

Making a bad situation worse?

The impact of welfare reform and the economic recession on health and health inequalities in Scotland (baseline report)
October 2013



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Please note, this version of the report corrects an error in the graph detailing trends in suicide and a duplication of a graph showing trends in myocardial infarction.

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Summary

There is significant concern within the public health community that the current wave of welfare changes may cause negative health impacts for working-age people in receipt of benefits and their families. This section of the population is already the most vulnerable in society and so the net result may be an increase in health inequalities. These benefit changes are occurring at the same time as a deep and prolonged economic recession, which is likely to have some positive short-term and negative long-term health impacts.

It is too soon to evaluate the impacts of either the economic recession or welfare changes using routine health data. Furthermore, it will be difficult to detect anything other than large and widespread impacts because the routine data are not currently linked to benefits uptake or economic activity, nor are concurrent comparison groups available who are not exposed. More could be done in the future to disaggregate the routine data by socio-demographic characteristics and geography, which may facilitate more sensitive measures of the impacts. However, linking benefits and taxation data to health data, and the use of longitudinal studies, are likely to be more sensitive in detecting real impacts. Further work should be undertaken to evaluate the impacts of the current economic recession and welfare changes in the future when more data are available.

Although the health impacts remain uncertain, the threats to public health are grave and all policy options to: maximise employment (though the provision of good jobs); maximise the incomes of the poorest groups (in particular those most vulnerable to the benefit changes); and reduce stigmatisation of benefit recipients should be considered.

Section 1: Background

Introduction and aims

The design, value and eligibility of welfare benefits are policy areas under the jurisdiction of the UK Government. Welfare policy in the UK has been constantly evolving since the introduction of the welfare state in the late 1940s, and the most recent alterations (encapsulated in the Welfare Reform Act 2012) are just the latest in a long process of legislative and non-legislative changes.

However, the current changes to welfare benefits are more far-reaching and profound than have been seen for 60 years, involving changes to entitlement, their value and how they are to be paid. They are being introduced on the back of a series of changes to the benefits available for those unable to work because of illness and disability, introduced by the previous UK Government, and at the time of the deepest economic recession since the 1930s.

The population groups most likely to be impacted by the welfare benefit changes and economic recession overlap. In particular, those who are of working age (and their children), women (particularly lone parents)¹ and those who have disabilities² are thought to be at greatest risk. Those aged over 65 years are at least risk given that state pension provision is to be increased at, or greater than, the rate of consumer price inflation (CPI).³ There is, however, a concern that the current policy direction may soon impact negatively on this group too.⁴ The UK Government argues that many of those of working age will be able to move into employment or increase the number of hours that they work, thereby compensating for any loss of income experienced.

Aims and structure of the baseline report

The Scottish Government has requested an assessment of the potential health and health inequality impacts of the current welfare reforms and economic context to inform the Ministerial Taskforce on Health Inequalities and the wider range of enquiries being undertaken by the Scottish Government and the Scottish Parliament on the impacts of welfare reform. This report provides an initial perspective on these impacts.

1 Aims

The aims of this report are to:

- outline a monitoring framework and a baseline report of the health impacts of the economic context and the recent changes to welfare provision
- ascertain the extent to which it will be possible to link any changes in health outcomes plausibly to the changing economic context and welfare state.

The remainder of this section summarises the welfare reform changes being introduced by the UK Government, describes the current economic context and sets out the anticipated impacts on health and health inequalities in Scotland. Section 2 sets out the theory of change on which to assess these impacts. This informs the analysis of baseline data presented in Section 3. The final sections summarise the strengths and weaknesses of this approach and set out proposals for the future monitoring of impacts.

2 Changes to welfare benefit provision in the UK

The biggest changes to the welfare state, and more specifically to welfare benefits, have been associated with Government responses to economic crises (e.g. those in the 1930s and 1970s).^{5,6} The current UK Government has responded to the recent economic crisis with a raft of changes to welfare benefits covering their value, eligibility and processes for making claims. The suite of changes to welfare provision introduced as part of the Welfare Reform Act 2012 continue a process of change and evolution in provision (Figure 1). However, the pace and breadth of changes, initially set in train as part of the UK Government's 'Emergency Budget' in June 2010, are more profound than went before and are, therefore, more likely have implications for health and health inequalities in Scotland.

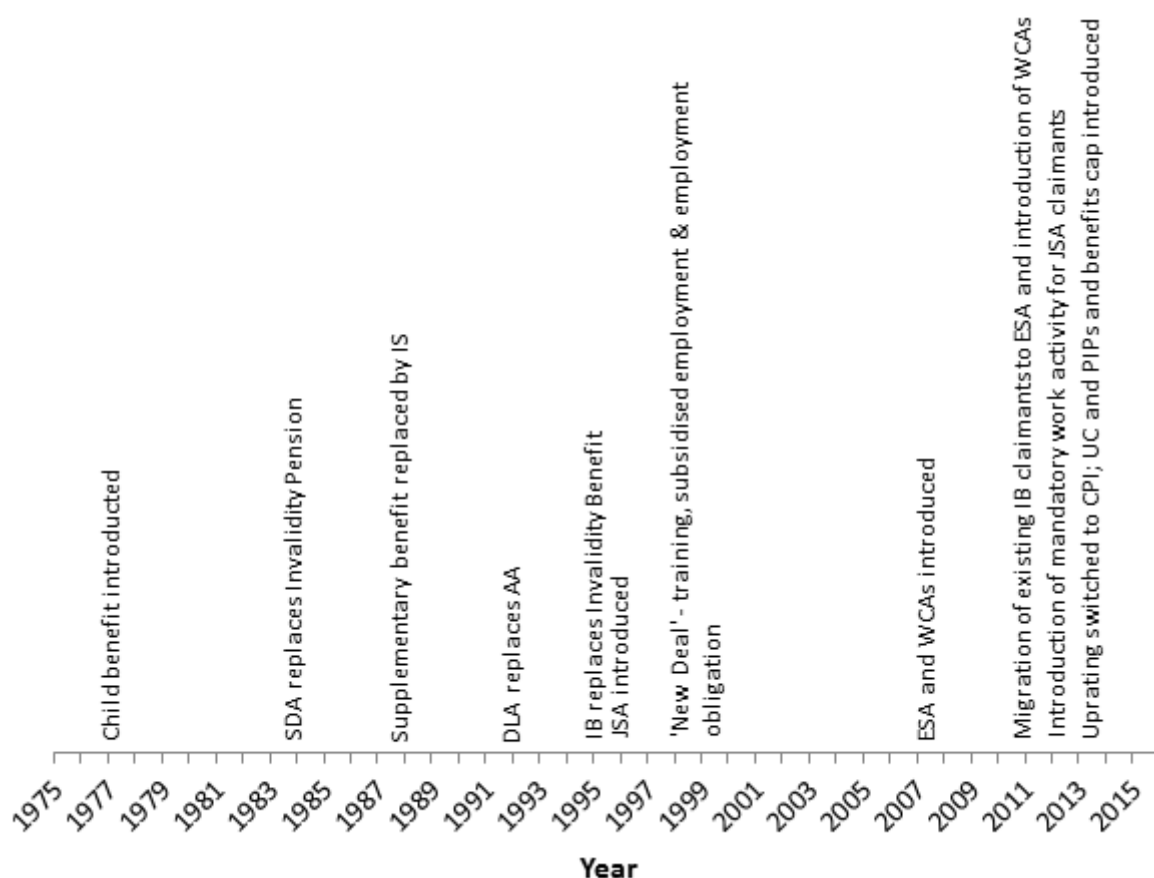
The UK Government rationale for the changes has been to reduce the tax disincentives to taking up paid work for those who are currently in receipt of benefits, to create stronger financial incentives to move from benefits to employment and to make the benefits system more affordable and 'fairer'.⁷ In this way, the UK Government argues that increased employment will improve health and reduce inequalities.

Figure 1: Timeline of selected changes in welfare benefits (1975–2016)

Key

Only selected welfare benefit changes are shown here and many benefits predate 1975.

SDA	Severe Disablement Allowance	ESA	Employment and Support Allowance
IS	Income Support	WCA	Work Capability Assessments
DLA	Disability Living Allowance	CPI	Consumer Price Inflation
AA	Attendance Allowance	UC	Universal Credit
IB	Incapacity Benefit	PIP	Personal Independence Payments
JSA	Job Seekers Allowance		



Although most of the changes that will result from the 2012 Act are known, there remains scope for further changes (as part of the secondary legislation process) as well as to how the alterations are implemented following the piloting process. Detailed analyses of the changes in the welfare system are provided elsewhere.^{3,8} These involve: changes to benefits entitlement; changes to the overall value of benefits; and the amalgamation of benefits into a single payment.

Making a bad situation worse?

In summary, the number of people eligible for benefits has been reduced, and the number of conditions to be met to claim the benefits has been increased. The specific changes include:³

- Housing Benefit (Local Housing Allowance) – changes to the rules governing assistance with the cost of housing for low income households in the private rental sector (involving changes to: rent levels; ‘excess’ payments; property size; age limits for sole occupancy; and indexation for inflation).
- Housing Benefit (under-occupation) – changes to the rules governing the size of properties for which payments are made to working age claimants in the social rented sector (widely known as the ‘bedroom tax’).
- Non-dependant deductions – increases in the deductions from Housing Benefit, Council Tax Benefit and other income-based benefits to reflect the contribution that non-dependant household members are expected to make towards the household’s housing costs.
- Household benefit cap – new ceiling on total payments per household, applying to the sum of a wide range of benefits for working age claimants (not including Disability Living Allowance or Personal Independence Payments).
- Disability Living Allowance – replacement of DLA by Personal Independence Payments (PIP), including more stringent and frequent medical tests, as the basis for financial support to help offset the additional costs faced by individuals with disabilities.
- Incapacity benefits – replacement of Incapacity Benefit (IB) and related benefits by Employment and Support Allowance (ESA), with more stringent medical tests, greater conditionality and time-limiting of non-means tested entitlement for all but the most severely ill or disabled.
- Child Benefit – three-year freeze, and withdrawal of benefit from households including a higher earner.
- Tax Credits – reductions in payment rates and eligibility for Child Tax Credit and Working Families Tax Credit, paid to lower and middle income households.
- 1% up-rating – most working age benefits have been limited to a 1% annual increase (which translates as a real-terms cut as inflation has been consistently higher than 1%). In contrast, state pensions have been increased (with a guarantee that annual increases will at least compensate for any inflation in the economy).⁹
- The Work Programme – those claiming unemployment benefits will increasingly be obliged to take up work-related activity, training or work placements in order to maintain their eligibility for benefits.
- Universal Credit – over a period of time, the way in which benefits will be paid is to change so that a single, monthly payment will be made, rather than a series of individual payments for each benefit.

The impact on health and health inequalities of these multiple changes to the welfare system has been a cause for great concern in the public health¹⁰⁻¹³ and disability rights communities.¹⁴⁻¹⁶ Those who are currently in receipt of sickness benefits are known to be at high risk of premature mortality (even after adjusting for socioeconomic status and other factors),¹⁷ and there is a danger that these

changes will increase these risks. Furthermore, concern has been expressed about the economic impacts the welfare changes will have on areas such as Glasgow which have a large number of individuals who receive these benefits.^{3,18} As a consequence of the concern about the likely economic, social and health impacts of the welfare changes, the Scottish Parliament passed legislation which seeks to mitigate some of the these impacts for the Scottish population.¹⁹

3 Welfare state types, health and health inequalities

The availability of a welfare state, and the way in which societies fund and access welfare, is recognised to be an important determinant of health and health inequalities.²⁰ Scandinavian-style welfare regimes are associated with lower mean mortality rates, although they do not appear to be sufficient to create a society with low health inequalities.^{21,22} The welfare state also has an important role in maintaining social solidarity within society. Without universal public services, progressive taxation and consequent greater equity may be difficult to justify.¹³

4 Economic recession

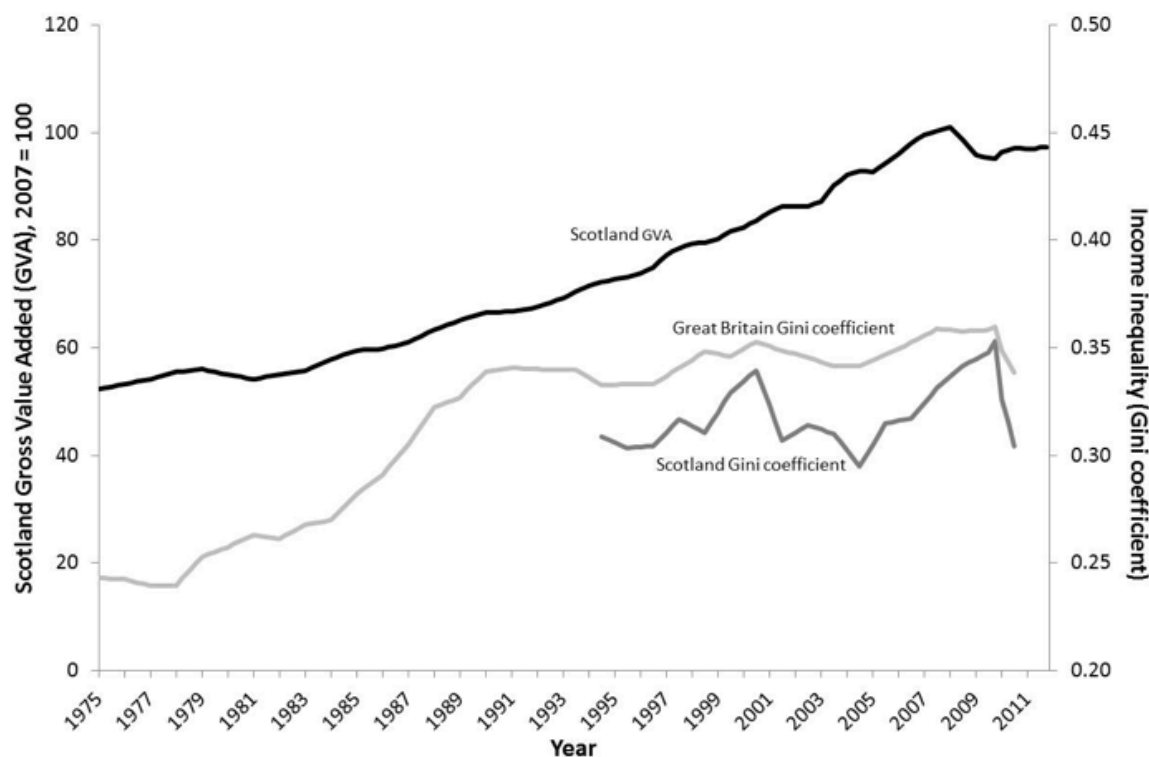
Economic trends in Scotland

The changes to welfare benefit provision currently being introduced in the UK have occurred at the same time as the deepest and longest-lasting recession since the 1930s. Figure 2 shows the trends in economic growth from 1975 in Scotland (as measured by Gross Value Added^a) alongside trends in income inequalities for both Scotland and Great Britain (GB). It shows that economic activity in Scotland in 2012 remains below the levels achieved in 2007 and that there is little evidence of economic growth. The decline in output since 2008 (initially a decline of 6%) was unprecedented in the UK. It is also worth noting that the period of economic growth witnessed during the 1980s and early 1990s was also associated with a large and rapid rise in income inequalities in GB and Scotland (with income inequalities wider in GB than in Scotland) and a large number of changes to welfare benefits.

Since the beginning of 2008 unemployment has risen. Although this rise is small compared to the levels of unemployment seen in Scotland during the 1980s and 1990s, the true impact of the current recession on under-employment and income may be obscured within employment figures by a large reduction in the mean number of hours worked (because of a rise in part-time working) and acceptance of reduced real pay. Self-employment has also increased, which may be associated with greater job insecurity (although this form of employment accounts for a very low mean number of hours per person).²³

^a Gross value added (GVA) measures the difference between economic output and intermediate consumption (i.e. the materials used in the production of the output).

Figure 2: Trends in economic growth (gross value added, 1975–2012) and income inequalities (measured by Gini coefficient* – GB 1975–2010, Scotland 1994–2010)²⁴



* The Gini coefficient is a measure of income distribution in the population where 0 represents complete equality and 1 is the theoretical point where all income is received by a single individual.

