', 'A more equal Wales', 'A Wales of cohesive communities', 'A globally responsible Wales', 'A Wales of vibrant culture and thriving Welsh Language', 'A prosperous Wales' and 'A resilient Wales'. The Act requires public bodies in Wales to work with others towards these goals. A Future Generations Commissioner has been instituted to ensure that the Act is implemented and to measure progress towards the achievement of well-being goals against 46 national indicators (Welsh Government, 2016). The Act has widely been seen as a piece of innovative and ground-breaking legislation (Messham and Sheard, 2020).

#### A More Equal Wales: The Socio-economic Duty 2021

The Socio-economic Duty came into force in Wales in 2021 and placed a statutory duty on public bodies in Wales to consider how their strategic decisions can improve inequality of outcome for people who experience socio-economic disadvantage (Welsh Government, 2021a). It also adds an understanding of socio-economic inequality into the More Equal Wales goal in the Well-Being of Future Generations Act.

#### The Health and Social Care (Quality and Engagement) (Wales) Act 2020

The Health and Social Care (Quality and Engagement) (Wales) Act came into force in 2023 (Welsh Government, 2023a). The Act has four parts: 'Duty of Quality', 'Duty of Candour', 'Citizen Voice Body (Llais)' and 'Vice Chairs of NHS Trusts'. Introducing a duty of quality means that NHS bodies, including Public Health Wales, must ensure a system-wide approach to improving quality of care and population outcomes.

#### Health Impact Assessment (Wales) Regulations

The Public Health (Wales) Act 2017 mandated the Welsh Government to ensure that Health Impact Assessments (HIAs) were made compulsory under certain circumstances. HIAs can help identify actions that enhance positive health impacts, reduce negative ones, and demonstrate how changes can reduce inequalities, promote health, and foster supportive environments. Recognised by WHO as a milestone in Wales's path to becoming a well-being economy, this approach is part of the government's "Health in All Policies" strategy. The Health Impact Assessment (Wales) Regulations are currently under consultation (Welsh Government, 2023b).

#### A Smoke-free Wales strategy

The 'A Smoke-free Wales' strategy sets out plans for Wales to be smoke-free by 2030. The strategy focuses on three key themes: 'Reducing Inequalities', 'Future Generations' and 'A Whole-System Approach for a Smoke-Free Wales'. Like other smoke-free policies (also termed 'tobacco endgame policies') the Welsh strategy aims to reduce smoking prevalence to minimal levels.

#### 3.2.2 Other supporting activities and approaches

#### A Healthier Wales: Long-term Plan for Health and Social Care

The 10-year strategy for health and social care in Wales, "A Healthier Wales: Health and Social Care Action Plan", was first published in 2018 and set out a 'whole system approach to health and social care'.

#### Value-Based Public Health programme

Value-based public health (VBPH) is an emerging concept within the field of public health (Raymond et al., 2023). The Public Health Wales programme of work on VBPH was launched in 2022 to promote and pioneer the application of social value methods and tools. The approach draws on current VBPH approaches, including social return on investment (SROI) methods, with the aim of capturing the holistic (social, economic, and environmental) outcomes and impacts of public health.

#### Healthy Working Wales programme

Healthy Working Wales is a national programme that aims to improve health and prevent ill health among the working-age population. The programme provides a digital offer to employers and workplaces in Wales, which is based on a self-directed approach to employee and workplace health.

# 3.3 Policy actions on the wider determinants

We identified relevant policy actions in seven high-income countries:

- Finland
- New Zealand
- Iceland
- Slovenia
- Scotland
- Ireland
- Belgium

Searches were carried out on Google, the WHO website and individual country government websites to identify reports and policy documents (see Appendix 3 for a full list). Reports and documents were consulted, and details of relevant policy actions were extracted and categorised using the WHO five essential conditions multi-sectoral policy framework (Box 1). Table 2 summarises the key examples of policy action on health inequalities that were selected. Appendix 3 provides country-level comparison data on relevant indicators.

#### Box 1. WHO's Five Essential Conditions for Health Equity

**Health and health services** category includes policies that ensure the availability, accessibility, affordability and quality of prevention, treatment and health-care services and programmes.

**Health and income security and social protection** category includes policies that ensure basic income security and reduce the adverse health and social consequences of poverty over the life-course.

**Health and living conditions** category includes policies that equalise differential opportunities, access, and exposure to environmental and living conditions that impact our health and well-being.

**Health and human and social capital** category includes policies that improve human capital for health through education, learning and literacy; and policies that improve the social capital of individuals and communities in a way that protects and promotes health and well-being.

**Health and employment and working conditions** category includes policies that improve the health impact of employment and working conditions, including availability, accessibility, security, wages, physical and mental demands, and exposure to unsafe work.

Table 2. Country examples of policy action on health inequalities across the five essential conditions

| Country | Health services                                                                                                                                                                                                    | Income security & social protection                                                                                                                            | Living conditions                                                                                                                                                                                      | Social and human capital                                                                                                                                                          | Employment<br>and working<br>conditions                                                                                                                                       | Early years,<br>childhood and<br>adolescence                                                  |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Wales   | 3 Ps Policy developed as a recovery plan for patients waiting for treatment. Shaping Places for Well-being programme is embedding systems approaches to health and well-being through local Public Service Boards. | Basic income pilot<br>for care leavers.<br>Child Poverty<br>Strategy objective to<br>maximise the income<br>of families.                                       | New Warm Homes Programme to provide an advice service and physical improvements to households on low incomes. A high-level national action plan aims to make homelessness rare, brief, and unrepeated. | Progress towards becoming a well-being economy. A commitment to the well-being of future generations has been enshrined through the Well-being of Future Generations (Wales) Act. | Healthy Working Wales and the Employee Health Management Programme provide resources for employers in Wales. Adoption of key priorities from the Fair Work Commission report. | Child Poverty Strategy to support the best start in life. Funding for early years programmes. |
| Belgium | Measures to alleviate<br>financial barriers<br>to healthcare<br>access for the<br>most economically<br>disadvantaged.                                                                                              |                                                                                                                                                                | Belgian Constitution includes the right to decent housing.                                                                                                                                             |                                                                                                                                                                                   | Highly structured approach to collective bargaining. Job creation through the piloting Territories of Zero Long-Term Unemployment initiative.                                 |                                                                                               |
| Finland | Legislation to reduce<br>the waiting times for<br>primary healthcare.                                                                                                                                              | Finnish Government implemented a basic income trial in 2017-2018. Unemployed individuals aged 25-58 years received a monthly unconditional payment of EUR 560. | Finnish Government has set a goal to eradicate homelessness by 2027. National action plans have standardised the housing first principle and shelters replaced with rental housing units.              | Progress towards becoming a well-being economy.                                                                                                                                   | Services that meet people's employment and social and health needs together.                                                                                                  | Legal entitlement and integrated approach to early childhood education and care.              |

| Early years,<br>childhood and<br>adolescence |                                                                                                                | Whole-of-<br>government policy<br>framework for<br>children and young<br>people.                                                                                                                 |                                                                                                                                                                                                                                   |
|----------------------------------------------|----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Employment<br>and working<br>conditions      |                                                                                                                | > 61 C O D                                                                                                                                                                                       |                                                                                                                                                                                                                                   |
| Social and<br>human capital                  | Progress towards<br>becoming a well-<br>being economy.                                                         |                                                                                                                                                                                                  | Progress towards becoming a well- being economy. Launch of the well- being budget.                                                                                                                                                |
| Living conditions                            |                                                                                                                |                                                                                                                                                                                                  | New Zealand Healthy Homes Initiative aims to increase the number of children living in warm, dry, and healthy homes. Healthy Homes Standard introduced into law in 2019 to close the gap between rented and owner-occupied homes. |
| Income security & social protection          |                                                                                                                |                                                                                                                                                                                                  |                                                                                                                                                                                                                                   |
| Health services                              | Healthy Promoting Communities programme provides infrastructure for governance and addressing community needs. | Implementation of annual Waiting List Action Plans since 2022. Sláintecare Healthy Communities Programme launched in 2021 to provide increased health and well-being services in 19 communities. | Pae Ora (Healthy Futures) Act 2022 established a new structure and accountability arrangements for the health system. Six priority areas for change.                                                                              |
| Country                                      | Iceland                                                                                                        | Ireland                                                                                                                                                                                          | Zealand                                                                                                                                                                                                                           |

| Country  | Health services                                                                                          | Income security & social protection                                                                                                                                     | Living conditions | Social and human capital                                                                                                                                           | Employment<br>and working<br>conditions | Early years,<br>childhood and<br>adolescence                                     |
|----------|----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------|----------------------------------------------------------------------------------|
| Scotland |                                                                                                          | Scottish Child Payment introduced in 2021 for low- income families on top of UK child benefit and other benefits. £25 weekly payment for each child under 16 years old. |                   | Public Health Scotland involved in collaboration to embed health and tackling health inequalities into regional economic policy. Progress towards becoming a well- |                                         | Whole-of-<br>government policy<br>framework for<br>children and young<br>people. |
| Slovenia | New community- focused model for health promotion centres in primary health care centres across Slovenia |                                                                                                                                                                         |                   |                                                                                                                                                                    |                                         | Legal entitlement and integrated approach to early childhood education and care. |