Sources: Institute of Fiscal Studies and Scottish Government

The impact of individual income and employment on health

Within societies, people with greater income and wealth are healthier.²⁵ Various longitudinal studies have established that this relationship is largely causal: greater income and wealth leads to better health.^{26–28} Although being able to obtain a minimum quantity of goods and services is clearly important to be healthy,^{29,30} in high income countries poverty is better conceptualised as a relative phenomenon. In this way, income to maintain a level of consumption which allows individuals to participate in the norms of society is what is important for health. Aside from the need for income to obtain material goods and services, individual income and wealth are also likely to be linked to health outcomes through other mechanisms.^{10,31,32} It is therefore the width of, and the individual place within, the social hierarchy which is more important in determining individual health.^{26,33}

The evidence on the links between unemployment and health is stark: a recent systematic review summarised that, on average, mortality rates increased by 63% for those experiencing unemployment compared to those in continuing employment.³² Negative health impacts are also seen where employment changes to become less secure or rewarding.³⁴

Recession and health

Although there is a clear relationship between income and health for individuals within societies, the impacts of recession on the health of whole populations and on health inequalities are less clear. There is evidence that some aspects of health tend to get worse during recessions (e.g. suicide) and others improve.^{35,36} There is also evidence that some of the negative health impacts of recession may be delayed (e.g. cardiovascular disease and health inequalities).³⁵⁻³⁹

It is becoming increasingly clear that the policy response to recession is an important determinant of whether health subsequently improves and whether health inequalities widen. The impacts of recession (and the policy responses to the recession) may impact differentially across the population (e.g. by gender, income group, social class, disability).⁴⁰ It has been found that countries which pursue active labour market policies and provide improved social and welfare protection have populations with better health than those which do not,⁴¹⁻⁴⁴ and those which pursue neo-liberal policies (i.e. reduced market regulation, increased privatisation and decreased universality of welfare provision) tend to see health inequalities widen.⁴⁵

Welfare and recession – mixed effects and timing

In addition to there being two separate exposures (welfare benefit changes and recession) likely to impact on health and health inequalities, there are also uncertainties about the timings of these exposures and the latency of the impacts. Welfare policy has been evolving in the current direction for over a decade; and the decline in incomes and increased unemployment associated with the recession may have predated the decline in UK Gross Domestic Product (GDP) amongst the lowest income groups.⁴⁶

Furthermore, there have been a series of policy responses to the changed economic context in relation to public spending and taxation policy (and indeed welfare policy), which provide further complexity to the task of determining the impact of health of these exposures.

In summary, the impacts of economic recession and welfare benefit changes are complex, with varying impacts across populations, through time and between countries. The impacts on health seem to be highly context-dependent with different political responses creating different health outcomes. The impacts are, therefore, as important to monitor as they are difficult to predict.

5 Predicted health impacts of the welfare benefit changes

There are several reports available which predict the health impacts of the current welfare benefit changes.⁴⁷⁻⁵⁰ The consistent predictions are:

- increased cardiovascular and respiratory illness
- increases in obesity-related illnesses
- worse mental health and general wellbeing
- increases in avoidable winter mortality
- increased substance misuse and associated alcohol- and drug-related harms
- increased unprotected sex and associated rises in sexually transmitted infections
- increased health inequalities.

The mechanisms which have been proposed to lead to these health outcomes include:

- decreased real incomes
- increased income inequalities
- increased fuel poverty
- increased food poverty (and a consequent shift from quality foodstuffs to calorific quantity)
- increased stigmatisation
- decreased housing security
- psychological impacts of unemployment and job loss.

These predictions are based on what is already known about the impact of these mechanisms on health and health inequalities, and the assumption that the current welfare reforms will have the effect of creating the conditions in which significant proportions of the Scottish population will be affected by these mechanisms. Overall, however, it is clear that there is still uncertainty around the range of health impacts, their magnitude and their timing. For example, it has been suggested that it was 10 years before large rises in alcohol-related harm resulted from the deindustrialisation and economic recession of the early 1980s.^{51,52} It is worth noting that there is ongoing academic debate as to if and how income inequalities might impact on health. In particular, some authors argue that income inequalities are linked only through absolute poverty to health outcomes,⁵³ whilst others argue that there is an independent impact.⁵⁴ There is general consensus that income inequalities do impact on health inequalities.⁴⁵

More importantly, welfare reform in the UK is concurrent with a prolonged and deep economic recession, a period of high unemployment and a plethora of public health policies which makes attributing changes in health outcomes to a single policy agenda very difficult.

6 Predicted health impacts of economic recession

Several reports have summarised the likely impacts of economic recession on health outcomes,^{41,49,55} although these are far from clear-cut and are highly likely to be context dependent. However, it is recognised that negative health impacts are likely to occur as a result of unemployment and that some population groups will be disproportionately affected:^{1,55}

- those living in areas already experiencing high unemployment and poverty
- those who will find it most difficult to re-enter the jobs market (including those with low skills, disabilities or those from ethnic minorities)
- younger unemployed workers are also likely to have poorer long-term health and employment outcomes if they are not supported to gain employment
- differential distribution (e.g. lone parents and women are more likely to be affected by benefit cuts and men are more likely to experience negative impacts of unemployment).

Furthermore, there are likely to be increases in health inequalities because of rising poverty and income inequality⁴⁹ (which may also be compounded by the changes to welfare benefits).⁵⁶ This will impact most on those already living in relative poverty.

Health impacts

The health impacts of economic recession are far from clear and may not actually be negative overall. However, it is suggested that there are likely to be a small number of specific negative and positive impacts (which are very similar to those described as the likely impacts of the welfare reforms above):⁴⁹

Negative

- increased suicide and attempted suicide
- increased homicides and domestic violence
- increased mental health problems including depression and lower levels of wellbeing
- increased rates of tuberculosis and human immunodeficiency virus (HIV)
- longer-term increases in health inequalities

Positive

- reduced road traffic fatalities
- reduced alcohol consumption⁵⁵

Notably, it is suggested that alcohol consumption might decrease as a result of the economic recession (because of decreased alcohol affordability), but that welfare changes might increase substance misuse (due to maladaptive coping). Further work is currently underway within NHS Health Scotland to clarify the extent to which the recent declines in alcohol-related harm may be due to the economic circumstances experienced in Scotland now and during the 1980s.⁵⁷

Section 2: Methods

1 Theory of change

A theory-based approach to evaluating the impact of the changes to the welfare state and the economic recession on health outcomes has been developed. Figure 3 outlines the simplified theory developed to link the economic recession and the changes to government policy on welfare to health through a variety of different pathways. It includes both the stated policy intent of the changes (i.e. increased incentives to take up paid work, and consequent decreases in poverty and increased employment) and the central critiques made of the policy approach (i.e. increased unemployment or under-employment; decreased income due to reduced eligibility and value of benefits; increased stigma, anxiety and stress relating to the uncertainty and rhetoric surrounding the changes). Further work is required, informed by qualitative research, to develop this theory of change further.

Populations affected most by welfare reform and recession

The population groups most likely to experience the impact of the welfare changes and economic recession overlap. In particular, those who are of working age, children in low income families, ethnic minorities⁵⁸ and those who have disabilities² are thought to be at greatest risk. Those aged over 65 years are at least risk given that state pension provision is to be increased at, or greater than, the rate of consumer price inflation (CPI).

Those at greatest risk are concentrated in the most deprived areas in Scotland (e.g. the city of Glasgow).^{3,59} This is partly because of the more profound lack of employment in deprived areas,⁶⁰ the higher levels of ill-health and multiple disadvantage,⁵¹ and the greater cuts in public spending in the most deprived areas.⁵⁹

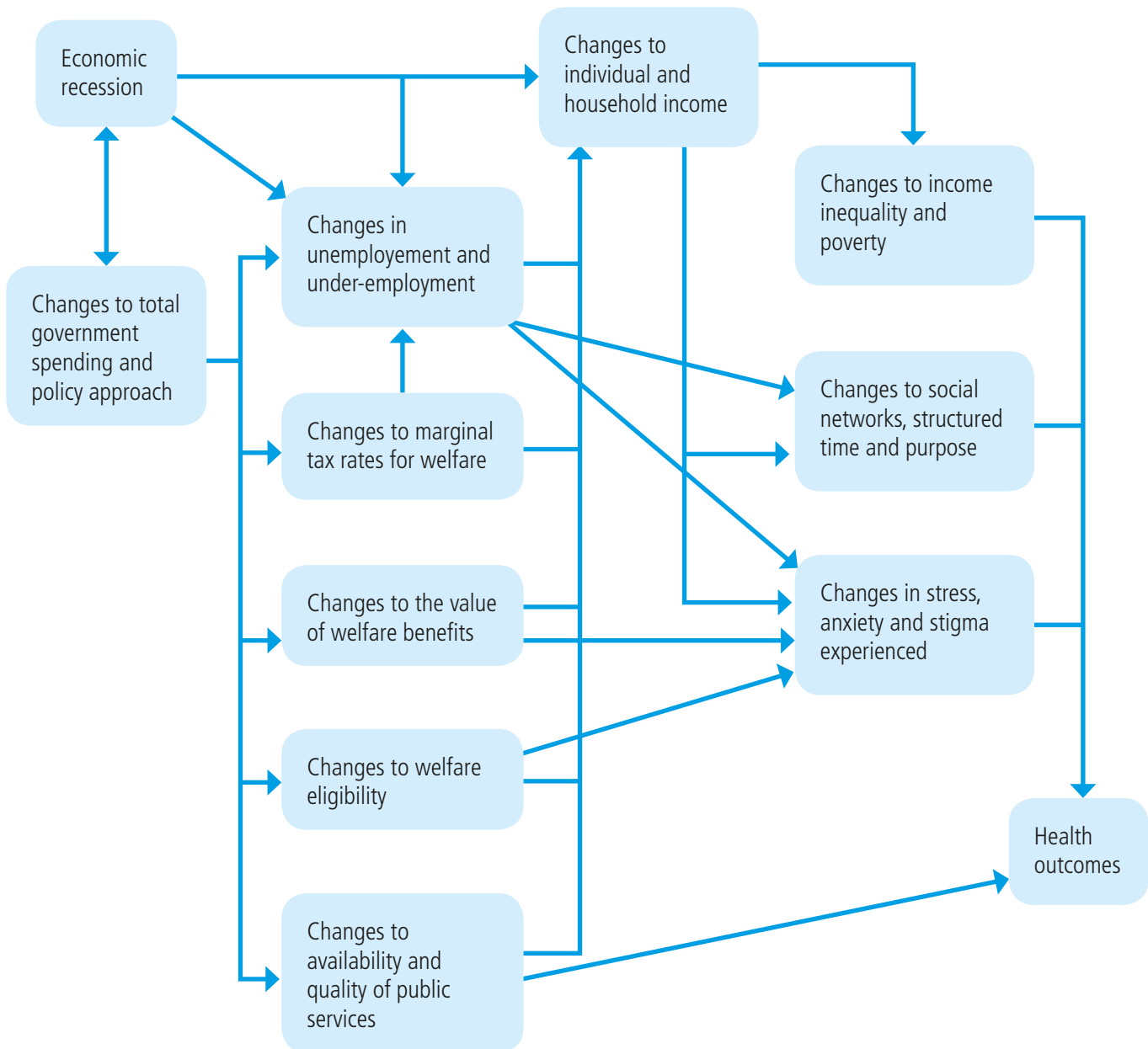
Some individuals and households, who are in receipt of multiple benefits, are likely to experience greater impacts than those projected on the basis of the changes in individual benefits. Figure 4 details the number of individuals who are in receipt of different combinations of benefits in Scotland in 2011. It shows that 72,660 people were in receipt of three key benefits (Income Support/Pension Credit, Incapacity Benefit/Employment and Support Allowance/Severe Disablement Allowance, and Disability Living Allowance), and 226,520 were in receipt of at least two of the key benefits. Those in receipt of multiple benefits will also be the most likely to be subject to the household cap of £500 per week.

In relation to the economic recession, young adults seem to be disproportionately affected by unemployment and under-employment (although the impacts of reduced working hours, reduced real wages and indirect impacts through decreased public services are likely to have a wider reach). Therefore, in relation to the combined impacts of welfare changes and the economic context, young people and those in receipt of benefits (and in particular those in receipt of disability benefits and multiple benefits) are the groups most likely to experience health impacts. These impacts will

be more concentrated in areas of multiple deprivation where a greater proportion of the population are in receipt of benefits.

Although most routine sources of outcomes (health) data are available by age group (and gender, and, more limited by ethnicity) and many are available by geography or deprivation, none are currently available separately for those in receipt of welfare benefits. This further limits the ability to detect and attribute the health impacts of welfare reform.

Figure 3: A simple theory of change linking the economic recession and changes to welfare provision to health outcomes



Exposures other than the economic context and welfare changes

In addition to the interacting impacts of the economic context and welfare changes, numerous other factors will influence the health and health inequality outcomes (either positively or negatively) in Scotland during the next few years. These include: demographic and cohort effects (i.e. impacts due to the ageing of the population and impacts still to be revealed from previous exposures); public service changes (some of which are directly due to changes in public spending, others are related to reforms such as health and social care integration); and concurrent public policy changes (e.g. latent impacts of the ban on smoking in public places and the alcohol strategy). All of these factors need to be recognised as important influences on health outcomes which are likely to make it difficult to attribute any changes to the economic context or welfare benefit change, particularly in the absence of a good comparison population which is exposed to all other factors except those of interest.

2 Data sources

Explanatory variable data

Data on the value of welfare benefits over time were obtained from the House of Commons Library⁶¹ and data on the number of claimants from the Scottish Government.⁸ Details on the welfare changes were taken from the Scottish Public Health Network briefings and Scottish Government summaries.^{48,62,63}

Income and employment outcome data

Data on the number of unemployment benefit claimants and the number of people who are economically inactive were obtained from the Office for National Statistics (NOMIS website) and were combined with mid-year population estimates obtained from National Records of Scotland. Data on income, income inequality and poverty were obtained from the Scottish Government⁶⁴ and the Institute of Fiscal Studies.⁶⁵

Long-term outcome data

Data on hospital admissions for heart disease were obtained from the Information Services Division (ISD) of National Services Scotland. Data on mortality for heart disease, respiratory disease, suicide, drug-related mortality, alcohol-related mortality, road traffic fatalities and excess winter mortality were obtained from National Records for Scotland. Mental health survey data were obtained from a summary report published by NHS Health Scotland.⁶⁶ Data on violence were obtained from the Scottish Government.⁶⁷ Data on the incidence of tuberculosis⁶⁸ and HIV⁶⁹ were obtained from Health Protection Scotland.

Health inequalities data were taken from concurrent analyses being produced for the Scottish Government health inequalities taskforce by NHS Health Scotland using mortality data obtained from National Records for Scotland, as well as from a recent Scottish Government report.⁷⁰

Where possible, data were obtained in age-standardised form (using the European standard population). For some datasets (road traffic fatalities, suicide) only crude data were available, and for others data were used for particular age strata (obesity).

3 Analytical approach

Indicators from each stage of the theory of change (Figure 2) were plotted as a time series. This allowed for the overall trends in the explanatory factors (timing of welfare changes, employment rates, income and poverty levels) and outcomes data (health and health inequality outcomes) and their stability to be assessed.

As this is a baseline report and it is too early to expect or to ascertain any changes in the outcomes indicators, no attempt to statistically associate any changes has been made. Details of intended future work to address this gap are given in Section 4.

Section 3: Results

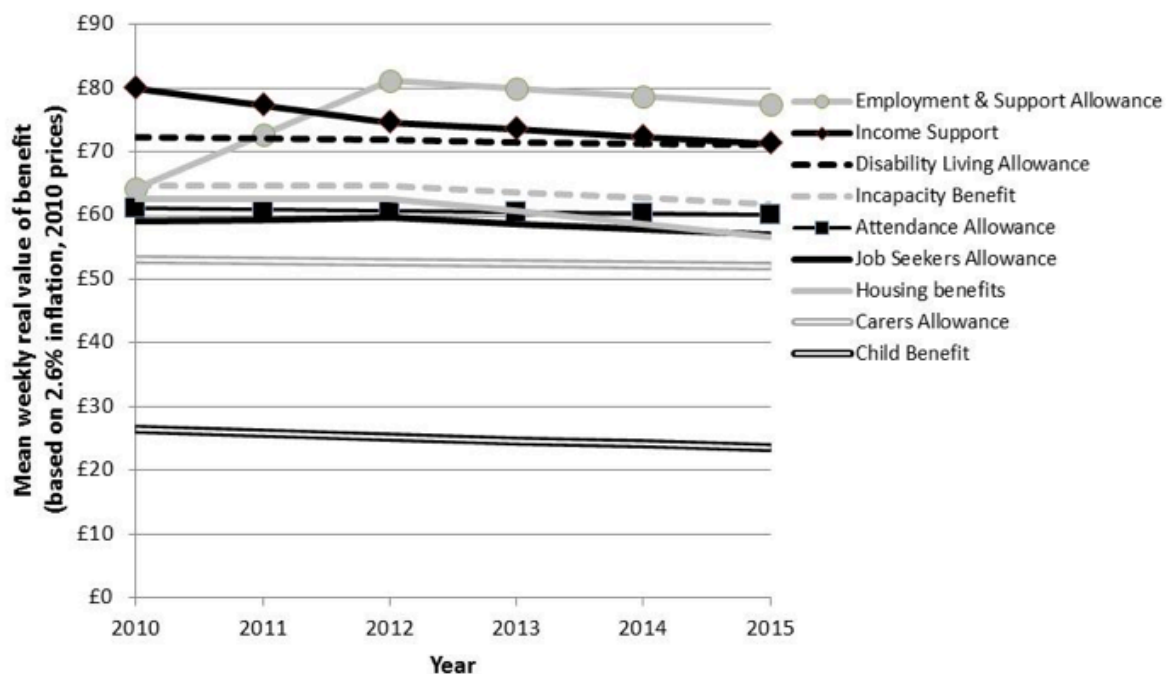
1 Welfare changes and economic context (exposures)

The recent intensification of change in provision of welfare has three key features: changes to the value of benefits; changes in eligibility and conditionality; and changes in the way in which benefits are to be paid. The changes and timing of each of these are detailed below.

Value of benefits

Figure 5 shows that the real value of all the key benefits (calculated on the basis of a 2.6% inflation rate) falls from 2012 onwards, and falls for all except Employment and Support Allowance (ESA) from 2010. It is worth noting that there are concurrent efforts by the Department for Work and Pensions (DWP) to move people from Incapacity Benefit (IB) and ESA through a process of Work Capability Assessments (WCA), and that this increase in conditionality is likely to generate a shift of individuals from IB and WCA to Job Seekers Allowance (JSA) or employment (or to a position of being out of work and not in receipt of benefits, potentially being supported by family).

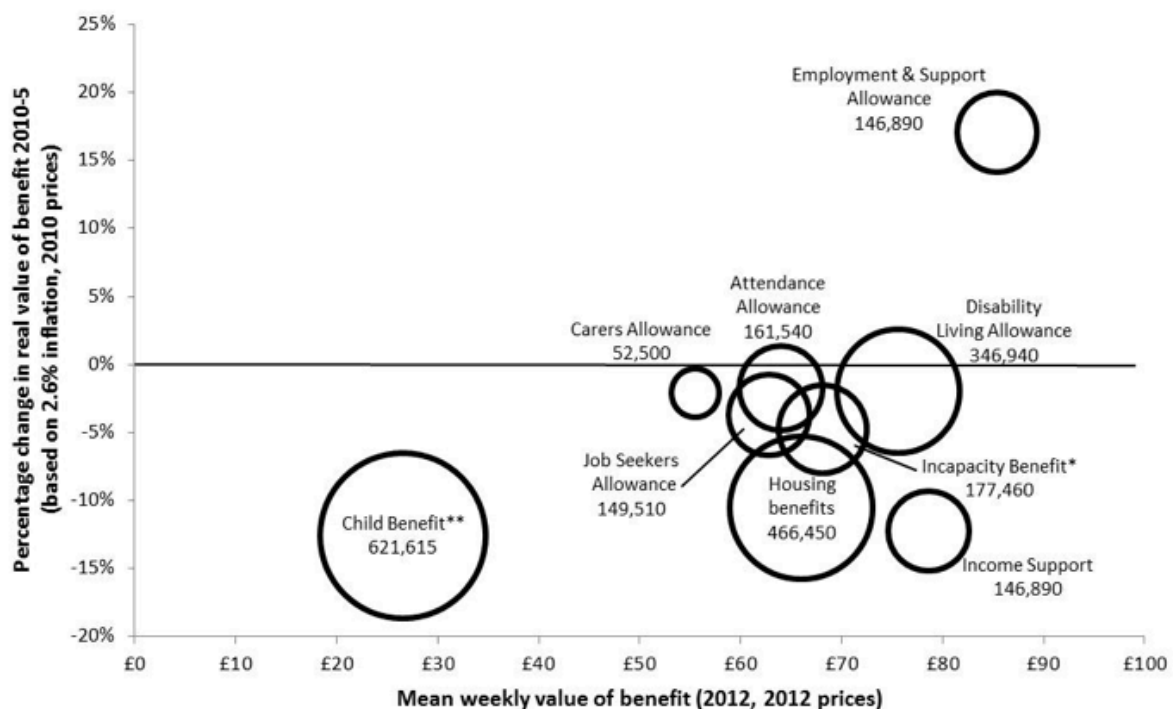
Figure 5: Changes in the real value of key welfare benefits, 2010–2015



Source: House of Common Library⁶¹

Figure 6 shows the change in mean weekly value of the key benefits alongside the current mean weekly value and the number of claimants. The benefit that will see the largest decline is also the benefit that has the lowest mean weekly value and the largest number of claimants (Child Benefit). However, ESA, which has the highest mean weekly value, is the only benefit to project an increase by 2015 (although there is greater conditionality planned for this benefit which is likely to result in a decline in the number of recipients over time). Furthermore, as Figure 3 shows, there are large numbers of people who are in receipt of at least two of Disability Living Allowance (DLA), IB/ESA and Income Support (IS) benefits. This means that a very large number of people will see multiple benefits decline in value over the next few years (even assuming little or no change resulting from the increased conditionality).

Figure 6: Change in the real value of benefits, number of claimants and mean weekly value of benefits in Scotland (2010–2015) (The diameter of the circles is in proportion to the number of claimants)



* Includes Severe Disablement Allowance (SDA)

** The number of recipients of Child Benefit count households not children

Source: Scottish Government⁸

Eligibility and conditionality of benefits

In addition to the value of key benefits declining between 2010 and 2015, a large number of new rules have been, or are soon to be, introduced which will either restrict the population eligible for the benefits (by restricting the eligibility criteria or by introducing new conditions). In addition, there are new rules which will penalise some claimants due to their individual circumstances. As noted earlier, these changes include:³

- Housing Benefit (Local Housing Allowance) – changes to the rules governing assistance with the cost of housing for low income households in the private rental sector (involving changes to rent levels, ‘excess’ payments, property size and age limits for sole occupancy).
- Housing Benefit (under-occupation) – changes to the rules governing the size of properties for which payments are made to working age claimants in the social rental sector (widely known as the ‘bedroom tax’).
- Non-dependant deductions – increases in the deductions from Housing Benefit, Council Tax Benefit and other income-based benefits to reflect the contribution that non-dependant household members are expected to make towards the household’s housing costs.
- Household benefit cap – new ceiling on total payments per household, applying to the sum of a wide range of benefits for working age claimants (not including Disability Living Allowance (DLA) or Personal Independence Payments (PIP)).
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- Incapacity benefits – replacement of Incapacity Benefit and related benefits by Employment and Support Allowance (ESA), with more stringent medical tests, greater conditionality and time-limiting of non-means tested entitlement for all but the most severely ill or disabled.
- Child Benefit – withdrawal of benefit from households including a higher earner.
- Tax Credits – reductions in eligibility for Child Tax Credit and Working Families Tax Credit, paid to lower and middle income households.

Changes to how benefits will be transferred

Universal Credit (UC) is to be introduced in October 2013. This will pool multiple benefits into a single payment and remove the jumps in tax rate that might reduce the financial benefit of working longer hours or taking up employment. The introduction of UC is not designed to change the value of benefits received and may reduce the tax payable if benefit recipients are able to find work to supplement their income.⁷¹ However, there are four other impacts of UC introduction which are relevant. First, payment will be made monthly rather than weekly. This has raised some concerns that some benefits recipients will struggle to cope with the new budgeting arrangements. Second, claims will be made and managed by claimants online, raising concerns about claimants who do not have internet access, cannot use online services or do not want to access their benefits claims online. Third, the

benefit will be paid to households, not to individuals, and paid straight into bank accounts. It has been suggested that this may impact on the distribution of income within households, potentially disadvantaging women. Fourth, by merging the receipt of benefits into a single payment, it remains unclear how 'passport' benefits will be retained (e.g. free school meals, free dental treatment etc.).

Economic recession

Figure 2 shows that the economic recession started in 2008, and that economic activity had not recovered to pre-recession levels by the end of 2012. However, the incomes of the poorest groups declined from around 2004 (preceding the recession).⁴⁶ More detail on income trends is given in the next section.

2 Income and employment outcomes

The theory of change describes key pathways through which it is expected the changes in the economic context, and to welfare policy, will impact on health and health inequality outcomes. There are several of these pathways for which data are readily available:

- change to employment and unemployment
- changes to income and poverty levels
- changes to income inequality levels.

Employment and unemployment

Figure 7 shows the trends in proportion of the working-age population claiming unemployment benefit. Throughout the time series, the proportion is higher among men than women, with large peaks in the mid-1980s, and lesser peaks in the early 1990s and from 2008 onwards.

Figure 7: Trends in the proportion of the working-age population claiming unemployment benefits including Job-Seekers Allowance (1975–2013)

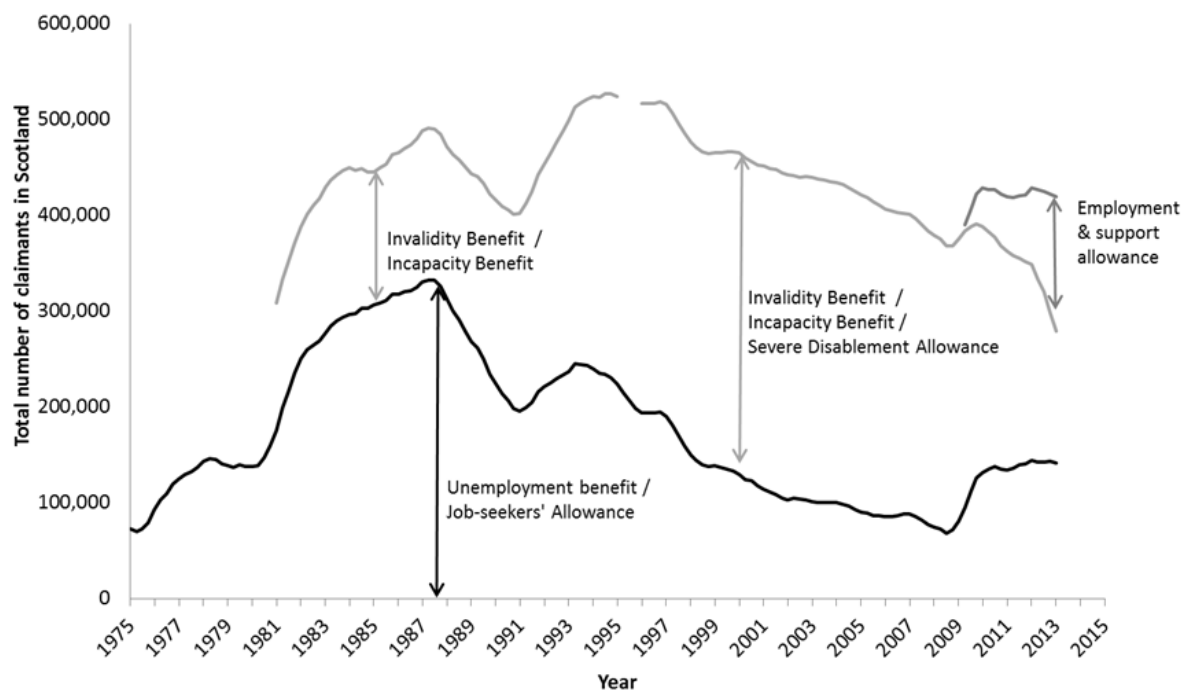


* Male working age population is 15–64 years; female working age population is 15–59 years

Source: NOMIS (Office for National Statistics)

Although the recent rises in the proportion of the working-age population claiming unemployment benefits are much lower than the increases seen during the 1980s, the data require careful interpretation. During the 1980s and 1990s, the number of people claiming disability benefits (Invalidity Benefit, Incapacity Benefit, Severe Disablement Allowance and more recently Employment and Support Allowance) rose rapidly, such that any decline in the number of people coming off unemployment benefits was largely compensated by the increase in those claiming disability benefits (Figure 8). Taking the trends in the total number of people claiming either unemployment or disability benefits as a more accurate reflection of real worklessness,⁷² it can be seen that there was a rapid and large increase from around 300,000 in 1980 to almost 500,000 in 1987. This fell back to around 400,000 by 1990 before increasing to over 500,000 again by 1994. This total declined steadily until around 2008 before increasing again.

Figure 8: Crude number of people claiming key working-age benefits in Scotland 1980–2012



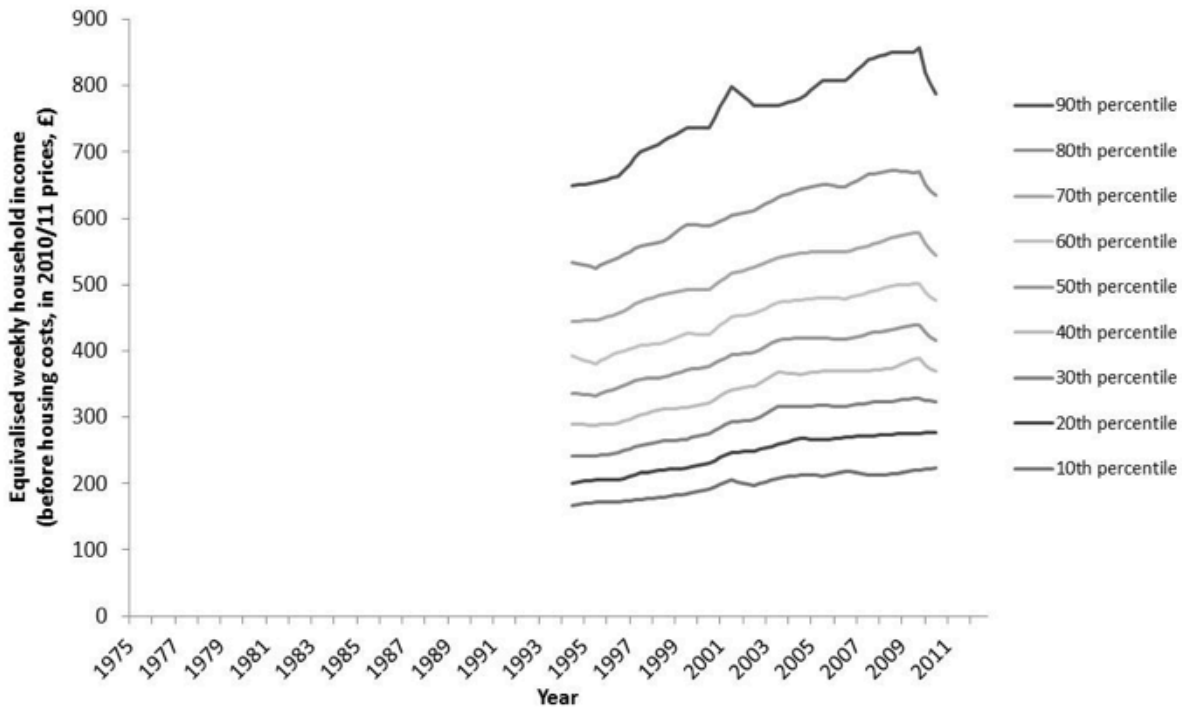
Sources: NOMIS (Office for National Statistics) and the Department for Work and Pensions

Income and poverty

Although the economic recession in Scotland did not begin until 2008, incomes for the poorest 10% of the population increased only very slowly from 2002 onwards and exhibited a decrease around 2007 (Figure 9).⁴⁶ Although these data account for changes in prices, there is a question over the extent to which they capture the steeper rises in prices experienced by lower income groups who spend a higher proportion of their income on heating and food, which have seen higher inflation rates than luxury goods over time. The proportion of the working-age population living in relative poverty has been relatively stable in Scotland following a short peak in 2000 (Figure 10).