#### 3.3.1 Health and health services

#### Reducing waiting times in healthcare

Empirical evidence from several countries suggests that individuals with higher socioeconomic status may wait less for publicly funded health services than those with lower socioeconomic status (Martin et al., 2020). Waiting times are therefore an important challenge for universal health care systems that may exacerbate existing health inequalities. The Covid-19 pandemic had a major impact on health systems around the world and in the aftermath, many countries have faced challenges with reducing waiting lists. Specific policy actions to reduce waiting lists/times were identified for Finland and Ireland.

In 2023, the Finnish Parliament amended the Health Care Act (116/2023) to introduce legislation to guarantee maximum waiting times for non-urgent physical and mental health problems. Within primary healthcare, the threshold was initially set at 14 days as of September 2023, with this being gradually shortened to 7 days by November 2024. The government has made a one-off investment of EUR 400 million to reduce waiting times.

In Ireland, **annual Waiting List Action Plans** have been funded and implemented since 2022. The Waiting List Action Plan for 2024 (WLAP 2024) aims to deliver reductions in waiting list numbers and waiting times through a EUR 360 million investment. The WLAP 2024 includes 19 targeted actions under three pillars: delivering capacity, reforming scheduled care and enabling scheduled care reform.

The Welsh Government published its plan to reduce waiting lists in 2022 (Welsh Government, 2022a), which outlined five key ambitions to reduce waiting times. The **3Ps policy** (Promote, Prevent, and Prepare for planned care) has also been developed as a recovery plan under which people who are waiting for treatment will be supported to self-manage their condition (Welsh Government, 2023c).

#### Collaborative approaches within the health system

To address the social determinants of health, the community orientation of primary health care providers needs strengthening, as well as their engagement with community-based partners within their catchment areas (Frieden, 2010).

An example of policy action in this area is the creation of **Health Promotion Centres (HPCs)** in Slovenia. HPCs were created in all primary health care centres in 2002 to provide lifestyle interventions against key risk factors for noncommunicable diseases. Between 2013 and 2016, HPCs were given a new role to create partnerships, including with social services and non-governmental organisations, to prepare local strategies and action plans to identify and reduce health inequalities. A pilot project with three HPCs concluded in 2016 with plans to introduce the new model into 25 additional HPCs by 2020 and the National Health Care Plan 2016-2025 set out plans to systematically scale up the model to all primary health care centres. A similar intersectoral approach has been implemented in Iceland through **the Health Promoting Communities programme**, which provides infrastructure for governance and addressing community health needs.

Developed by a special all-party parliamentary committee, Sláintecare is a 10-year programme of health reform being implemented in Ireland. The **Sláintecare Healthy Communities Programme** was introduced in 2021 as part of the Healthy Ireland Strategic Action Plan

2021–2025. The Healthy Communities Programme has established a legal structure for local authorities to work in an intersectoral way with community agencies and health services for health and well-being improvement. The public health system in New Zealand has also undergone reform in recent years and the **Pae Ora (Healthy Futures) Act 2022** has established a new structure and accountability arrangements for the public health system. There are six priority areas for change, including the creation of new health strategies which specifically target women, Pacific people and rural communities.

The policy context in Wales promotes intersectoral and systems working to support health and well-being. The **Shaping Places for Well-being programme** (supported by funding from the Health Foundation), for example, promotes local governments and local partners to take action on the wider determinants of health by embedding systems-based approaches through Public Service Boards (PSBs) (Public Health Wales, 2024b).

#### 3.3.2 Health and income security and social protection

#### Basic and minimum income programmes

Interest in providing a universal basic income (UBI), a system of universal cash transfers to adult citizens, has grown exponentially in recent years. It has been suggested that UBI is a more effective way of managing social protection systems and by affecting material, biopsychosocial and behavioural determinants of health, capable of improving health and well-being (Johnson et al., 2020; Johnson et al., 2022). Recent trials of UBI-like policies have been done or are planned in several high-income countries including Wales (Jones, 2021), and the Welsh Government recently introduced a small trial of a **Welsh basic income for young people leaving the care system** (Welsh Government, 2022b).

The Finnish Government carried out one of the largest trials of a UBI-like policy over two years between January 2017 and December 2018. The approach involved a **partial basic income** which provided a monthly unconditional payment of EUR 560 to unemployed individuals aged 25-58 years (Kangas et al., 2019).

#### Reforms to social security

Using their devolved powers, the Scottish Government established a new social security system for Scotland through the Social Security (Scotland) Act 2018. Social Security Scotland currently delivers seven benefits which are only available in Scotland including child and adult disability payments and the **Scottish Child Payment** (SCP), which began in 2021. The SCP was extended to children under 16 years old in 2022 and provides families who are eligible to claim other benefits with a £25 weekly payment for each eligible child, with no limit on the number of children in a family who can get the payment.

In Wales, most social security benefits are administered by the UK government. The devolution of powers to Scotland has however led to renewed calls to review the system in Wales, as it is thought this would improve outcomes for people in Wales (e.g., Bevan Foundation, 2016). An objective of the Child Poverty Strategy for Wales (Welsh Government 2024a) is to maximise the incomes of families and highlight ambitions for the creation of a coherent and compassionate Welsh benefits system.

#### 3.3.3 Health and living conditions

#### Regional economic frameworks

Regional inequalities are a concern in many high-income countries (OECD, 2023; Bachlter and Downes, 2023) and they are entrenched across the countries of the UK. Although economic development and public health strategies tend to be designed separately, there is growing recognition that economic development and regional policy can play an important role in improving health and reducing health inequalities (Naik et al., 2020).

In Scotland, the **Public Health Scotland Regional Economies and Health programme** has involved a collaboration between Public Health Scotland and Glasgow City Region to embed health and tackle health inequalities into the role of Regional Economic Partnerships and to maximise the influence that Public Health Scotland can have on economic decision-making (Winterbottom, 2023).

In Wales, the Welsh Government has moved to a place-based approach to economic development and has worked with local authorities and regional bodies across the four regions of Wales to co-design Regional Economic Frameworks.

#### Healthy homes

Housing and housing quality are fundamental to good population health and well-being (Howden-Chapman et al., 2023). In New Zealand, there has been a decade long government-led collaborative partnership in place, the **New Zealand Healthy Homes Initiative**, which aims to increase the number of children living in warm, dry, and healthy homes. Warm Up New Zealand: Heat Smart was one of the largest schemes to retrofit insulation implemented in the world (Grimes et al., 2011) and a Healthy Homes Standard was introduced into law in 2019 through the Residential Tenancies (Healthy Homes Standards) Regulations 2019. The Act aims to close the gap in housing quality between rental properties and owner-occupied homes.

In Wales, the Future Generations, Welsh Language and Children's Commissioners have recently called on the Welsh Government to co-create a vision for housing in Wales (Future Generations Commissioner for Wales, 2024). The **Welsh Government's Warm Homes Programme** will focus on the provision of an advice service and physical improvements to households on low incomes. The government continues to fund a retrofit programme focused on existing social housing stock and the Nest programme provides support for retrofit insulation in the private sector (Welsh Parliament, 2023).

#### Ending homelessness

Housing insecurity and homelessness are common in many high-income countries and Finland is the only European country to have seen a decline in the number of people who are homeless. Underpinned by a 'Housing First' policy approach, the Finnish Government launched its first national homelessness policy in 2008 (PAAVO 2008-2015) and they have since set a goal to eradicate homelessness by 2027. The **Finnish model of Housing First** involved collaboration between the national government, municipal governments, and a nongovernmental organisation and combined financial assistance with integrated and targeted support services. A key component of the programme was providing new dwelling and supported housing places, including by replacing shared shelters with rental housing units with permanent tenancies.