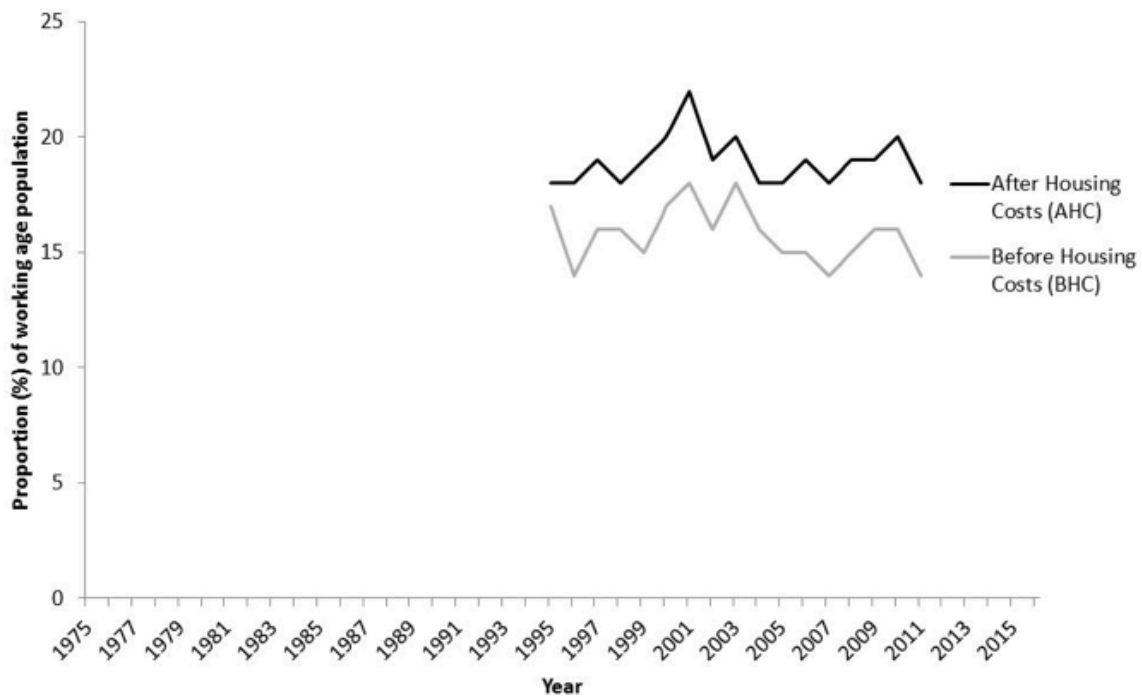
Making a bad situation worse?

Figure 9: Trends in equivalised real household income distribution by percentile (Scotland, 1994/95–2010/11)



Source: Scottish Government

Figure 10: Proportion of the working-age population in relative poverty (below 60% of median incomes, Scotland, 1995–2011)

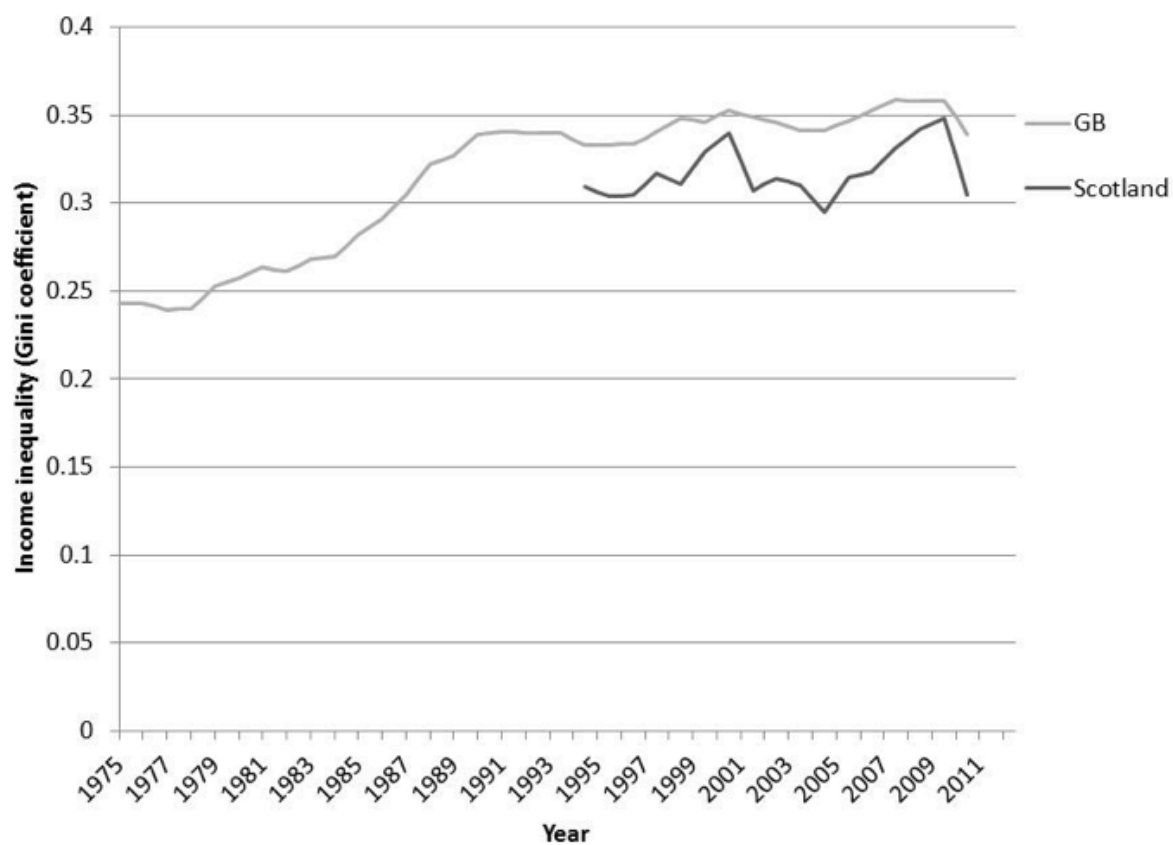


Source: Scottish Government

Income inequality

Inequality in incomes rose rapidly from around the European median in the 1970s to be amongst the most unequal by the 1990s in Great Britain.⁷³ Although income inequalities have been consistently lower in Scotland from the mid-1990s onwards, they are still relatively high compared to elsewhere in Europe. After 2009, income inequalities dropped in both GB and Scotland as incomes for the most affluent dropped more quickly than incomes amongst the poorest (Figure 11).

Figure 11: Trends in income inequality for GB and Scotland



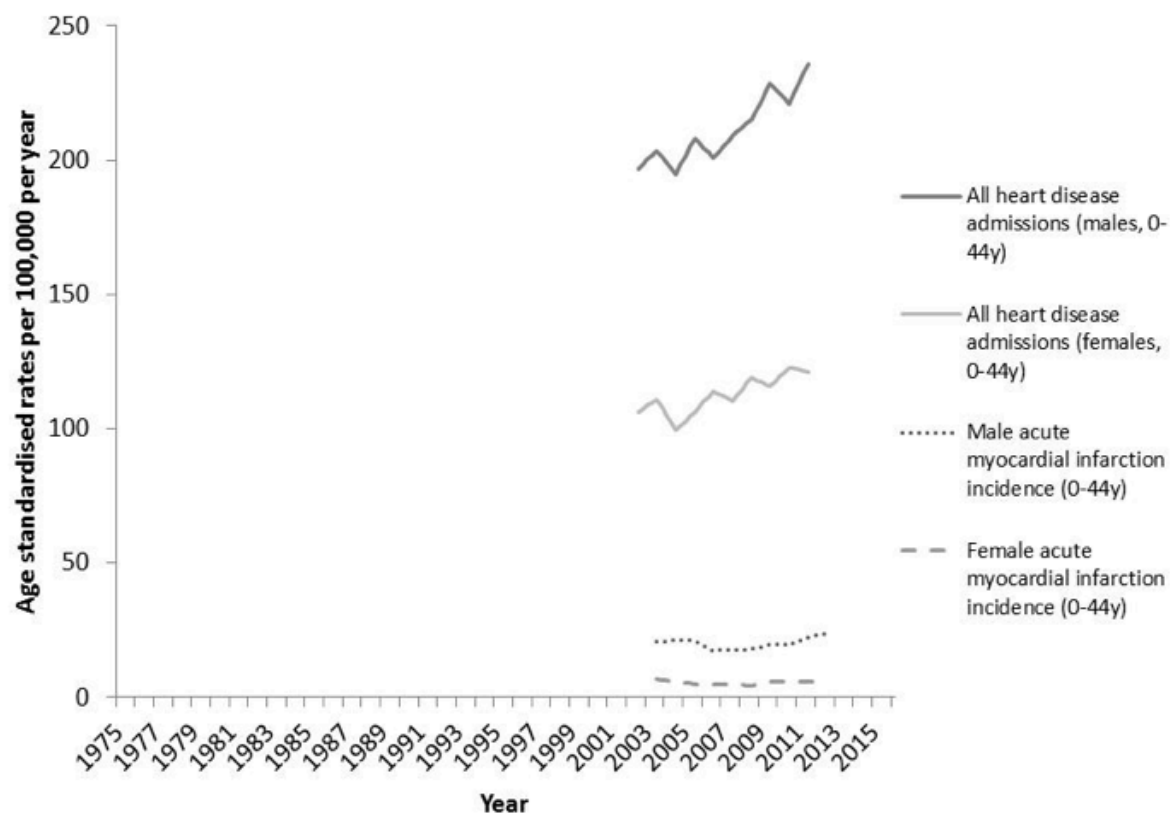
3 Health and health inequality outcomes

The potential health impacts of the welfare changes and economic context have been detailed in Section 1. Particular health and health inequality outcomes are more likely to have an impact through their links with unemployment, income inequality and poverty, including: heart disease; respiratory disease; obesity; mental health and wellbeing; suicide; alcohol misuse; drugs misuse; excess winter mortality; health inequalities; violence; tuberculosis; HIV; and road traffic accidents. The trends in the indicators of these outcomes, as described in Section 2, are shown below.

Heart disease trends

Admissions to hospital for heart disease amongst young adults in Scotland increased in both men and women from 2003 (Figure 12). The incidence of myocardial infarction (heart attack) amongst young adults was, however, more stable over the same period. It should be noted that these trends may be susceptible to changes in the treatment and confirmed diagnosis of myocardial infarction over time.

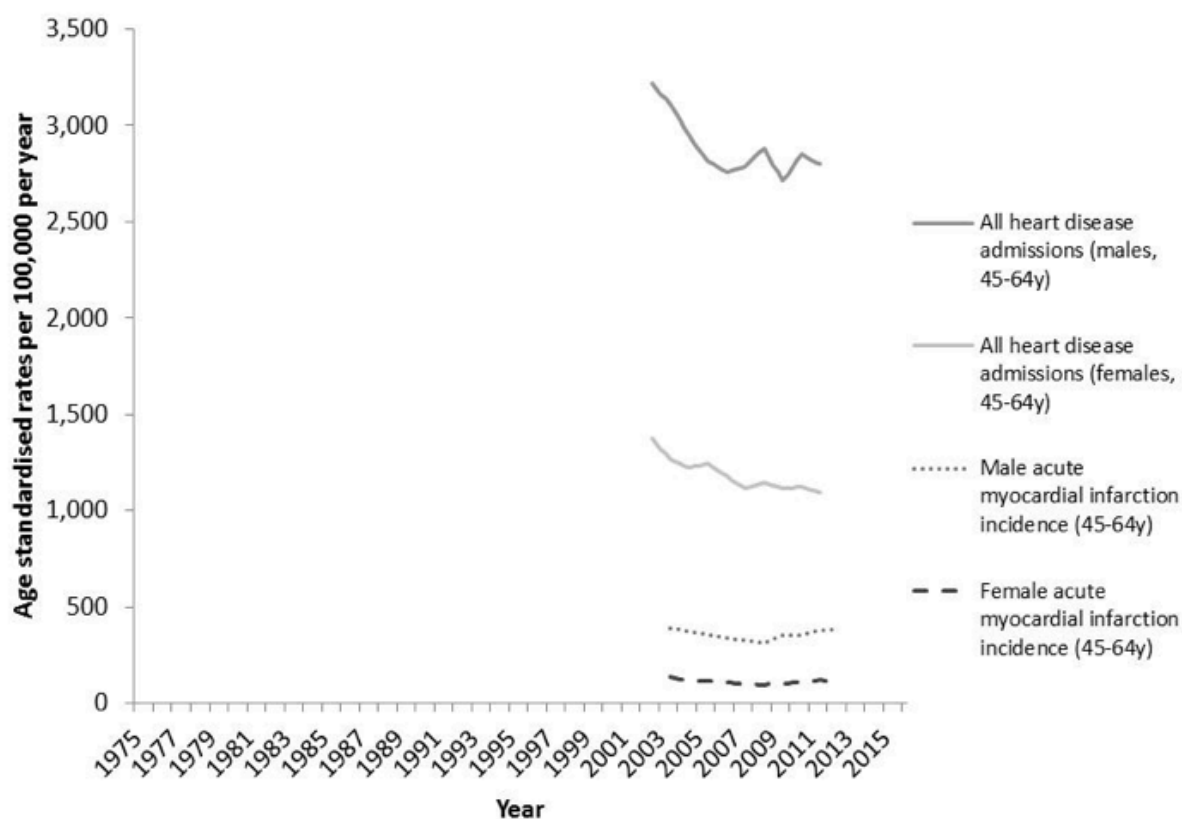
Figure 12: Incidence and admissions for heart disease in young adults in Scotland (0–44 years, 2003–2012)



Source: Information Services Division, NHS National Services Scotland

Figure 13 shows the trends for older working-age adults. In contrast to younger working-age adults, hospital admissions decreased over time. In this age group, the incidence of myocardial infarction was also relatively stable. Mortality from cardiovascular disease in all ages has dramatically declined in Scotland in both men and women from the late 1970s, and declined very rapidly from the mid-1980s (Figure 14).

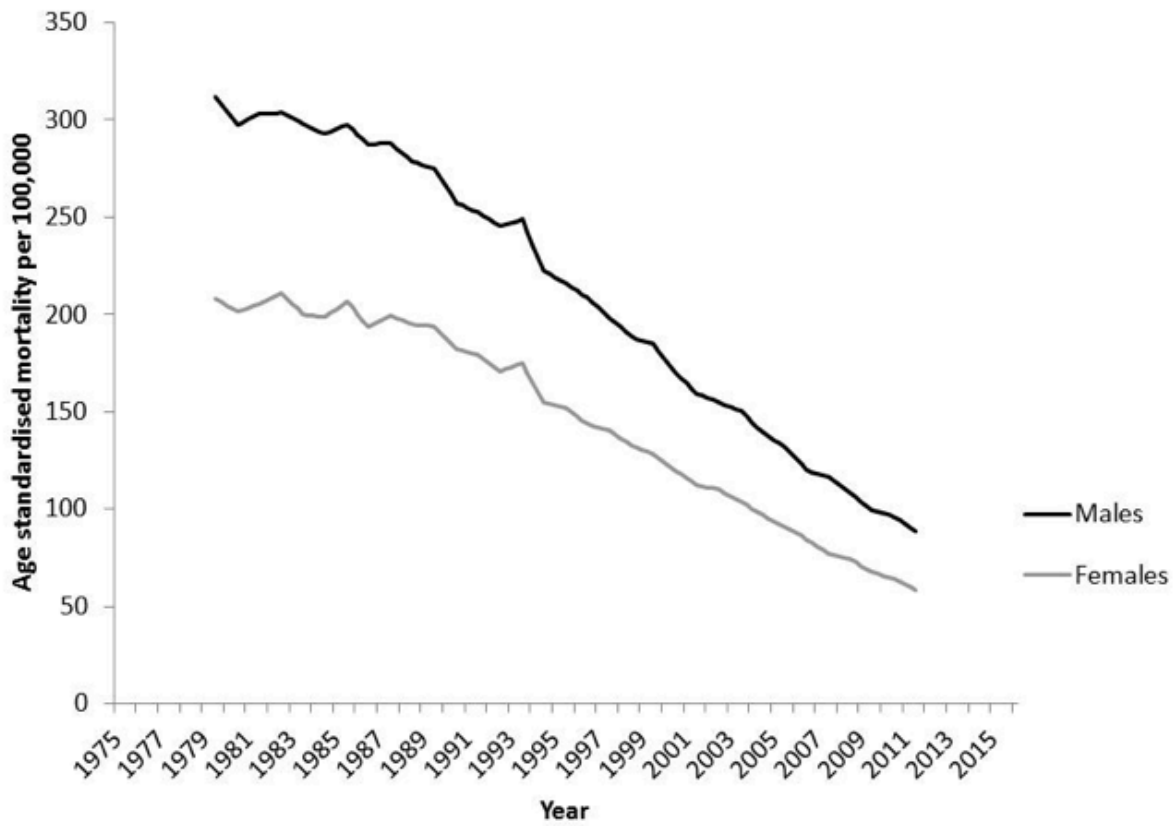
Figure 13: Trends in new cases of myocardial infarction ('heart attack') and all hospitalisations for heart disease amongst adults (45–64 years) in Scotland (2003–2012)



Source: Information Services Division, NHS National Services Scotland

Making a bad situation worse?

Figure 14: Trends in mortality from ischaemic (coronary) heart disease in Scotland (all ages, 1979–2012)

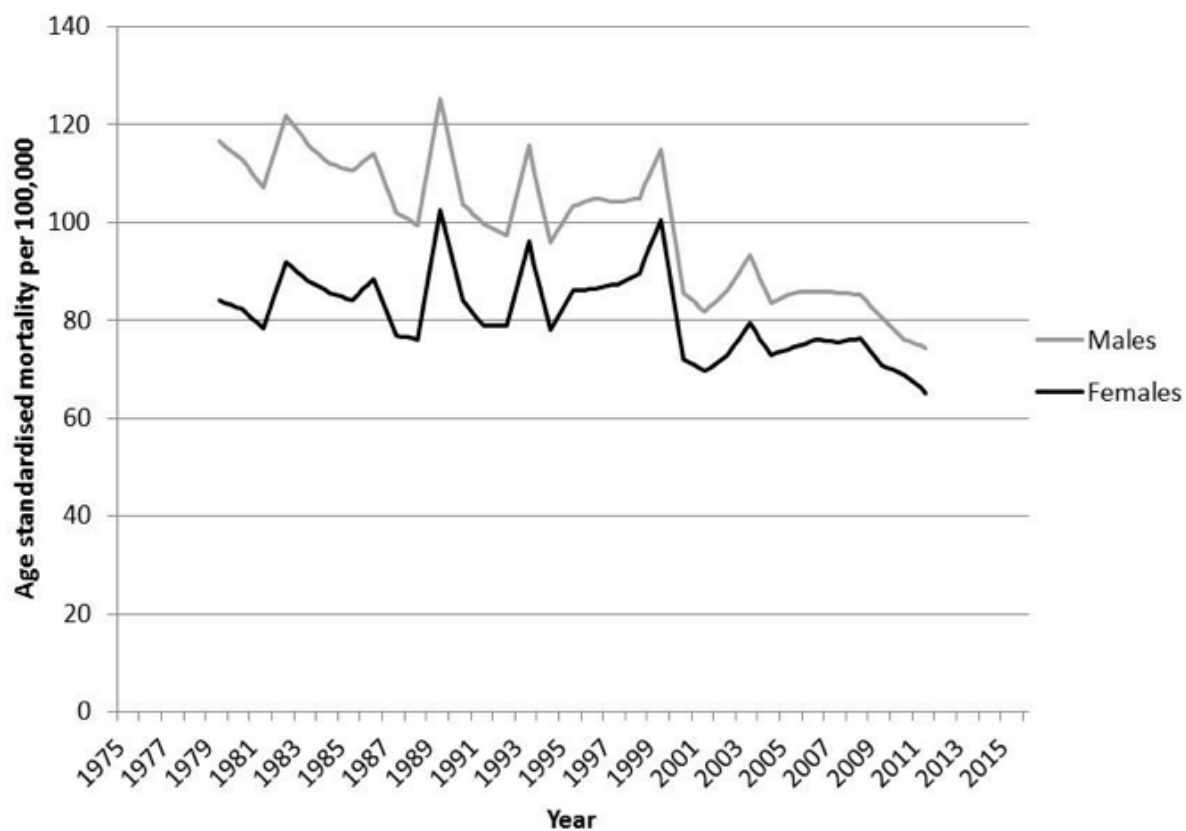


Source: National Records for Scotland

Respiratory disease

Mortality from respiratory disease, for all age groups, declined from the late 1970s onwards (Figure 15), with mortality rates consistently higher for men than women.

Figure 15: Trends in mortality from respiratory disease in Scotland, all ages (1979–2012)

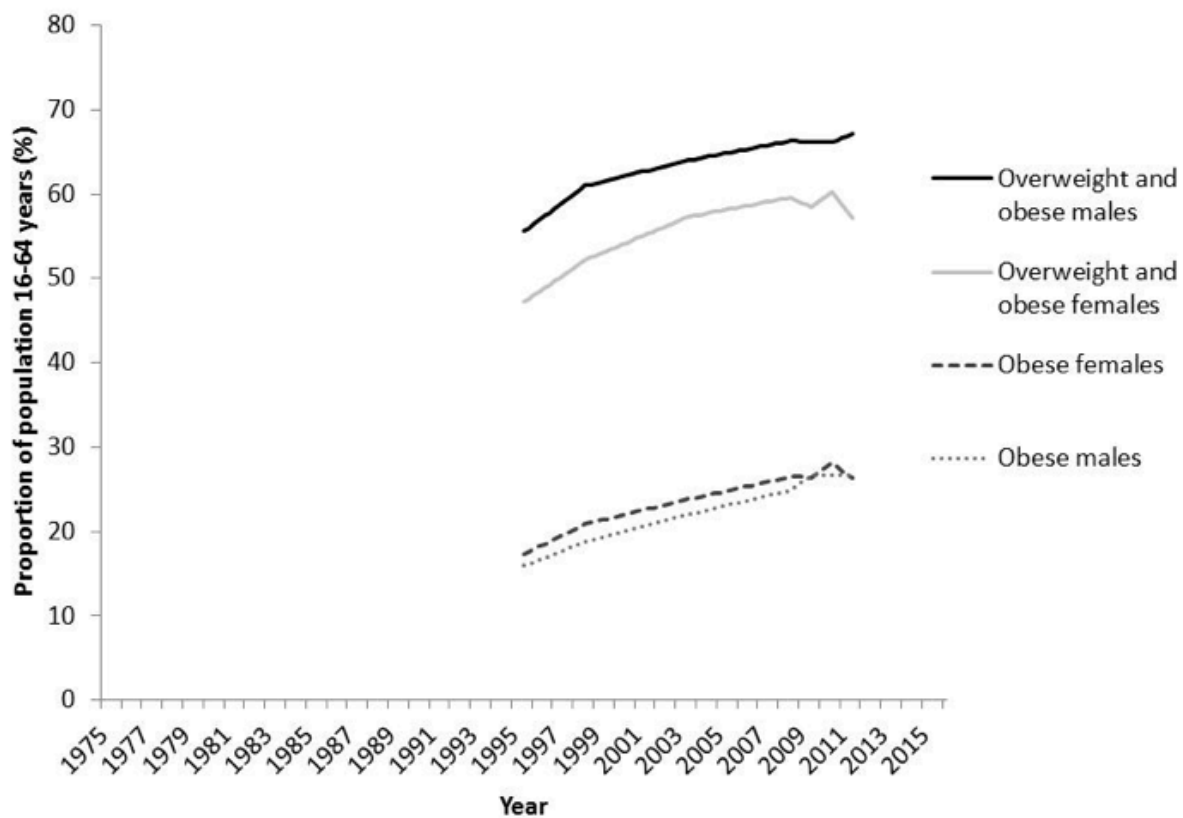


Source: National Records for Scotland

Obesity

The prevalence of obesity (defined as a body mass index of >30 kg/m²) and overweight and obesity (defined as a body mass index of >25) has been measured since 1995 (Figure 16). Obesity steadily increased from 1995 to around 2009 for men and women before stabilising. The proportion of Scottish adults (aged 16–64) who are overweight or obese has risen to over 60% for men and over 50% for women from 1995, with some evidence that the proportion of women has stabilised or has even started to decline.

Figure 16: Trends in the proportion of the Scottish adult population (16–64 years) overweight and obese



Source: Scottish Health Survey

Mental health and wellbeing, suicide, alcohol and drug-related mortality

The most appropriate measures of mental health and wellbeing have recently been extensively reviewed and reported on for adults.⁶⁶ The positive aspects of mental health and wellbeing can be measured in terms of life satisfaction and using the Warwick-Edinburgh Mental Well-Being Score (WEMWBS). Only short time series are currently available for the Scottish population, but they show a small improvement in life satisfaction between 2002 and 2009 and little change in WEMWBS between 2008 and 2011 (Figure 17).

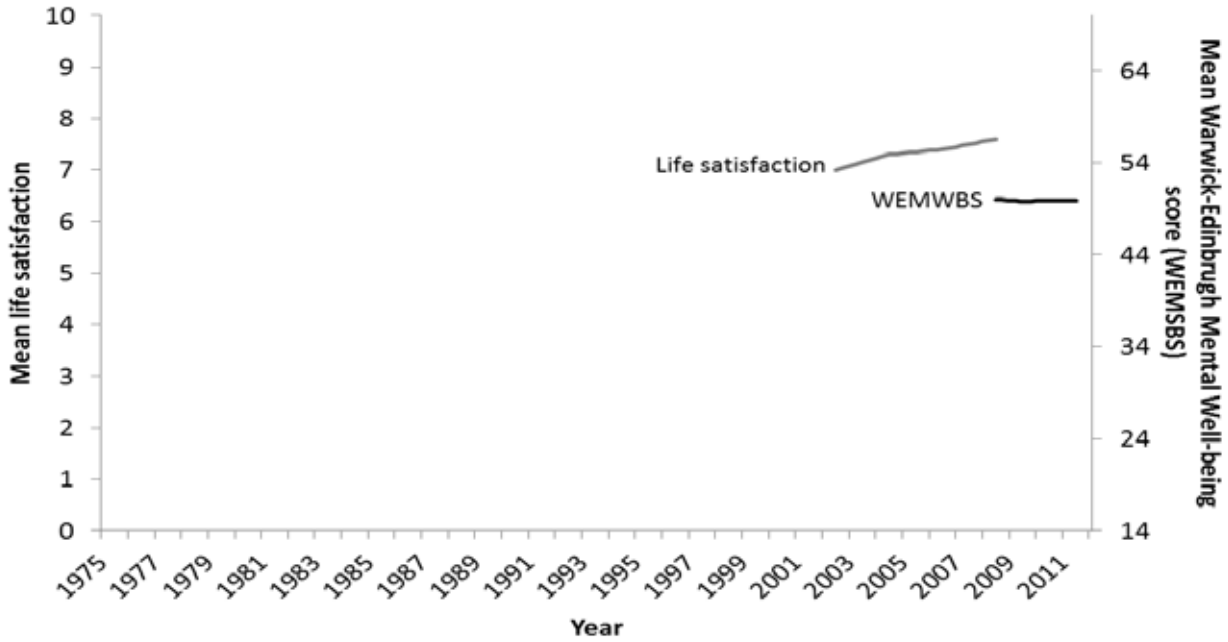
Trends in the prevalence of mental health problems can be measured in self-reported surveys and through cause-specific mortality rates (data on hospital admissions are not routinely age-standardised, making trends difficult to interpret). Figure 18 shows the trends in the prevalence of common mental health problems in Scottish adults based on self-reported survey data. The data series is short and so no conclusion on the trend can be drawn.

Figure 19 shows the trends in suicide mortality in Scotland from 1979. Suicide deaths include those of undetermined intent and show a large rise from the 1970s to around 2003 before subsequently falling in men, with little change over time amongst women after a fall from 1979 to around 1984.

Alcohol-related mortality rose rapidly during the 1990s amongst men and women and has since fallen markedly, particularly for men. The total illicit drug-related mortality was stable from 2001 to 2006, before subsequently increasing (Figure 20).

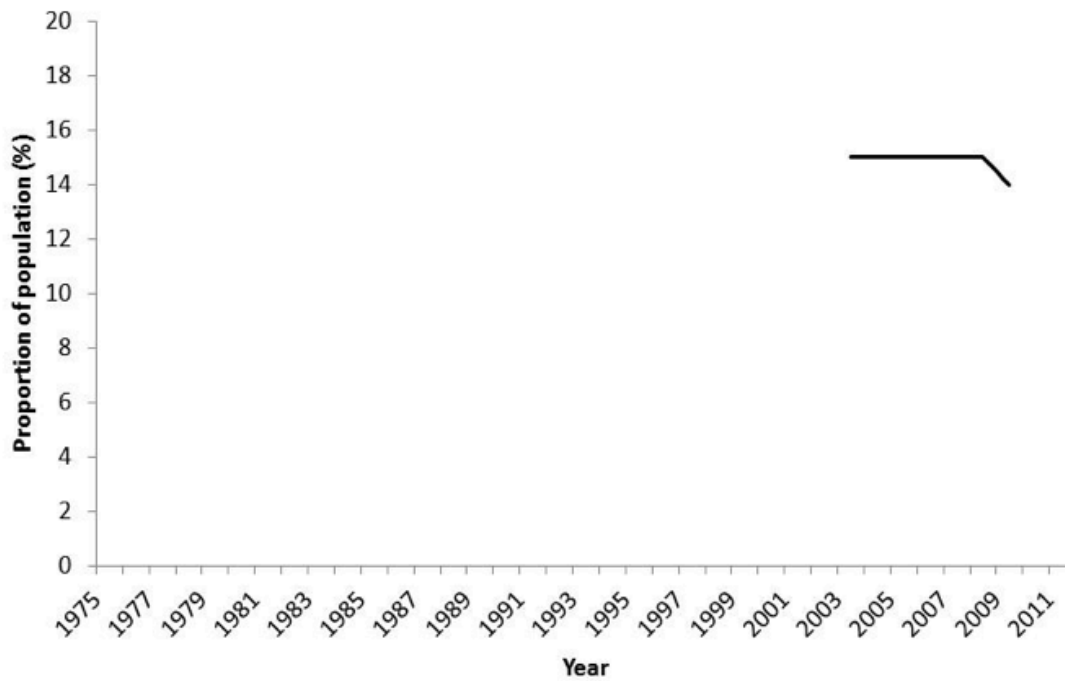
Making a bad situation worse?