The **Ending Homelessness in Wales High-Level Action Plan** builds on the 2019 Strategy to End Homelessness (Welsh Government, 2021b). The action plan sets out a series of components which aim to "make homelessness rare, brief and unrepeated" including transformation of the homelessness system, prevention, and a set of overarching supporting actions. The transformation of the system includes a £1.9 million Housing First programme. Cymorth Cymru and the Housing First Network Wales have recently published a set of revised national principles for Housing First services in Wales (Housing First Network Wales and Cymorth Cymru, 2024).

#### 3.3.4 Health and social and human capital

The WHO's five essential conditions for health equity emphasise the importance of social and human capital. Social capital refers to the networks and relationships within a society and human capital to the personal characteristics, knowledge and skills which are embodied in individuals. Both concepts are thought to be significant drivers of economic growth and productivity and, along with planetary and economic, form part of the WHO's four well-being capitals (WHO Regional Office for Europe; 2023).

#### Well-being economy approaches

The **Well-being Economy approach** moves countries beyond gross domestic product (GDP) and economic growth as markers of progress. Within Europe, Finland, Iceland, Scotland, and Wales have all committed to and are making progress towards becoming well-being economies (World Health Organization, 2023). Table 5 provides a summary of how each country has approached the concept of a well-being economy.

The government of New Zealand has also sought to incorporate well-being into economic policy and a "well-being budget" was launched in 2019 to guide investment and funding decisions across the government. The approach was seen as novel as it involved a significant change in usual budgeting practices through its focus on five priority areas: (i) improving mental health; (ii) reducing child poverty; (iii) addressing the inequalities faced by indigenous Māori and Pacific Island people; (iv) thriving in a digital age; and (v) transitioning to a lowemission, sustainable economy.

Table 3. Approaches to well-being economy in Finland, Iceland, Scotland, and Wales

| Measuring and monitoring progress | facilitating Developing a well-being economy indicator system focusing on socioeconomic variables and living conditions. their lig.  welfare welfare ras served ning conditions.                                                                                                                                                                     | n as both The well-being economy itiator indicators system is supported butes to by regular public health and well-being.  L-being. Six well-being priorities: welfare ding upon of "Health of "Health of "Health of "Health of "Becure housing.  Tero carbon emissions. orused on orunovation growth. orused on orunovation.                                                  |
|-----------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Role of public health             | Serves as a convener, facilitating cross-governmental dialogue.  Contributes to designing policies that maximise their influence on well-being.  Enhances the current welfare state system by expanding upon and beyond the idea of "Health in All Policies", which has served as a basis for transitioning towards economies focused on well-being. | Plays a crucial function as both an advocate and an initiator for change and contributes to designing policies that maximise their influence on well-being.  Enhances the current welfare state system by expanding upon and beyond the idea of "Health in All Policies", which has served as a basis for transitioning towards economies focused on well-being.               |
| Policy focus                      | To reframe the welfare state with new policies that:  Protect people and the planet.  Promote peace and security.  Ensure financial sustainability with an ageing population.  Focus on labour market inclusivity and income security.                                                                                                               | Return to a traditional "Nordic state approach" with the aim of protecting people's wellbeing through a strong welfare system.  Young people are being active in the labour market, creating a more sustainable work-life balance, and improving gender equality and opportunities for women and girls.  Aligned with the implementation of the Sustainable Development Goals. |
| Defining well-being               | Well-being is synonymous with welfare. Linked to social sustainability and recognises the interdependency with economic and environmental sustainability.                                                                                                                                                                                            | Well-being is approached as a holistic concept.  Encompasses both subjective and objective dimensions.  Well-being is directly linked to factors in society, the economy and the environment.                                                                                                                                                                                  |
| Country                           | Finland                                                                                                                                                                                                                                                                                                                                              | Iceland                                                                                                                                                                                                                                                                                                                                                                        |

| Country  | Defining well-being                                                                                                   | Policy focus                                                                                                                                                                                                                                                                 | Role of public health                                                                                                                                                                                                      | Measuring and<br>monitoring progress                                                                                                                                                                                                                                                                                                                                             |
|----------|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Scotland | Well-being defined as<br>"living well" and about "how<br>we're doing as individuals,<br>communities and as a nation". | Shifted its goal from achieving inclusive and sustainable economic growth to creating a well-being economy for all that focuses on:  Social justice.  Addressing high levels of child poverty and inequalities.  Protection of natural resources as future assets.           | Contributes to designing<br>policies that maximise their<br>influence on well-being.                                                                                                                                       | The National Performance Framework assesses progress against the "National Outcomes" by monitoring indicators that measure national well-being across economic, social, and environmental areas.                                                                                                                                                                                 |
| Wales    | Conceptualised in the Well-<br>being of Future Generations<br>(Wales) Act through its seven<br>"Well-being Goals".    | Based on a longstanding commitment to sustainable development, future generations and early years.  The "Foundational Economy" supports local communities and is a response to the complex, multifaceted challenges of creating an "equal, prosperous, and resilient" Wales. | Plays a crucial function as both an advocate and an initiator for change.  Serves as a convener, facilitating cross-governmental dialogue.  Contributes to designing policies that maximise their influence on well-being. | Several monitoring and accountability measures support the Well-being of Future Generations (Wales) Act. "National Well-being indicators Framework" and corresponding "national milestones" shape and progress the vision for a well-being-based future.  The Future Generations Commissioner can hold public bodies accountable by reviewing budgets and challenging decisions. |

Scotland and Wales: summary of key findings. World Health Organization. Regional Office for Europe. Available from: https://iris.who.int/handle/10665/366279. Source: World Health Organization. Regional Office for Europe. (2023). Deep dives on the well-being economy showcasing the experiences of Finland, Iceland,

#### 3.3.5 Health and employment and working conditions

There is a bi-directional relationship between health and employment in that good quality employment can have a positive impact on health and that good health enables people to participate in the workforce. The labour and employment practices of companies, corporations and other commercial entities are also a key factor in the commercial determinants of health and escalating health harms (Gilmore et al., 2023). The Welsh Government plan for employability and skills, **Stronger**, **Fairer**, **Greener Wales** (Welsh Government, 2022c), was launched in 2022 and included actions to tackle economic inequality, create high-quality employment, and support people with a long-term health condition to work.

#### Improving labour and employment practices

There is evidence that collective bargaining over wages and other working conditions contributes to better population health (Sochas & Reeves, 2023; Humphreys et al., 2022). The Welsh Government has accepted six priority recommendations from the Fair Work Wales report (Fair Work Commission, 2019) and this was also used to inform the Social Partnership and Public Procurement (Wales) Act 2023, which came into force in May 2023.

Government policies can support collective bargaining, and Belgium, Iceland, Finland, and Slovenia all have a high union (collective bargaining) coverage rate ranging from 77% in Slovenia to 96% in Belgium. Collective bargaining is highly structured in Belgium, with national unions and employer organisations engaging in cross-sectoral bargaining at a central level, as well as at the sectoral and company level (OECD, 2019).

New Zealand has seen steep decreases in collective bargaining coverage (OECD, 2019), but in 2022 the government adopted a new sectoral bargaining policy through the introduction of the Fair Pay Agreements Act (New Zealand Government, 2022). Although the act has since been repealed following a change in government, it provides an example of government action to bring together unions and employer associations to achieve better pay and conditions through sector-wide collective bargaining.

#### Meeting people's health and employment needs together

The rate of economic inactivity due to ill health has been rising across the UK since 2019 and it has been a bigger factor behind economic inactivity than in other high-income countries (Office for Budget Responsibility, 2023). The Health Foundation (Tinson et al., 2022; Atwell et al., 2024) suggested that policy interventions should focus on: 1) protecting people at risk of leaving employment on health grounds; and 2) helping people experiencing poor health and who want to return to work to overcome barriers. **Healthy Working Wales** and the **Employee Health Management Programme** provide resources for employers in Wales on how to support disabled people and those with long-term health conditions and to support system-wide action on preventing people from falling out of work due to ill health (Lewis and McKibben, 2022).