Figure 17: Trends in mean life satisfaction (on a scale of 0–10, with 10 being most satisfied, 2003–10) and wellbeing (on a scale of 14–70, with 70 being the maximum possible wellbeing, 2008–11) in Scottish adults aged 16+ years



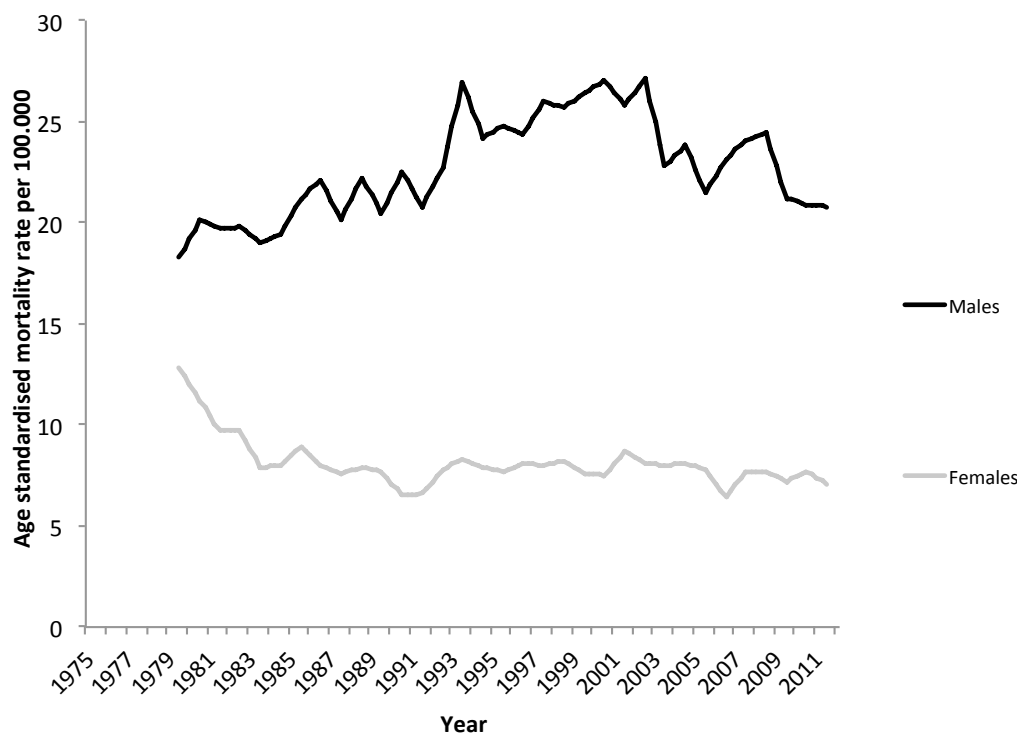
Source: NHS Health Scotland⁶⁶

Figure 18: Trend in the prevalence of common mental health problems in the Scottish adult population (aged 16+ years) (scoring 2+ on the depression on in the GHQ-12 questionnaire), 2003–10



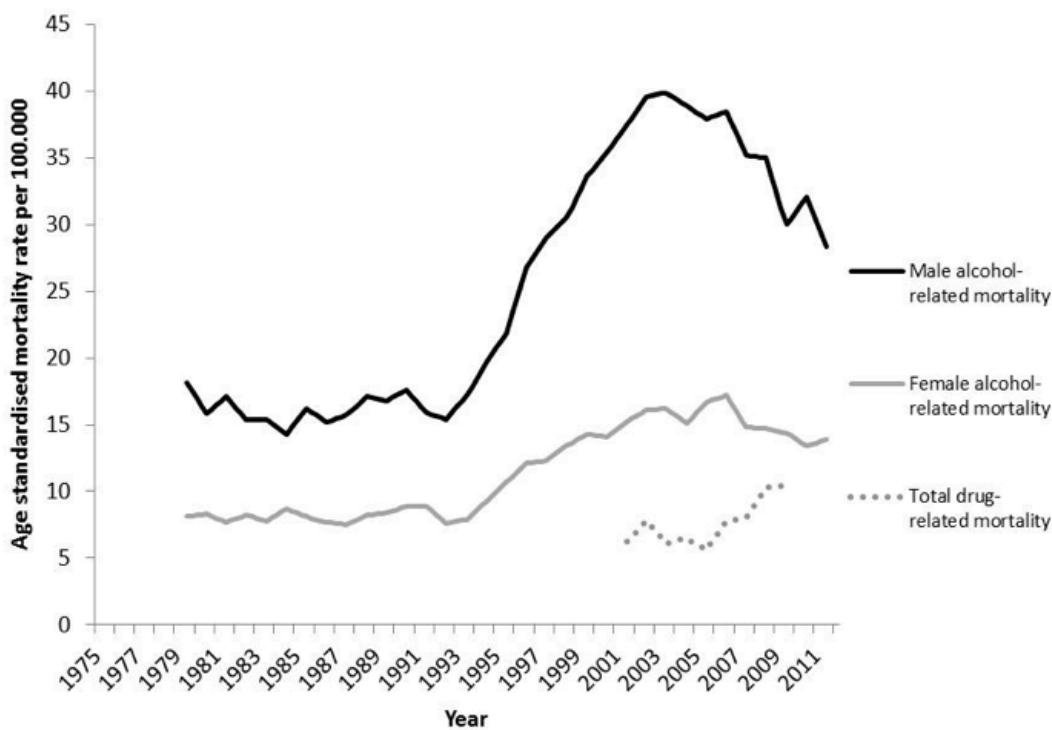
Source: NHS Health Scotland⁶⁶

Figure 19: Trends in age-standardised suicide mortality (including undetermined deaths) in Scotland, 1979–2011



Source: National Records for Scotland

Figure 20: Trends in age-standardised drug-related mortality and alcohol-related mortality in Scotland (all ages, 1979–2011)

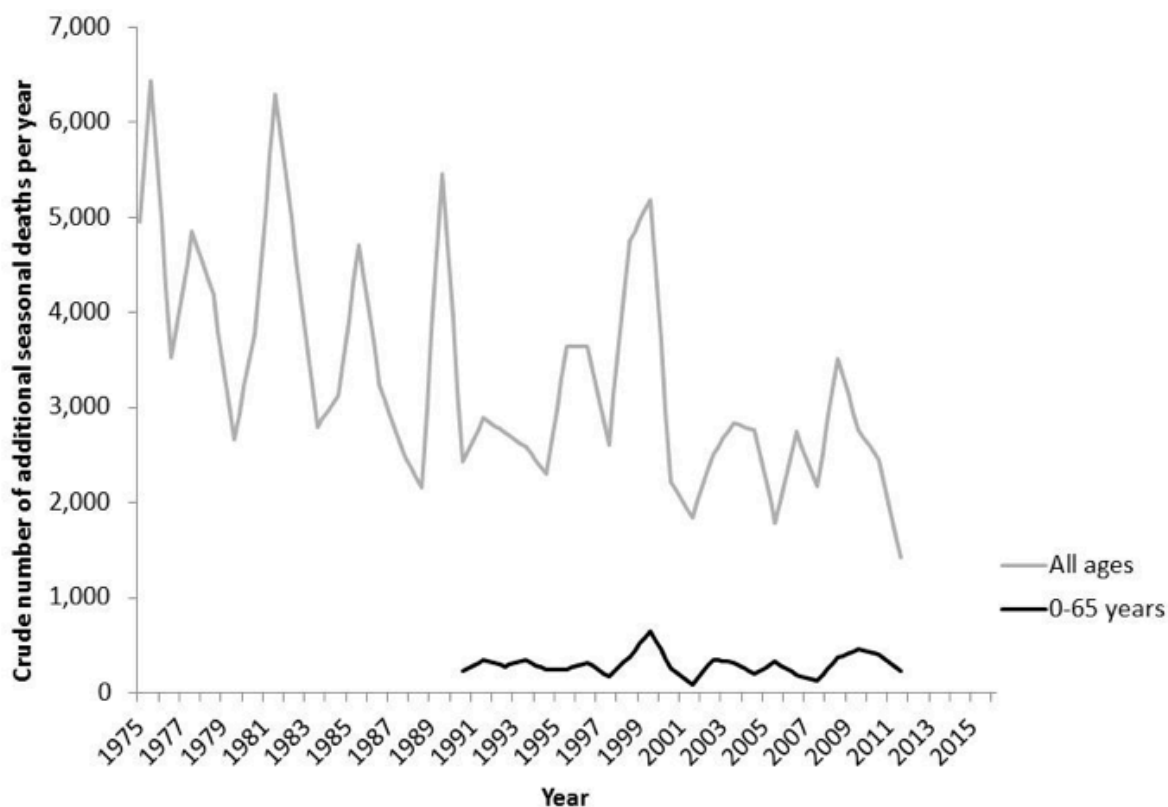


Source: National Records for Scotland

Excess winter mortality

Excess winter mortality is calculated on the basis of the seasonal variation in mortality rates across the year, with the excess being the difference between the rates in December to March compared to the rest of the year. It is influenced by a variety of factors, including influenza epidemics, the weather, social infrastructure (such as housing) and prevalence of fuel poverty in the population.⁷⁴ Figure 21 shows the trends in excess winter mortality for the whole population and for those aged up to 65 years. Mortality rates are higher in years with influenza epidemics and cold winters, but have declined substantially from 1975 to 2012 (even though the data presented are crude and not age-standardised during a time in which the population has aged). The great majority of the excess is amongst those aged over 65 years and there is little evidence of any trend over time in those under this age.

Figure 21: Trends in excess winter mortality in Scotland for all ages and for those aged 0–65 years, 1975–2011



Source: National Records for Scotland

Health inequalities

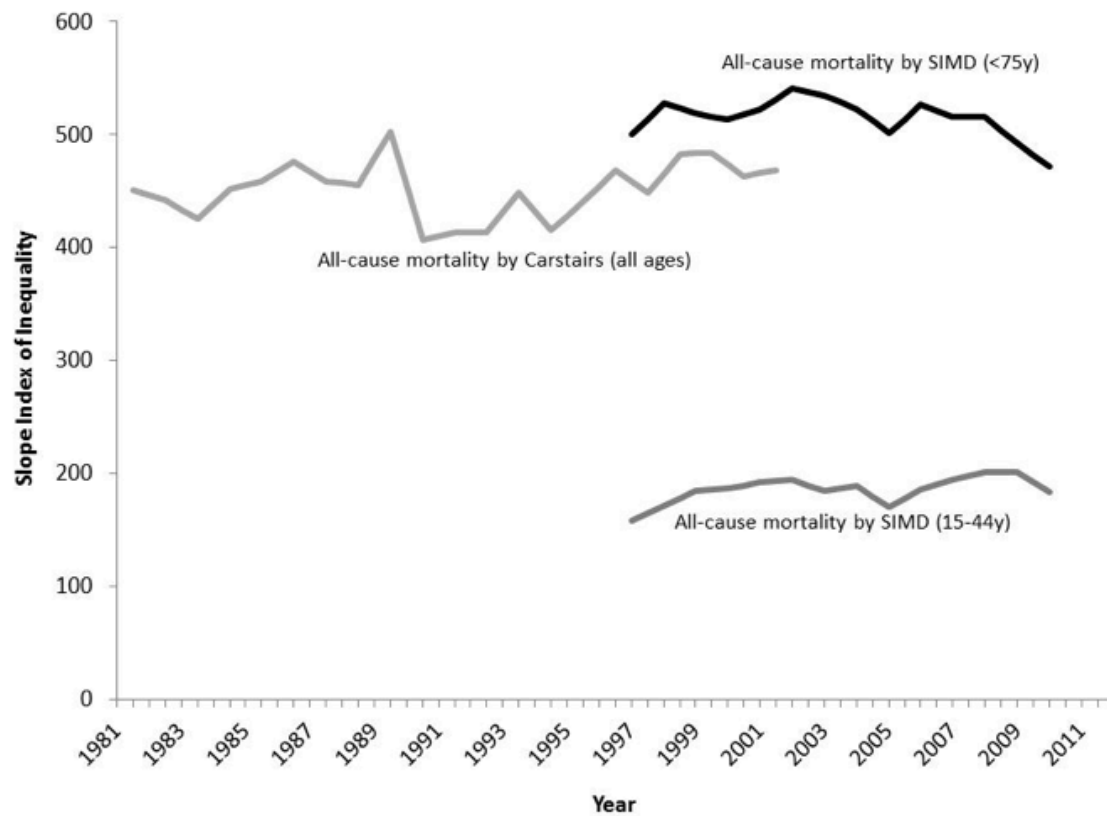
The most statistically appropriate summaries of health inequality trends take into account the distribution across the whole population (not just the gap between the most and least deprived), and account for changes in the size of different population groups over time. For absolute inequalities (the gap between the notional top and bottom of the deprivation scale after accounting for these factors) the best measure is the Slope Index of Inequality (SII) and for relative inequalities (the ratio between the best and worst groups) is the Relative Index of Inequalities (RII).⁷⁵

This section looks at premature mortality inequalities. Figures 22 and 23 show the trends in the SII and RII summary measures over the longest time period available (for the period 1981–2001 using the Carstairs index and from 1996 using SIMD). The two measures are not directly comparable because they include slightly different age groups and differently sized geographies. However, taken together, they allow the overall trends in health inequalities in Scotland to be assessed.

Figure 22 shows that absolute health inequalities have remained high over the entire time period from 2001, but there is a suggestion of a recent decline. In contrast, relative inequalities have consistently risen from 1981 onwards (the difference in the rate of increase between the Carstairs and SIMD measures may simply be an artefact of sensitivity of the two measures) (Figure 23).

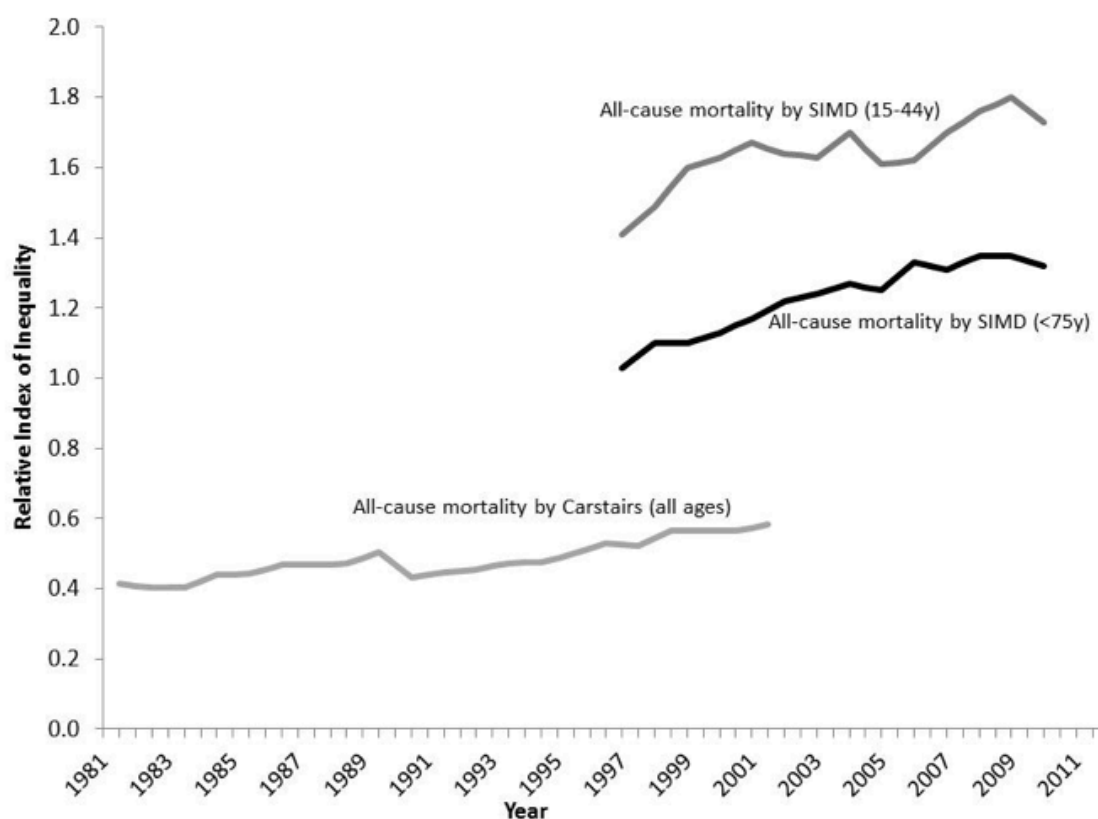
Making a bad situation worse?