Providing services for people with poor health and employment needs together is thought to be a key element of an effective work and health system. Finland has over a decade of experience of providing 'one-stop-shop' services. For example, **Labour Force Service Centres** for the long-term unemployed are jointly funded through the employment services and local health and social services (Duell, 2023). Currently, local government pilots (2021-2024) are testing reforms that aim to integrate employment, education, and social and health services more closely together (<a href="https://tem.fi/en/local-government-pilots-on-employment">https://tem.fi/en/local-government-pilots-on-employment</a>).

#### Job creation measures

The correlation between unemployment and poor health is well established. **Zero long-term unemployment initiatives** and similar models have been proposed as an innovative solution to long-term unemployment, with models being introduced in recent years in France, Austria and the Netherlands. In Belgium, the "Zero Long-Term Unemployment Territories" initiative is in the early stages of implementation in areas of high unemployment in the Walloon and Brussels-Capital regions of the country. Based on a French model (Territoire Zéro Chômeur de Longue Durée), the initiative is a local level job creation programme that aims to provide sustainable jobs in response to unmet local needs.

# 3.3.6 Reducing inequities in health in the early years, childhood and adolescence

Policies that aim to support and improve experiences in the early years and an emphasis on giving all children the best start in life are important for lifelong health and well-being (Pearce et al., 2020). Supporting children through the early years and into adolescence requires that support is also provided for families. Policy actions across the five essential conditions for health equity will also directly and indirectly improve the conditions in which children grow, learn and play. The **Child Poverty Strategy for Wales 2024** (Welsh Government 2024a) recognises that poverty can have an adverse impact on child development and the need for early years policies to support the best start in life.

Like the Welsh Government's Children and Young People's plan, in Scotland and Ireland, policy for children and young people has been underpinned by whole-of-government frameworks. For example, Scotland's model for supporting child well-being, **Getting It Right for Every Child**, provides an integrated policy framework with a focus on changing culture, systems and practice. In Ireland, **Young Ireland** and **First 5** provide a whole-of-government national policy framework to support the early years, children, and their families.

#### Early childhood education and care

Early childhood education and care (ECEC) policies, which focus on the provision of care and education for children under compulsory schooling age, are seen as crucial for advancing equity in child health and development outcomes. In Wales, the approach to ECEC is known as Early Childhood Play, Learning and Care and the government funds three early years programmes: (1) Flying Start for 0-3 year olds; (2) the Childcare Offer for 3-4 year olds; and early education (Foundation Phase) for 3-4 year olds. There has been a trend across countries towards the integration of the ECEC systems and a 2022 cabinet paper set out the vision for a Welsh system based on progressive universalism (Welsh Government, 2022d).

Countries differ in their approaches to ECEC and outcomes may depend on the policy decisions made and how ECEC policies are implemented (van Belle, 2016; Dallimore, 2019). Some countries provide a legal entitlement to ECEC, and Slovenia and Finland, for example, have recently implemented a legal entitlement to ECEC following the end of paid parental leave (from 11 months old in Slovenia and from one year old in Finland). Both countries also have an integrated approach to ECEC, based on a unitary system whereby provision for all children under compulsory schooling age is organised and delivered in one setting.

## 4 Discussion

## 4.1 Summary

#### 4.1.1 Global trends in health inequalities within countries

Studies of gaps in adult and infant mortality within a range of high-income countries typically show that the most deprived areas and groups have had a slower rate of improvement in life expectancy compared to the least deprived areas and groups. In both the United Kingdom and Germany, data suggests that improvements in life expectancy have slowed in recent years. Although there are historical examples of health inequalities being reduced at scale, recent trend analyses of with-in country differences in health show that many high-income countries have experienced a widening in health inequalities. Drawing on available evidence from the United States, United Kingdom, Sweden, and Western Europe, Bambra (2024) has described the existence of a U-shaped curve in health inequalities across the 20th and 21st centuries. That is, following a decrease in health inequalities through to the early 1980s, they then started to increase and widened further from 2010 onwards.

#### 4.1.2 Policy actions to tackle health inequalities

Although many governments are taking steps to address health inequalities, particularly in light of the unequal impacts of the Covid-19 pandemic, we did not identify any recent examples of national cross-governmental programmes to reduce health inequalities. The English cross-government strategy implemented between 1997 and 2010 remains the most ambitious attempt to deliver national policy to reduce health inequalities (Mackenbach, 2019). The English strategy was associated with modest reductions in inequalities, including in life expectancy and infant mortality (Barr et al., 2017; Robinson et al., 2019), but it has been noted that more research is needed to 'unpick its active ingredients' (Holdroyd et al., 2022).

While there is consensus among researchers in the field pointing to the importance of welfare state expansion and increased access to healthcare for achieving reductions in health inequalities (Mackenbach, 2019; Bambra, 2022), it was not possible within the context of this work, however, to recommend specific courses of policy action to reduce health inequalities. Instead, we have highlighted policy actions on the determinants of health across seven high-income countries of a similar population size and with similarities in their political systems and policy choices to Wales.

# 4.2 Learning for Wales

A commitment to acting on health inequalities requires high-level political will and a strong culture of intersectoral collaboration inside and outside of government (Cairney et al., 2021; Green et al., 2021). The strategic and policy context for acting on health inequalities has been strengthened in Wales by several key pieces of enabling legislation that support a greater focus on prevention and addressing inequalities. However, there are also major challenges and constraints to what policy actions are possible within the powers that the Welsh Government can exercise under devolution.

#### 4.2.1 General considerations

The NHS in Wales is currently facing enormous pressures and there has been little progress on reducing the post-pandemic backlog of waiting times. There have been calls to transform the approach to delivery of health and care in Wales both before (e.g., Welsh Government, 2018) and since (e.g., The Bevan Commission, 2024) the pandemic. Given that increased healthcare access is an important mechanism for reducing health inequalities (Mackenbach, 2019), the importance of preserving equal access to health and care in Wales should not be underestimated. The expansion of the welfare state has also been identified as an important mechanism for reducing health inequalities. Any changes to the social security system in Wales should take account of the evidence on the relationship between social security provision and health inequalities (Simpson et al., 2021) and the opportunity for synergies between welfare reform and policies to reduce health inequalities (Mackenbach, 2019). Health impact assessment (HIA) is a method that can be used to guide the explicit consideration of health and well-being in policies and used to ensure that policy decisions do not exacerbate health and well-being inequalities (Green et al., 2021). Wales is in the unique position of having a dedicated Health Impact Assessment Unit (WHIASU, Public Health Wales) and a public health law that requires HIAs to be carried out in defined circumstances.

Based on the argument that behavioural risk factors should also be specifically targeted by health inequalities policy (Mackenbach, 2019), alongside action on the wider determinants, opportunities for greater cross-government working and intersectoral action on health-related behaviours should be taken and maximised. Wales is working towards a tobacco-free future through the Smoke Free Wales strategy and has a long-term strategy to prevent and reduce obesity through Healthy Weight Healthy Wales, but there is a need to ensure continued cross-government action and co-ordinated intersectoral strategies and policies are used to effectively target and support action on health-related behaviours.

#### 4.2.2 Summary of key policy actions

Under the category of **Health Services**, key examples of policy actions were focused on reducing waiting times and collaborative approaches within the health system. The governments in Finland and Ireland have implemented specific policies to reduce waiting times, including legislative changes and significant financial investments. From Slovenia and Iceland, we identified examples of programmes that have focused on strengthening the role of primary health care providers by engaging with community partners and addressing community health needs through intersectoral collaboration and community partnerships.

#### Learning opportunity:

With the development of the Public Health Wales framework for a system leadership role in healthcare public health (Public Health Wales, 2023), there is the potential to learn from the policy actions in Slovenia, Iceland, and Ireland about the development of health promotion and prevention services at a local level and the structures needed to support intersectoral working.

With regards to **Income Security and Social Protection**, interest has grown in providing security through a UBI and trials of UBI-like policies in Finland and Wales are informing policy development in this area. There have also been renewed calls to review the social security system in Wales. Scotland has used its devolved powers to establish a new social security system, delivering benefits such as child and adult disability payments and the Scottish Child Payment.

Regional economic frameworks are commonly used as a policy approach to tackle regional inequalities in **Living Conditions**. Economic development and public health strategies tend to be designed separately, but in Scotland, Public Health Scotland has collaborated with the Glasgow City Region to integrate health into regional economic decisions. Ensuring healthy homes and ending homelessness are key policy priorities in many countries aiming to equalise living conditions. New Zealand's Healthy Homes Initiative provides an example of a sustained government-led partnership on housing. Finland is the only European country to have seen a decline in the number of people who are homeless and is considered a world leader in the implementation of the Housing First approach.