Figure 22: Trends in absolute all-cause mortality inequality (1981–2001 using Carstairs index (all ages); 1996–2010 using SIMD (<75 years)⁷⁰; men and women)



Source: Scottish Government

Figure 23: Trends in relative all-cause mortality inequality (1981–2001 using Carstairs index; 1996–2011 using SIMD⁷⁰; men and women)



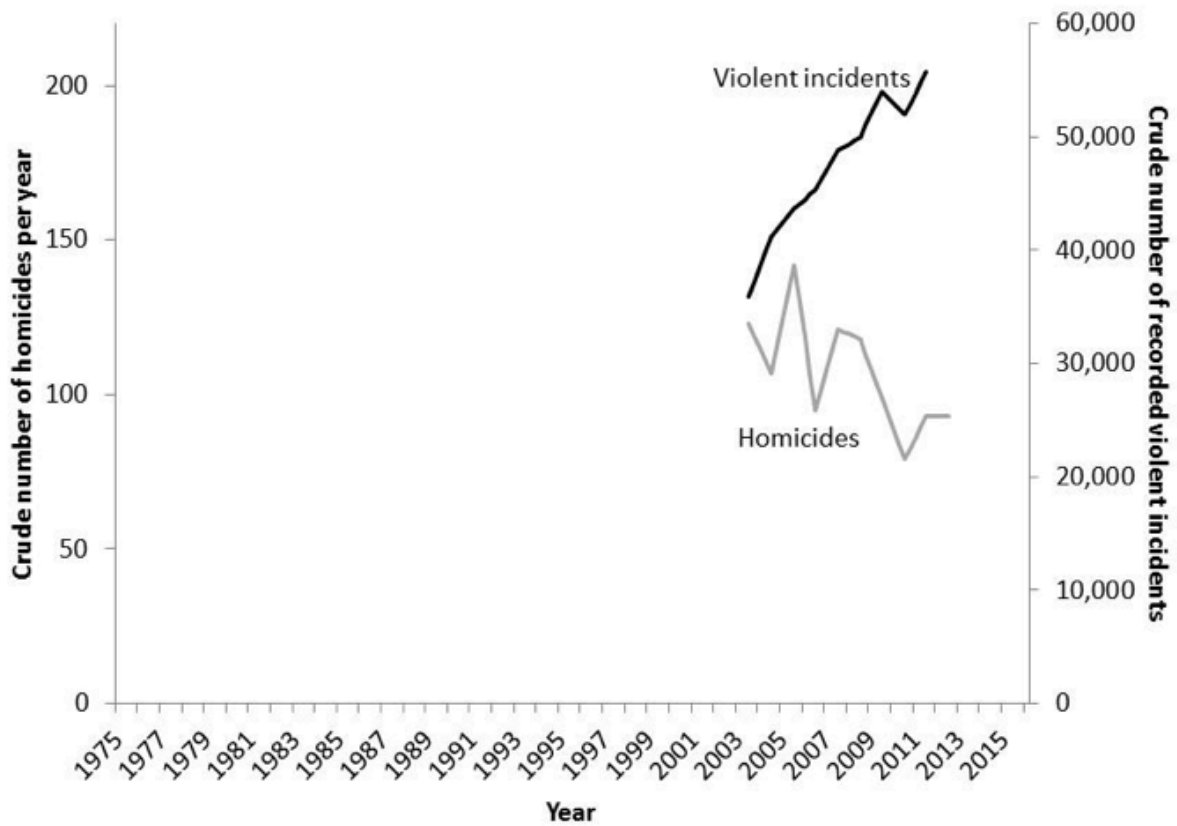
Source: Scottish Government

Violence

Trends in domestic violence are very sensitive to changes in recording practices and the acceptability and accessibility of reporting. Furthermore, the classification of assault into serious and minor categories over time is also subject to changes in recording and prioritisation. One of the best ways of measuring violence over time is, therefore, to consider homicides and the total number of violent incidents together (which records the number of deaths and the broadest definition of recorded violence respectively). Figure 24 shows the trends in these two measures in Scotland. There is a clear downward trend in the crude number of homicides over time, but a substantial increase in the crude number of violent incidents (although both time series are relatively short).

Making a bad situation worse?

Figure 24: Trends in the crude number of homicides and recorded violent incidents in Scotland (all ages, 2003–11)

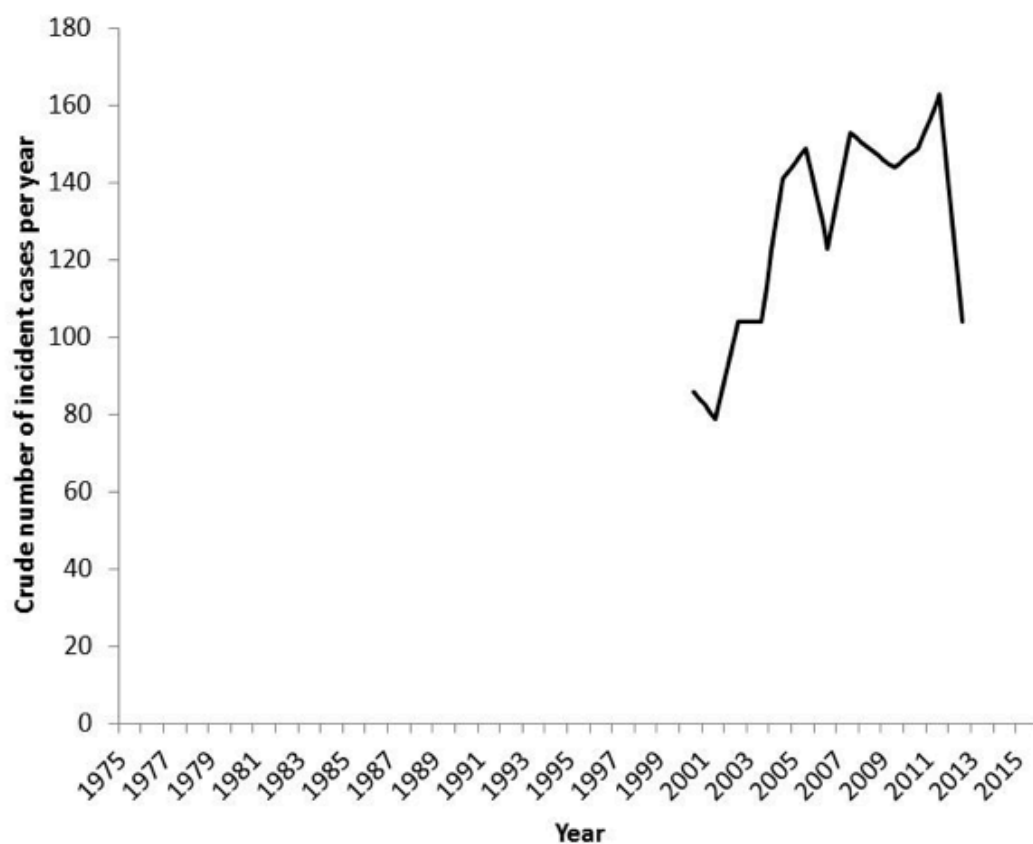


Source: Scottish Government

Human Immunodeficiency Virus (HIV) and Tuberculosis

HIV has a much higher incidence in Africa and many of the new cases diagnosed in Scotland were not acquired in Scotland but abroad. Figure 25 shows the crude number of new cases of HIV or Acquired Immunodeficiency Syndrome (AIDS – the pattern of morbidity associated with HIV) which are presumed to have been acquired in Scotland on the basis of the personal history of the infected individual. The total number of new cases each year is small and rose between 2000 and 2011 before falling substantially in 2012.

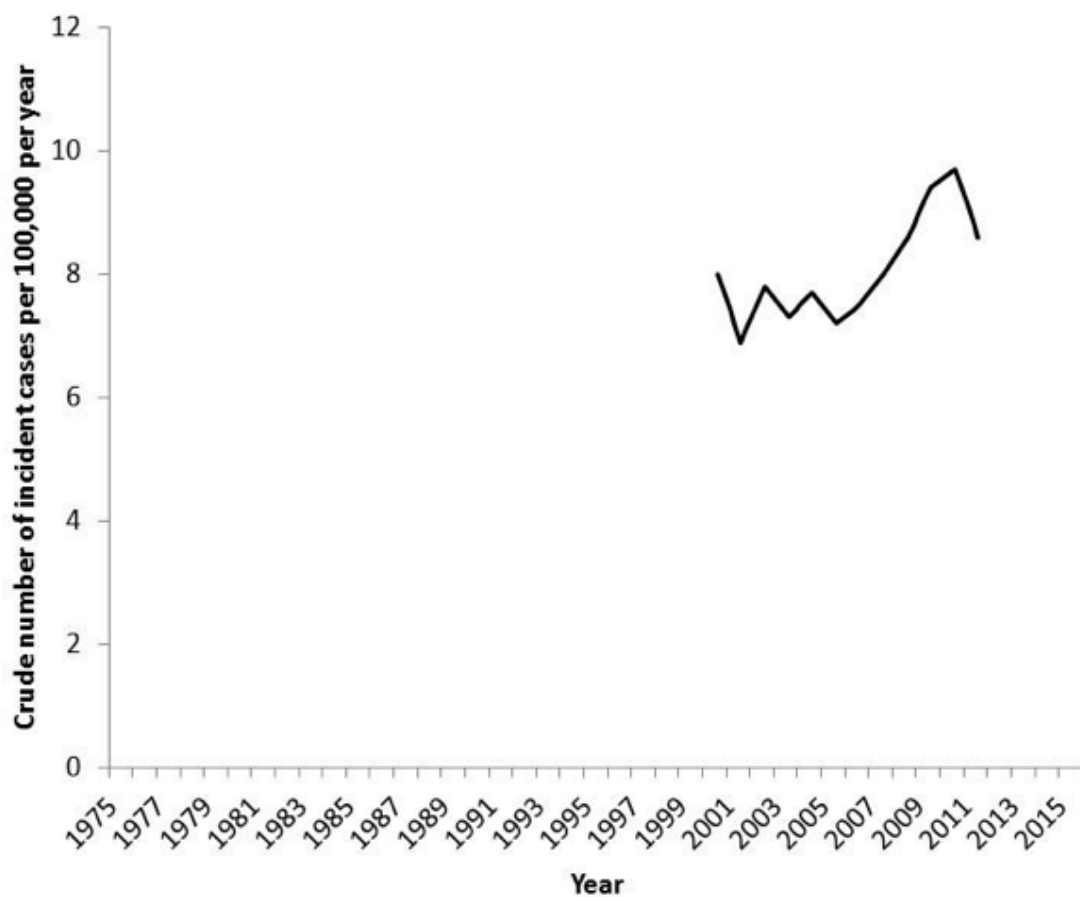
Figure 25: Crude number of incident cases of HIV/AIDS with a presumed Scottish origin per year (all ages, 2001–2012)



Source: Health Protection Scotland

Tuberculosis is also an infectious disease which is most commonly acquired abroad rather than within Scotland, although data are not available to break down the total number of new cases by presumed country of origin. This measure is, therefore, sensitive to patterns of immigration and international incidence rates. Figure 26 shows that the crude number of new cases of tuberculosis increased in Scotland between 2000 and 2011, although the number of cases in 2011 was substantially lower than that in 2010.

Figure 26: Trend in the crude number of incident cases of tuberculosis in Scotland (all ages, 2000–2012)

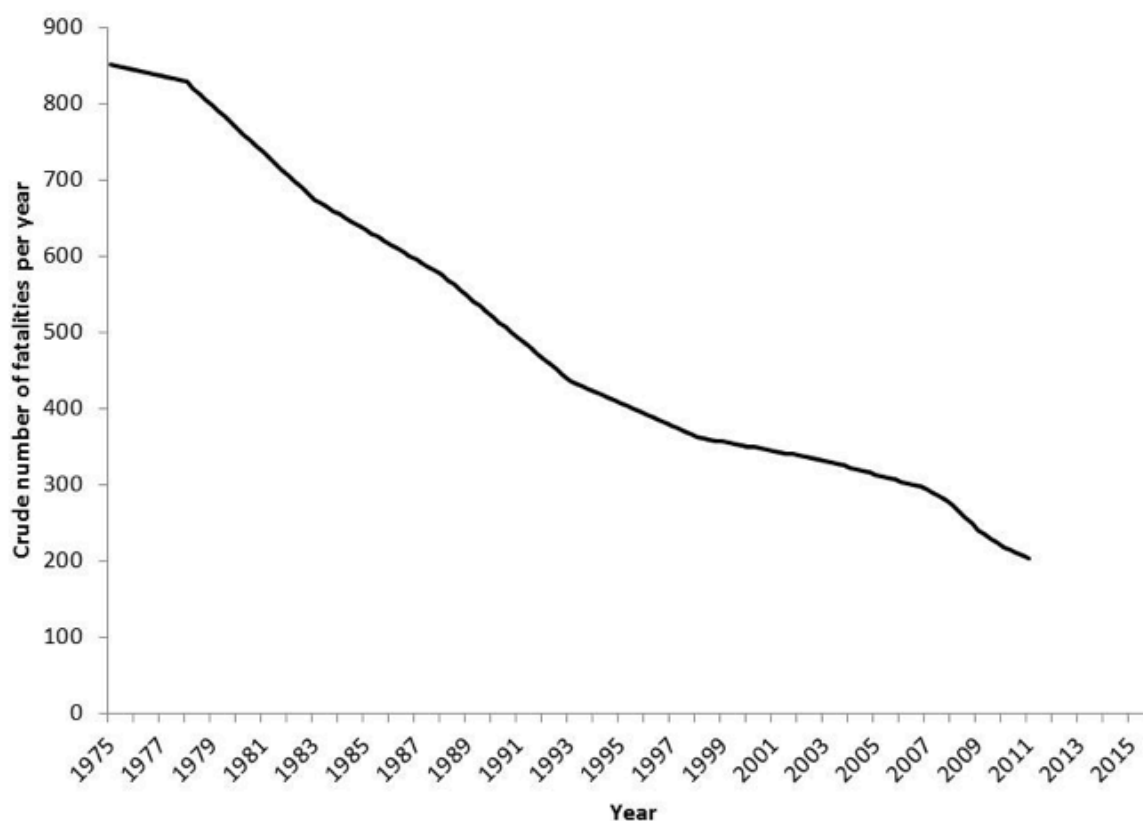


Source: Health Protection Scotland

Road traffic accidents

The crude number of fatalities from road traffic accidents has radically and consistently reduced from over 800 per year in 1975 to around 200 per year by 2011. There is a suggestion that the rate of decline lessened slightly between 1997 and 2007, before subsequently accelerating once again (Figure 27).

Figure 27: Trend in the crude number of fatalities due to road traffic accidents in Scotland 1975–2011



Source: National Records for Scotland

4 Theory-based descriptive time trend analyses

Having examined the time trends in each of the explanatory factors, intermediate outcomes and health outcomes to consider the baseline trends and stability, the following section combines these data to show the timing of the key exposures alongside the intermediate and health outcomes data. Although no large impacts are expected in the currently available data (see the discussion section), this process does allow for an early check for emergent trends in relation to the economic context. Some of the health trends shown above are very short and it is, therefore, difficult to determine whether any changes are new and associated with welfare or economic change, or whether these simply reflect longer (but unmeasured) secular trends.

For each of the following charts (Figures 28–34), the welfare changes and economic growth data (exposures of interest) and intermediate outcomes data (number of unemployment claimants, income inequality and poverty) are shown in each, with the included long-term outcomes of interest (i.e. the health and health inequalities data) varying between charts.

Figure 28 shows time trend data absolute and relative mortality inequalities in relation

to welfare changes, economic growth, unemployment benefit claimants, income inequality and relative poverty. From the start of the current economic recession in 2008^b, there is a rapid and immediate increase in the number of male and female unemployment claimants. There are too few data points for the health inequalities outcomes to ascertain whether the trends change following the economic recession or the introduction of the key changes to welfare policy.

Figure 29 shows the relationship with the outcomes data for heart disease. All of these outcomes data show secular trends that are relatively unchanged following the economic recession, although there are insufficient data points after the start of the recession to evaluate this fully. Insufficient data are available in relation to the welfare changes to evaluate the impact on heart disease.

Figure 30 shows the relationship with respiratory mortality and excess winter mortality. Again, there are insufficient outcomes data available to fully evaluate the relationship to the economy and welfare changes, but there is no early suggestion of a change in the trends.

Figure 31 shows the relationship with obesity and road traffic fatalities. Although there are insufficient post-exposure data, there is a change in the obesity trend shortly after the onset of the economic recession, where the female obesity and overweight and obese proportions decline slightly following a sustained period of increase. There is no evidence of a change in the downward trend in road traffic fatalities.