#### Learning opportunities:

There may be opportunities to learn from the collaboration between Public Health Scotland and Glasgow City Region (Winterbottom, 2023) to guide the greater involvement of public health in regional economic policy development and delivery in Wales.

With the call to co-create a vision for housing in Wales (Future Generations Commissioner for Wales, 2024), there are opportunities to put health at the centre of housing policy.

The WHO's five essential conditions for health equity draw attention to the importance of **Social and Human capital** in promoting health and reducing health inequalities. Along with planetary well-being and economic well-being, they also form part of the WHO's four well-being capitals that are considered vital for achieving inclusive and sustainable development. Wales, along with Finland, Iceland and Scotland have all committed to making progress towards a Well-being Economy and moving beyond GDP and economic growth as markers of progress.

Under the category of **Employment and Working Conditions**, the labour and employment practices of companies, corporations and other commercial entities are recognised as a key factor in the commercial determinants of health and escalating health harms. Government policies can support collective bargaining to improve labour and employment practices, and Belgium, Iceland, Finland, and Slovenia have maintained high rates of union coverage against declines elsewhere. The attempt in New Zealand to introduce sector-wide collective bargaining through the Fair Pay Agreements Act, though later repealed, provides a further example of government action in this area. Ill health is a large driver of economic inactivity

across the UK and there is a need for policy interventions that focus on protecting those at risk of leaving employment for health reasons and helping those who want to return to work. Finland's integrated employment and health services 'one-stop-shop' model provides an example of policy in this area which is jointly funded by the employment services and local health and social services.

Although policy actions across the five essential conditions for health equity will directly and indirectly improve the conditions in which children grow, learn and play, there is also a need for policies that specifically aim to support and improve experiences through the **Early years**, **Childhood**, **and Adolescence**. In countries including Wales, Scotland, and Ireland, integrated policy frameworks and whole-of-government approaches are a key feature of plans to support child well-being. ECEC policies are seen as crucial for advancing equity in child health and development outcomes. Slovenia and Finland have recently implemented a legal entitlement to ECEC following the end of paid parental leave and have an integrated approach based on a unitary system.

#### 4.3 Conclusion

The international data highlights the persistent and complex nature of health inequalities, particularly those driven by socioeconomic factors. Despite various strategies and policies, significant differences in health outcomes remain across high-income countries, exacerbated by recent challenges such as the responses to the global financial crisis and COVID-19 pandemic. The key findings from this report highlight the need for comprehensive and multi-faceted policy approaches to address health inequalities. The evidence highlights the importance of preserving equitable healthcare access, expanding the welfare state, and targeting health-related behaviours through coordinated intersectoral strategies. By learning from international examples and adapting successful policies, Wales can work towards effective actions to reducing health inequalities and improving overall population health and well-being. Addressing health inequalities requires high-level political will, strong intersectoral collaboration, and a commitment to long-term, sustainable policy actions. These efforts will not only improve health outcomes but also contribute to a more equitable and just society.

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Appendix 1. Summary of studies with trend data on differences in adult and infant health outcomes

| Author(s)<br>Country<br>Year                                                        | Data source(s)                                                   | Individual- or area-level<br>Measure of inequality<br>Outcome measure(s)                                                                                                                                                  | Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Brønnum-Hansen et<br>al., 2021<br>Denmark, Finland,<br>Norway & Sweden<br>1997-2017 | Register-based data<br>for populations aged<br>30 years and over | Individual-level Individuals were divided into income quartiles (based on equivalised disposable household income as defined by Eurostat) within each combination of gender and age.  Life expectancy, lifespan variation | Life expectancy at age 30 increased between 1997 and 2017 in all four countries and across income quartiles. The difference in life expectancy between the highest and lowest income quartile increased for men in all four countries. For women, it decreased in Denmark and Finland and increased in Norway and Sweden. Across all countries there was a social gradient in lifespan variation, individuals with higher income had lower lifespan variation and higher life expectancy. |
| Buajitti et al., 2020<br>Ontario, Canada<br>1992-2017                               | Register-based data                                              | Area-level Each death record assigned to a provincial quintile based on the Ontario Marginalization Index Premature mortality                                                                                             | Premature mortality rates declined in all socioeconomic groups between 1992 and 2017. Relative inequalities in premature mortality increased over the same period. A downward year-on-year trend in adult premature mortality was consistently seen for males and females between 1992 and 2006. Improvements slowed after 2006 in the most deprived groups and notable increases were seen in low socioeconomic status females for some age groups.                                      |
| Chen-Xu et al., 2024 32 countries in the European Economic Areas 2009-2019          | Eurostat<br>Global Burden of<br>Disease 2019                     | Area-level Gini coefficient of the average relative average difference of YLLs between regions (NUTS 3 and NUTS 2) All-cause premature mortality using age-standardised rates for YLLs                                    | Reductions in YLLs were observed across all countries and most subnational regions. Small relative and absolute inequalities in YLLs persisted. Overall, relative inequalities were reduced for females and increased for males. For absolute differences, there was no significant change but for males, absolute inequalities were reduced.                                                                                                                                             |

| Author(s)<br>Country<br>Year                | Data source(s)                                                                               | Individual- or area-level<br>Measure of inequality<br>Outcome measure(s)                                                                                                   | Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Clarsen et al., 2022<br>Norway<br>1990-2019 | Global Burden of<br>Disease 2019                                                             | Area-level Gini coefficient between counties All-cause YLLs, YLDs, and DALYs, health-adjusted life expectancy                                                              | Life expectancy at birth improved in all counties, with an upward trend in healthy life expectancy. High degree of equality between counties for both life expectancy and healthy life expectancy and healthy life expectancy. Small regional differences in life expectancy in 1990 were found to have decreased by 2019. Levels of inequality were low across the counties with respect to the level-1 DALY causes (non-communicable diseases and injuries) and inequalities in communicable maternal, neonatal, and nutritional diseases decreased. Inequality in exposure to level-1 risk factors (metabolic risks, behavioural risks, and environmental or occupational risks) was low. Decreased death rates for ischaemic heart disease and lung cancer were identified as the primary reasons for the increasing life expectancy in all counties. |
| Currie et al., 2021<br>Wales<br>2002-2018   | Welsh mid-year<br>population and<br>mortality data from<br>Office for National<br>Statistics | Area-level Deprivation at a small area level defined by quintiles of the Welsh Index of Multiple Deprivation Life expectancy and contribution of avoidable causes of death | Life expectancy rose throughout the period across all quintiles up to 2012-14. Life expectancy fell in the most deprived quintiles after 2012-14. For both men and women, the absolute gap in life expectancy between the most and least deprived quintile overall rose between 2002-04 and 2016-18. Relative inequalities in life expectancy also rose for both men and women throughout this period.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Currie et al., 2023<br>Wales<br>2002-2020   | Welsh mid-year<br>population and<br>mortality data from<br>Office for National<br>Statistics | Area-level Deprivation at a small area level defined by quintiles of the Welsh Index of Multiple Deprivation Life expectancy and contribution of avoidable causes of death | Life expectancy rose across all quintiles before plateauing around 2012-14. Life expectancy fell in the most deprived quintile between 2012-14 and 2018-20. Trends in absolute life expectancy inequalities between the most and least deprived 20% of areas rose overall between 2002-04 and 2018-20 among both males and females.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| Author(s)<br>Country<br>Year               | Data source(s)                                        | Individual- or area-level<br>Measure of inequality<br>Outcome measure(s)                                           | Findings                                                                                                                                                                                                                                                                      |
|--------------------------------------------|-------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Jensen et al., 2023                        | Register-based data                                   | Individual-level                                                                                                   | A decrease in all-cause, smoking-related and alcohol-related mortality was observed across all educational groups and                                                                                                                                                         |
| Denmark                                    |                                                       | Highest attained educational level<br>used as an indicator for social position                                     | among both men and women (with some exceptions).  Difference between the lowest and the highest educational                                                                                                                                                                   |
| 6102-5661                                  |                                                       | All-cause mortality, smoking and alcohol-related mortality                                                         | quartile, in alt-cause, smoking-related and alconot-related<br>mortality rates, respectively, generally widened among both<br>men and women.                                                                                                                                  |
| Lewer et al., 2019<br>England<br>2003-2018 | UK Office for<br>National Statistics                  | Area-level<br>Deprivation at a local authority level<br>defined by deciles of the Index of<br>Multiple Deprivation | Premature mortality rates decreased for men and women and in all deprivation groups. Reductions in absolute mortality rates were greater for more deprived groups. Relative reductions were greater for less deprived groups leading to an increase in mortality attributable |
|                                            |                                                       | Mortality attributable to socioeconomic inequality and YLLs to inequality                                          | to socioeconomic inequality. At eas of nigher deprivation typically had higher values of mortality attributable to socioeconomic inequality.                                                                                                                                  |
| Otavova et al., 2024                       | Individual-level                                      | Area-level                                                                                                         | Premature mortality rates declined over time. Comparing                                                                                                                                                                                                                       |
| Belgium<br>1998-2019                       | specific mortality<br>data from the Civil<br>Registry | Geographical areas assigned a<br>deprivation decile based on Belgian<br>Indices of Multiple Deprivation            | with 2014–2019, showed they have decreased over time in both sexes and across all deciles of socioeconomic deprivation. The relative difference in premature mortality                                                                                                        |
|                                            |                                                       | Age-standardized premature<br>mortality rates, population<br>attributable fractions and potential<br>YLLs          | between deciles has increased due to a raster deciline in the least compared to the most deprived areas. The relative difference between the most and least deprived areas increased in men and women by approx. 8%.                                                          |
| Petrelli et al., 2024<br>Italy             | 2011 Census of<br>Population and<br>Housing           | Individual-level Education level as a proxy of                                                                     | Observed an inverse trend in age-standardised mortality rates by education level for preventable, treatable, and nonavoidable causes of death among both males and females                                                                                                    |
| 2012-2019                                  | Register-based data                                   | Preventable and treatable mortality                                                                                |                                                                                                                                                                                                                                                                               |

| Author(s)<br>Country<br>Year                      | Data source(s)                                                                                                                              | Individual- or area-level<br>Measure of inequality<br>Outcome measure(s)                                                                                | Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Seaman et al., 2019<br>Scotland<br>1981-2011      | Individual level death<br>records and census<br>population estimates                                                                        | Area-level Postcode sectors assigned to quintiles of socioeconomic deprivation based on Carstairs score Cause-specific mortality and lifespan variation | Differences in lifespan variation increased between deprivation quintiles over the period and the socioeconomic gradient for lifespan variation has steepened over time. Males from the most deprived quintile lagged further behind the national average and contributed to the steepening gradient. Females from the most deprived quintile were converging toward the national average and contributed to a decrease in the gradient. Males and females from the least deprived areas diverged away from the national lifespan variation average.                                                                                                         |
| Shahidi et al., 2020<br>Canada<br>1991-2016       | 1991, 1996,<br>2001, 2006 &<br>2011 Canadian<br>Census Health<br>and Environment<br>Cohorts linked to the<br>Canadian Mortality<br>Database | Individual-level<br>Household income and education.<br>Premature mortality                                                                              | Premature and avoidable mortality rates declined in most socioeconomic groups. Socioeconomically disadvantaged groups did not benefit equally from these overall decreases in mortality.                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Steel et al., 2018<br>United Kingdom<br>1990-2016 | Global Burden of<br>Disease 2019                                                                                                            | Area-level Deprivation in local authorities assigned using the Index of Multiple Deprivation All-cause and cause-specific YLLs, YLDs, and DALYs         | Between 1990 and 2016, life expectancy at birth improved in all four UK countries for both males and females. The rate of improvement slowed from 2010. In England in 2016, agestandardised rates of all cause YLLs varied by more than two times between the highest and lowest IMD-ranked UpperTier Local Authorities. Age-standardised YLL rates for the 15 (10%) most deprived and 15 least deprived Upper-Tier Local Authorities in England were consistently increased in the deprived areas for most conditions. Upper-Tier Local Authorities in London had generally lower rates of DALYs and YLLs than was expected for their level of deprivation. |

| Findings                                                                 | Overall municipal-level variation in all-cause mortality remained relatively stable over the period.                                                      | Life expectancy increased but improvement slowed after 2009. The difference in life expectancy between the most and least deprived quintiles of districts increased among females and males between 2003 and 2019. Between 2020 and 2021, life expectancy decreased in both more and less deprived districts, but the pace was faster in more deprived districts resulting in an increased gap. The authors note that the pandemic exacerbated the expansion of area-level socioeconomic inequalities in life expectancy. | A change in the male death trend was observed from 2011/2013 for Scotland and England, little improvement observed in the periods following. Data suggest there has the been a slight increase (rather than slowdown) in mortality rates for Scotland in the most recent period. For male allcause mortality, increased rates observed in the most recent period for the most deprived fifth of the population in each country of the UK. Similar trends observed for women. Absolute and relative inequalities have widened across deprivation quintiles since 2011/2013 in all countries of the UK. |
|--------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Individual- or area-level<br>Measure of inequality<br>Outcome measure(s) | Area-level Based on individual socioeconomic characteristics (level of education, income and occupation) nested within municipalities All-cause mortality | Area-level Districts assigned to quintiles based on German Index of Socioeconomic Deprivation Life expectancy, age-specific and cause-specific mortality                                                                                                                                                                                                                                                                                                                                                                  | Area-level<br>Levels of deprivation within individual<br>countries assigned using the separate<br>Scottish, English and Northern Irish<br>area-based indices of deprivation                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Data source(s)                                                           | Register-based data<br>for population aged<br>30 years and over                                                                                           | Federal Statistical Office of Germany                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | National Records of<br>Scotland, Office for<br>National Statistics<br>and Northern Ireland<br>Statistics & Research<br>Agency                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Author(s)<br>Country<br>Year                                             | Suulamo et al., 2021<br>Finland<br>1972-2018                                                                                                              | Tetzlaff et al., 2024<br>Germany<br>2003-2019                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Walsh et al., 2020<br>United Kingdom<br>1981-2017                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## Child health outcomes

|                                                                          | au .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | - 10 a                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Findings                                                                 | Rates increased with increasing deprivation quintile. Women in the most deprived areas were 1.68 times more likely to have a neonatal death than those in the least deprived areas.                                                                                                                                                                                                                                                                                                   | Infant mortality rates fell between 2000 and 2018, with no change in trend identified. Stillbirth rates were relatively static between 2000 and 2008 but experienced accelerated reduction from 2009 onwards. Infant mortality and stillbirth rates consistently higher in the most relative to least deprived quintile (2000 to 2018). Since 2016, most deprived quintiles in infant, neonatal and post-neonatal mortality rates have experienced a rising trend in mortality rates following previous downward trajectories. Each unit change in quintile, from least (Q5) to most (Q1) deprived was accompanied by a 16% increase in the incidence rate of infant mortality (IRR 1.16, 95% CI 1.13–1.19).  Analysis of slope and relative indices of inequalities did not find strong evidence for a change in absolute or relative inequality in infant mortality, neonatal mortality, post-neonatal mortality, extended perinatal mortality or stillbirth rates in two 8-year periods (2002-2010 and 2011-2018). |
| Individual- or area-level<br>Measure of inequality<br>Outcome measure(s) | Area-level  Low-Income Families Local Measure divided into quintiles; based on the proportion of children living in families that are either in receipt of out-of-work benefits or in receipt of tax credits with a reported income <60% of national median income.  Stillbirths (≥24 weeks' gestational age) or neonatal death (death of a live born infant ≥24 weeks' gestation, 0–27 days after birth), based on the Cause Of Death & Associated Conditions classification system. | Area-level  Scores on the Scottish Index of Multiple Deprivation income and employment collapsed into population weighted quintiles.  Analyses repeated at an individual- level using a modified version of the five-class National Statistics Socio- economic classification.  Infant mortality (deaths within the first year of life) and stillbirth (infants delivered at or beyond 24+0 weeks gestation who did not breathe or show any other signs of life)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Data source(s)                                                           | MBRRACE-UK                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | National Records of Scotland                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Author(s)<br>Country<br>Year                                             | Best et al., 2019 England, Wales, Scotland, and the UK Crown Dependencies 2014 – 2015                                                                                                                                                                                                                                                                                                                                                                                                 | Harpur et al., 2021 Scotland 2000 – 2018                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

| Author(s)<br>Country<br>Year                       | Data source(s)                                                                            | Individual- or area-level<br>Measure of inequality<br>Outcome measure(s)                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Findings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------------------------------|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pabayo et al., 2019<br>USA<br>2007 – 2010          | National Vital Statistics System US Cohort Linked Birth/Infant Death Data Files 2007–2010 | Area-level State-level income inequality, measured by the Gini coefficient between of 2007 to 2010. The change in Gini coefficient from 1900 to the year of birth was also calculated. State-level (median income, proportion of the population size, and US census division) and individual-level (mother's age, race/ ethnicity, education, marital status, and nativity) factors were controlled for. Infant mortality rate (deaths within 365 days of birth) and neonatal mortality (deaths within the first 28 days of life) | After controlling for state and individual level covariates, income inequality was not significantly associated with an increased odds of infant or neonatal mortality. However, change in income inequality was significantly associated with an increased odds of both infant (OR 1.03, 95% CI 1.00, 1.07) and neonatal mortality (AOR 1.05, 95% CI 1.01, 1.09).  Infants and neonates born in the US states that experienced a greater increase in income inequality since 1990 were more likely to die than those that were born in states with a smaller increase in income inequality. |
| Robinson et al.,<br>2019<br>England<br>1983 – 2017 | UK Data Archive<br>and Office<br>for National<br>Statistics                               | Area-level  Townsend index of material deprivation used to identify the most deprived local authorities in England Infant mortality rate, annual number of births and infant deaths under the age of 1 in local authority areas across England                                                                                                                                                                                                                                                                                    | Between 1983–1998 (before the English health inequalities strategy), absolute inequalities increased between the most deprived local authorities and the rest of England (0.034 per year 95% CI 0.001 to 0.067).  Between 1999–2010 (after the strategy), absolute inequalities decreased (–0.116 per year 95% CI –0.178 to –0.053). Relative inequalities also marginally decreased.  After the strategy period ended (2011–2017), absolute inequalities increased (annual change = 0.042 per year 95% CI –0.042 to 0.125).                                                                 |

| Author(s) Country Year Simeoni et al., 2019; Simeoni et.al, 2024 Italy 2006 – 2015 and 2016 – 2020 | Data source(s)  Italian National Institute of Statistics Causes of Death and Live births registers | Individual- or area-level Measure of inequality Outcome measure(s)  Area-level Five geographical areas of Italy: North West (Piedmont, Aosta Valley, Lombardy, Liguria), North East (Veneto, Trentino-South Tyrol, Friuli Venezia Giulia, Emilia-Romagna), Central (Tuscany, Marche, Umbria, Lazio), South regions (Abruzzo, Molise, Campania, Basilicata, Calabria, Apulia), and Islands (Sardinia and Sicily).  Neonatal mortality (deaths within the first 28 days of life), post-neonatal mortality (deaths between 28 days and the end of the first year of life) and infant mortality (number of deaths in the first year of life) | Between 2006 and 2015, mortality was greater in the southern regions and the main islands than in the central-northern regions. In 2020, neonatal mortality rates in the South were 74% higher than in the North. The difference in post-neonatal mortality and infant mortality between the South and the North was smaller.                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Singh & Yu, 2019<br>USA<br>1915 – 2017                                                             | National Vital<br>Statistics System                                                                | Individual-level Maternal socioeconomic status based on maternal education level (<12 years; 12 years; 13-15 years; 16+ years) Infant mortality rate (not defined)                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Declines in mortality between 1986 and 2016 in all education groups but overall disparity in infant mortality grew. Index of inequality score grew from 48% (1996) to 82% (2016). In 2016, mothers with less than a high school education (<12 years) had 2.4 times the risk of infant mortality, 1.9 times the risk of neonatal mortality, and 3.7 times the risk of post-neonatal mortality than those with a college degree (16+ years). Discrepancies between regions have grown with time; Southeast states report higher infant mortality rates than others. |

# Appendix 2: Welsh policies and strategies with relevance to health inequalities

| Area of Focus                       | Strategy*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Policy*                                                                                                                                                  |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Health Services                     | <ul> <li>Digital and data strategy for health and social care in Wales</li> <li>The role of outpatients in transforming planned care in Wales</li> <li>Strengthening our community care system</li> <li>Substance Misuse Delivery Plan 2019-2022</li> <li>Dementia Action Plan 2018 to 2022</li> <li>Together for Mental Health Delivery Plan 2019-2022</li> <li>Age Friendly Wales: Our Strategy for an Ageing Society</li> <li>Healthy Weight: Healthy Wales Obesity Strategy</li> <li>A Healthier Wales: Long-term Plan for Health and Social Care</li> <li>Transforming and Modernising Planned Care and Reducing NHS Waiting Lists</li> <li>A Smoke-free Wales: Our Long-term Tobacco Control Strategy</li> <li>Directed Enhanced Service: Homelessness</li> <li>Directed Enhanced Service: Asylum Seekers and Refugees</li> <li>Directed Enhanced Service: Asylum Seekers and Refugees</li> <li>More Than Just Words: Welsh Language Plan in Health and Social Care</li> <li>Learning Disability Delivery and Implementation Plan 2022-2026</li> </ul> | <ul> <li>Charter for unpaid carers</li> <li>National framework for social prescribing</li> <li>Programme for Government 2021</li> <li>to 2026</li> </ul> |
| Income Security & Social Protection | <ul> <li>Tackling Fuel Poverty 2021 to 2035</li> <li>Equality Plan and Objectives: 2020 to 2024</li> <li>Raising Awareness of Children's Rights</li> <li>Childcare Offer for Wales: National Digital Service Assisted Digital Strategy</li> <li>UK Strategy for Financial Well-being: Delivery Plan for Wales</li> <li>Welsh Government Budget Improvement Plan 2023 to 2024</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | • Our National Mission:<br>High Standards and<br>Aspirations for All                                                                                     |
| Living Conditions                   | <ul> <li>Healthy Weight: Healthy Wales Obesity Strategy</li> <li>A Healthier Wales: Long-term Plan for Health and Social Care</li> <li>Equality Plan and Objectives: 2020 to 2024</li> <li>An Active Travel Action Plan for Wales</li> <li>Clean Air Plan for Wales: Healthy Air, Healthy Wales</li> <li>Prosperity for All: A Climate conscious Wales</li> <li>Violence Against Women, Domestic Abuse and Sexual Violence: National Advisers Annual Plan Framework</li> <li>Violence Against Women, Domestic Abuse and Sexual Violence: National Advisers Annual Plan 2021 to 2022</li> <li>Low Carbon Delivery Plan</li> <li>Social House Building Strategy</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                          |

| Area of Focus                         | Strategy*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Policy*                                                                                                                        |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
|                                       | <ul> <li>Strategy for Preventing and Ending Homelessness</li> <li>National Strategy for Flood and Coastal Erosion Risk Management in Wales</li> <li>Cold Weather Resilience Plan</li> <li>Ending Homelessness in Wales: A High-Level Action Plan 2021 to 2026</li> <li>Regional Economic Frameworks</li> <li>Towards Zero Waste: Our Waste Strategy</li> <li>Future Wales: The National Plan 2040</li> <li>Welsh Government Net Zero Strategic Plan</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <ul> <li>Programme for<br/>Government 2021<br/>to 2026</li> <li>New Warm Homes<br/>Programme: policy<br/>statement</li> </ul>  |
| Social & Human Capital                | <ul> <li>Strengthening our community care system</li> <li>Together for Mental Health Delivery Plan 2019-2022</li> <li>Healthy Weight: Health Delivery Plan 2019-2022</li> <li>Healthy Weight: Healthy Wales Obesity Strategy</li> <li>Equality Plan and Objectives: 2020 to 2024</li> <li>Strategy for an Ageing Society: Delivery Plan</li> <li>Strategy for an ageing society: delivery plan progress May 2023</li> <li>Strategy for an ageing society: delivery plan progress May 2023</li> <li>Youth Engagement and Progression Framework</li> <li>Supporting Young People in the Justice system</li> <li>Digital Strategy for Wales</li> <li>Cymraeg 2050: Our Plan for 2021 – 2026</li> <li>Violence Against Women, Domestic Abuse and Sexual Violence: Strategy 2022 to 2026</li> <li>Equality, Race and Disability Evidence Units Strategy</li> <li>LGBTQ+ Action Plan</li> <li>Deriod Proud Wales Action Plan</li> <li>Delivering Justice for Wales</li> <li>Well-being of Future Generations: Continuous Learning and Improvement Plan for 2023 to 2025</li> </ul> | Charter for unpaid carers Programme for Government 2021 to 2026 Children and young people's plan Anti-racist Wales Action Plan |
| Employment<br>& Working<br>Conditions | <ul> <li>Healthy Weight: Healthy Wales Obesity Strategy</li> <li>Digital Strategy for Wales</li> <li>Cross-Government Employability Plan</li> <li>Workforce Equality, Diversity, and Inclusion Strategy: 2021 to 2026</li> <li>Stronger, Fairer, Greener Wales: A Plan for Employability and Skills</li> <li>Regional Economic Frameworks</li> <li>National Occupational Standards Strategy 2022 and Beyond</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | • Programme for<br>Government 2021 to<br>2026                                                                                  |

 $^{*}$  Categorised according to their classification on the Welsh Health Equity Solutions Platform.

Appendix 3: Country-level comparison data

Comparison of country-level demographic and socioeconomic contexts

|                                                                   | Belgium    | Finland   | Iceland     | Ireland   | New<br>Zealand                 | Slovenia  | Scotland                                           | Wales                                              | United<br>Kingdom   |
|-------------------------------------------------------------------|------------|-----------|-------------|-----------|--------------------------------|-----------|----------------------------------------------------|----------------------------------------------------|---------------------|
| Demographic factors <sup>[1]</sup>                                |            |           |             |           |                                |           |                                                    |                                                    |                     |
| Population size, 2022                                             | 11,640,788 | 5,556,108 | 382,005     | 5,100,229 | 5,124,100                      | 2,108,732 | 5,448,000 <sup>[2]</sup>                           | 3,132,000[2]                                       | 67,596,281[2]       |
| Share of population<br>over age 65 (%), 2022                      | 19.7       | 23.2      | 15.0        | 15.1      | 16.4                           | 21.3      | 20.1[3]                                            | 21.5 <sup>[4]</sup>                                | 1                   |
| Fertility rate (live births<br>per woman), 2022                   | 1.53       | 1.32      | 1.59        | 1.54      | 1.63                           | 1.55      | 1.31*[5]                                           | 1.49*[5]                                           | ı                   |
| Life expectancy at birth (years), 2023                            | 82.5       | 81.7      | 82.6        | 82.6**    | 82.3*                          | 82.0      | 76.5 (m) <sup>b</sup><br>80.7 (F) <sup>b [6]</sup> | 77.9 (m) <sup>b</sup><br>81.8 (F) <sup>b [6]</sup> | ı                   |
| Infant mortality rate<br>per 1,000 live births                    | 2.9*       | 2.0**     | 3.3*        | 3.3**     | 4.3 (2018)                     | 2.5**     | 3.5**[7]                                           | 3.6**[8]                                           | 1                   |
| Socioeconomic factors                                             |            |           |             |           |                                |           |                                                    |                                                    |                     |
| GDP per capita (PPP<br>international \$), 2023 <sup>[9]</sup>     | 70,456     | 65,061    | 77,567      | 127,623   | 54,110                         | 54,948    | 1                                                  | 1                                                  | 58,906              |
| Relative poverty rate†<br>(%), 2023 <sup>[10]</sup>               | 12.3       | 12.2      | 9.3 (2019)  | 12.0      | 12.4 <sup>[11]</sup><br>(2020) | 12.7      | -                                                  | -                                                  | 12.4                |
| Unemployment rate<br>(% aged 15 to 74 y),<br>2023 <sup>[12]</sup> | 5.5        | 7.2       | 3.5         | 4.3       | 3.3**[11]                      | 3.7       | 3.5[13]                                            | 3,7 <sup>[14]</sup>                                | 3.7 <sup>[14]</sup> |
| Disposable income<br>inequality (% Gini),<br>2021 <sup>[15]</sup> | 25.6       | 27.4      | 25.0 (2017) | 29.1      | 32.0 (2020)                    | 24.2      |                                                    |                                                    | 35.4                |

A P † Share of people earning less than 60% of the median income, after taxes and transfers. \* 2021; \*\* 2022; \*\*\* 2023

a UK, 2018 (21% in Scotland for 2020-2023); b 2020 – 2022

Regional gross domestic product per head: Wales £27,274 Scotland £34,299

- OECD Data Explorer, 2023
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  - 3. Scotland's Census 2022 Rounded population estimates.
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- Berrington A., K.B., Christison S., Kulu H., Understanding fertility trends in Britain: Do fertility intentions differ across England, Wales and Scotland? 2023. 5
- Office for National Statistics. National life tables life expectancy in the UK: 2020 to 2022.
- National Records Scotland. Vital Events Reference Tables 2022.
- Office for National Statistics. Child and infant mortality in England and Wales: 2022.
- The World Bank. GDP per capita, PPP (current international \$) OECD members. 2024
  - EuroStat. At-risk-of-poverty rate by age group EU-SILC survey. 2024
- 11. OECD Economic Surveys: New Zealand 2024. 2024.
- 12. EuroStat. Unemployment by sex and age annual data. 2024
- 13. Office for National Statistics. Employment, unemployment and economic inactivity in Scottish Borders. 2024
- 14. GOV.WALES. Labour market statistics (Annual Population Survey): 2023. 2024 [cited 2024; Available from: https://www.gov.wales/sites/default/ files/pdf-versions/2024/6/3/1719407202/labour-market-statistics-annual-population-survey-2023.pdf.
- 15. OECD Data Explorer: Income Distribution Database.

Comparison of country level outcomes on the OECD Better Life Index

The colours indicate different ranges of values: light green for high values (9 and above), light yellow for medium values (7 to 8.9), and **light coral** for lower values (below 7).

|                   | Belgium | Finland | Iceland | Ireland | New<br>Zealand | Slovenia | Scotland | Wales | United<br>Kingdom |
|-------------------|---------|---------|---------|---------|----------------|----------|----------|-------|-------------------|
| Housing           | 7.6     | 6.4     | 6.5     | 7.4     | 6.8            | 6.9      | ı        | ı     | 6.5               |
| Income            | 5.2     | 3.8     | 6.4     | 4.1     | 6.0            | 2.8      |          | 1     | 5.4               |
| Jobs              | 8.0     | 8.2     | 9.7     | 8.1     | 8.3            | 7.5      | ı        | ı     | 8.4               |
| Community         | 0.9     | 8.9     | 10.0    | 8.9     | 8.5            | 8.5      | ı        | ı     | 7.3               |
| Education         | 7.9     | 9.5     | 6.8     | 7.6     | 7.0            | 8.1      |          | 1     | 6.7               |
| Environment       | 5.8     | 9.8     | 2.6     | 7.1     | 8.1            | 6.8      |          | 1     | 6.8               |
| Civic engagement  | 7.2     | 5.4     | 9.9     | 2.9     | 7.5            | 4.3      | 1        | 1     | 7.1               |
| Health            | 8.1     | 7.6     | 8.6     | 9.5     | 9.2            | 7.3      | ı        | 1     | 7.8               |
| Life Satisfaction | 6.5     | 10.0    | 9.0     | 7.2     | 7.9            | 5.3      |          | 1     | 6.4               |
| Safety            | 6.4     | 9.3     | 9.3     | 8.3     | 7.3            | 9.7      | ı        | 1     | 8.6               |
| Work-Life Balance | 7.7     | 7.3     | 4.8     | 6.2     | 4.9            | 6.7      |          |       | 5.6               |

## Appendix 4: Country-level reports and policy documents

### **Belgium**

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- Buffel, V., Nicaise, I. (2018). ESPN Thematic Report on Inequalities in access to healthcare: Belgium. Brussels: European Commission.
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- Gerkens, S., Lefèvre, M., Bouckaert, N., Levy, M., Maertens de Noordhout, C., et al. (2024).
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- Renard, F., Scohy, A., De Pauw, R., Jurčević, J, Devleesschauwer, B. (2022). Health status report 2021: The state of health in Belgium. Brussels: Sciensano.
- Van Aerden, K. (ed.), et al. (2019). CAUSINEQ. Causes of health and mortality inequalities in Belgium: multiple dimensions, multiple causes. Final Report. Brussels: Belgian Science Policy Office

### **Finland**

- Finnish Government. (2023). A strong and committed Finland: Programme of Prime Minister Petteri Orpo's Government 20 June 2023. Helsinki: Finnish Government.
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