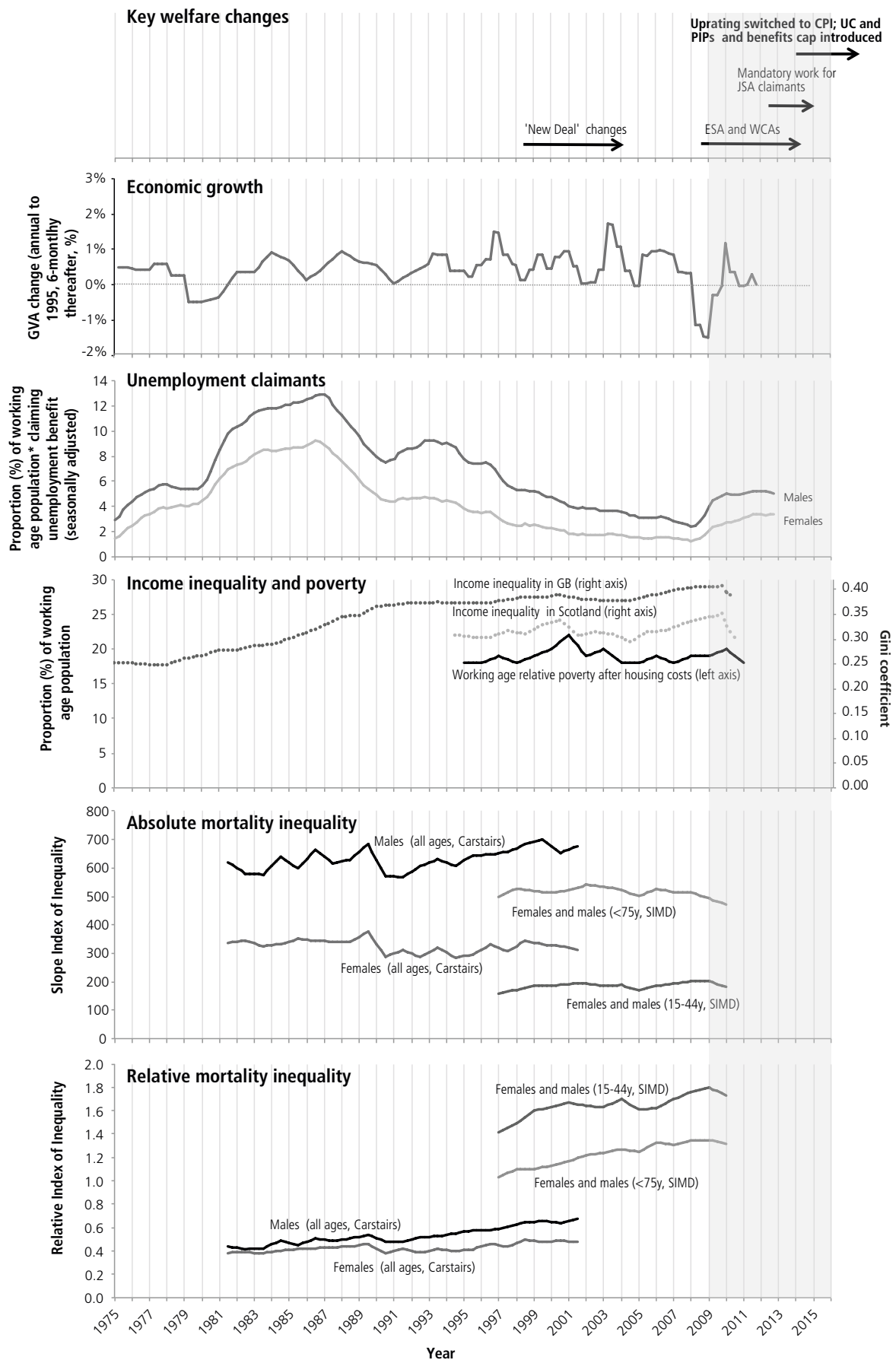
Figure 32 looks at the relationship with mental health outcomes. For most of the data series there are insufficient data points following the recession and the changes to the benefits system. For suicides, there are more data points, but the baseline is less stable and it is, therefore, unclear if there has been a recent change.

Figure 33 examines the relationship with alcohol- and drug-related mortality and violence. Prior to the recession there are declines in alcohol-related mortality for men and women. Explanation of this trend is currently subject of a more in-depth analysis by NHS Health Scotland that will examine trends in income for the poorest groups in more detail, and will include examination of possible cohort effects within the population. However, the change in the alcohol-related mortality trend here pre-dates the economic recession and is, therefore, not clearly a consequence. Drug-related mortality has very few data points following the recession and violent incidents (both homicide and all violence) continue to display their pre-exposure secular trends.

Figure 34 shows the relationship with the incidence of HIV and tuberculosis. Again, there are insufficient data following the recession and welfare changes to be conclusive about the impacts. However, there is a marked drop for the latest year in HIV incidence (although this represents only one data point) and a drop in the latest year for tuberculosis incidence (again, based on only one data point, and for a measure which includes infection acquired abroad).

^b Economic recession is technically defined as two consecutive quarters of declining Gross Domestic Product (GDP). Here we are interested in period following the abrupt change in sustained economic growth since 2008 and not simply the periods of technical recession.

Figure 28: Relation between benefit changes, economic growth, unemployment, income inequality, poverty and relative and absolute mortality inequalities in Scotland (the post-recession period is shown in grey)



Making a bad situation worse?

Figure 29: Relation between benefit changes, economic growth, unemployment, income inequality, poverty and heart disease in Scotland (the post-recession period is shown in grey)

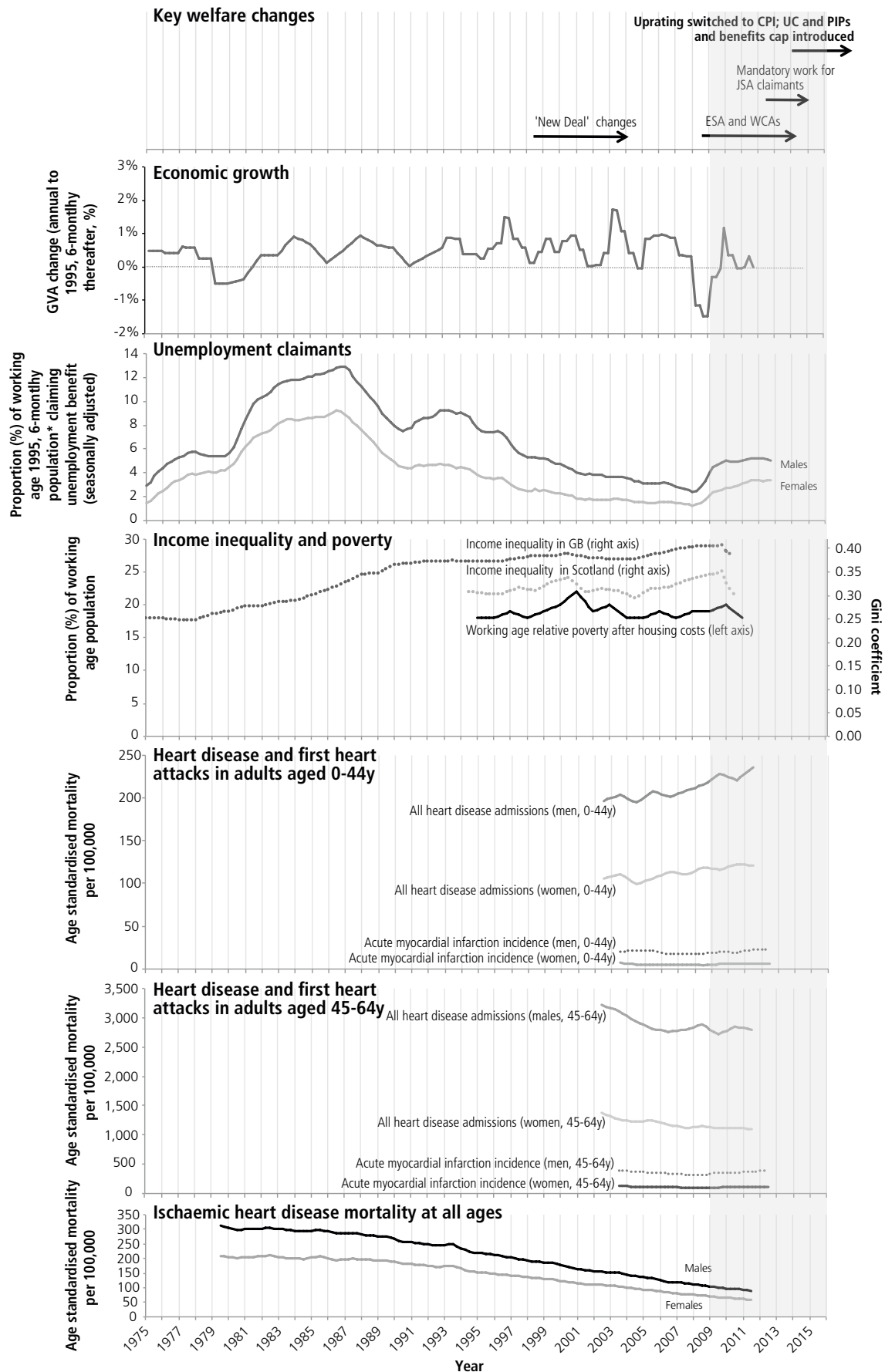
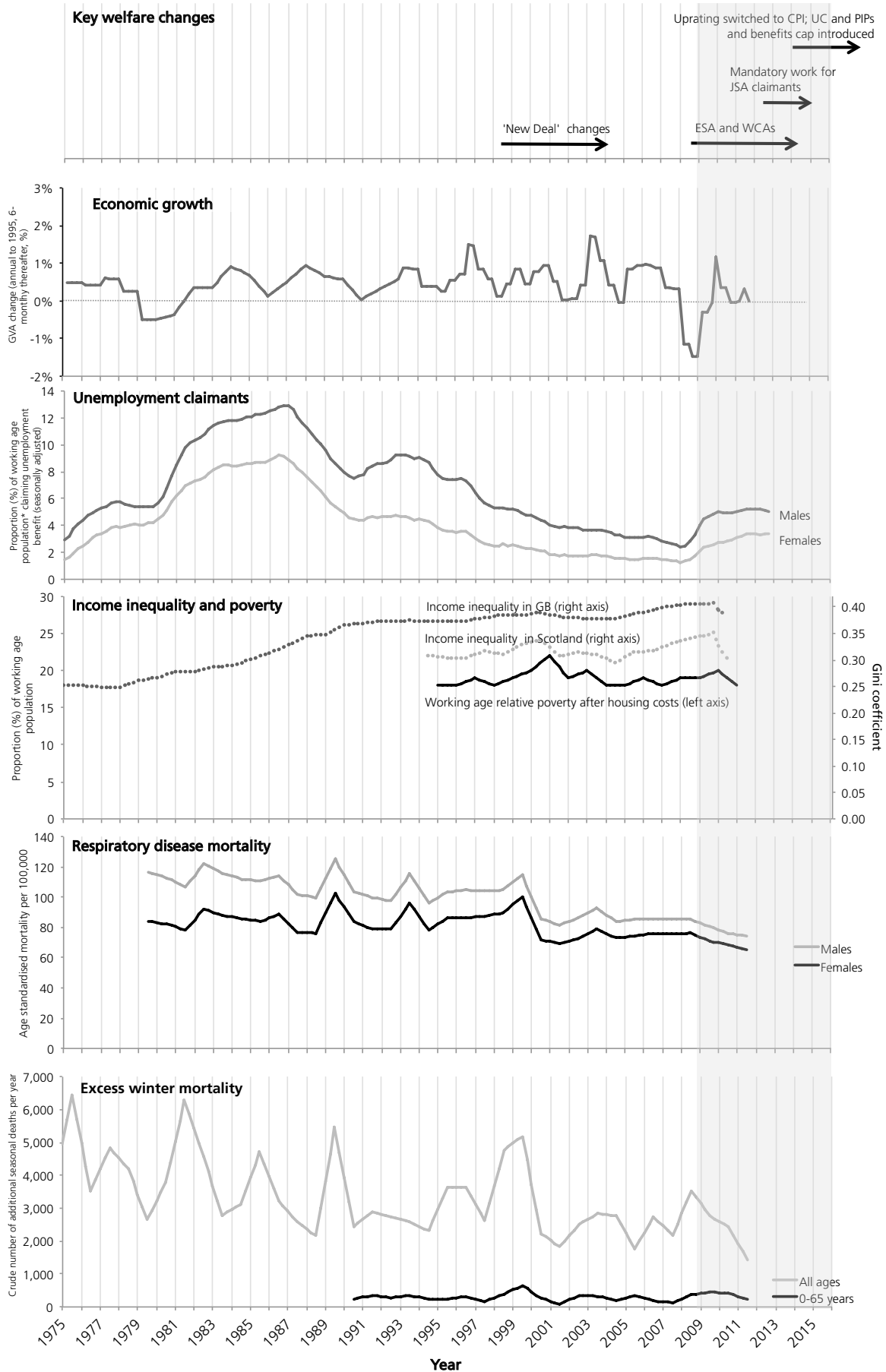


Figure 30: Relation between benefit changes, economic growth, unemployment, income inequality, poverty and respiratory disease mortality and excess winter mortality in Scotland (the post-recession period is shown in grey)



Making a bad situation worse?

Figure 31: Relation between benefit changes, economic growth, unemployment, income inequality, poverty and obesity and road traffic fatalities in Scotland (the post-recession period is shown in grey)

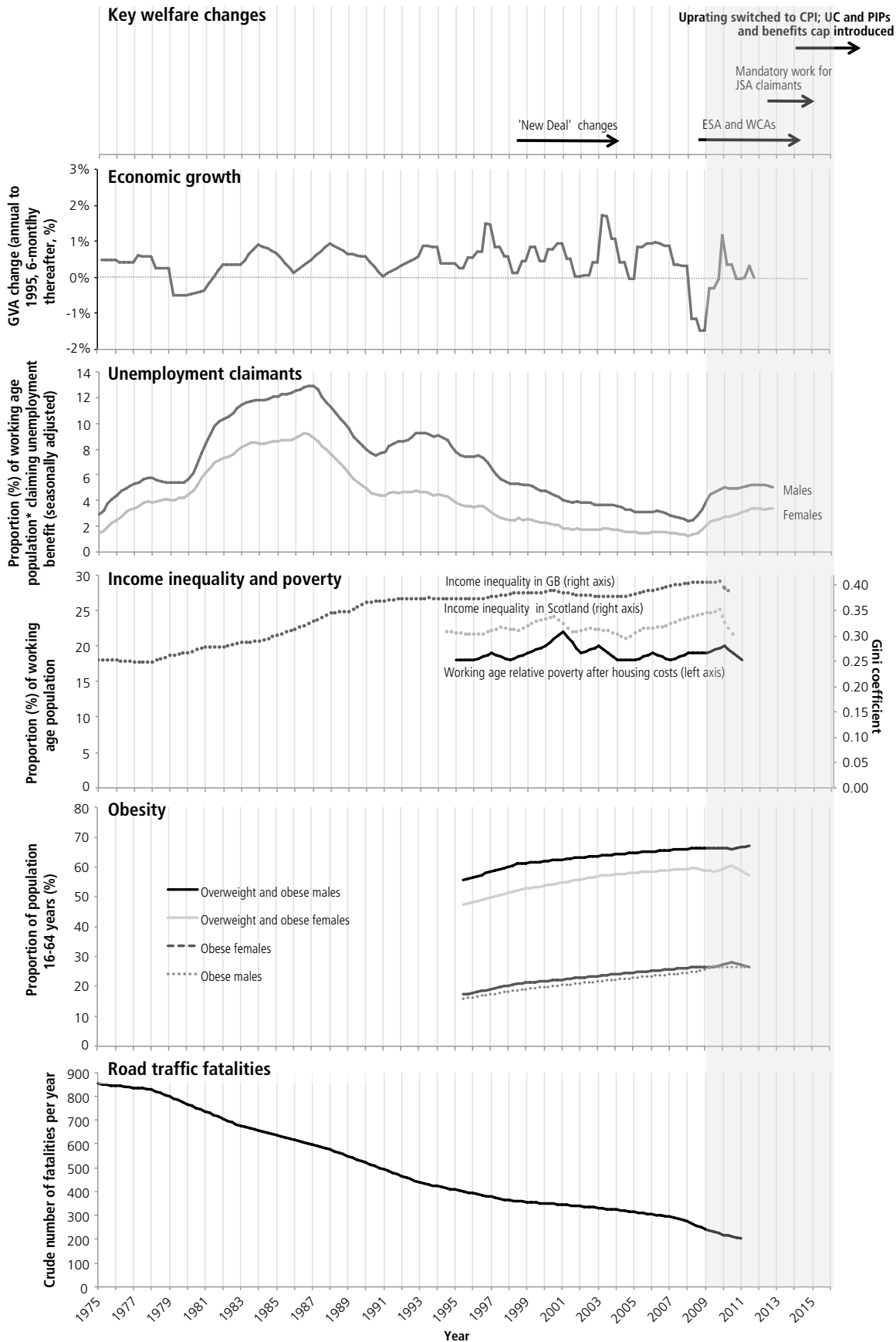
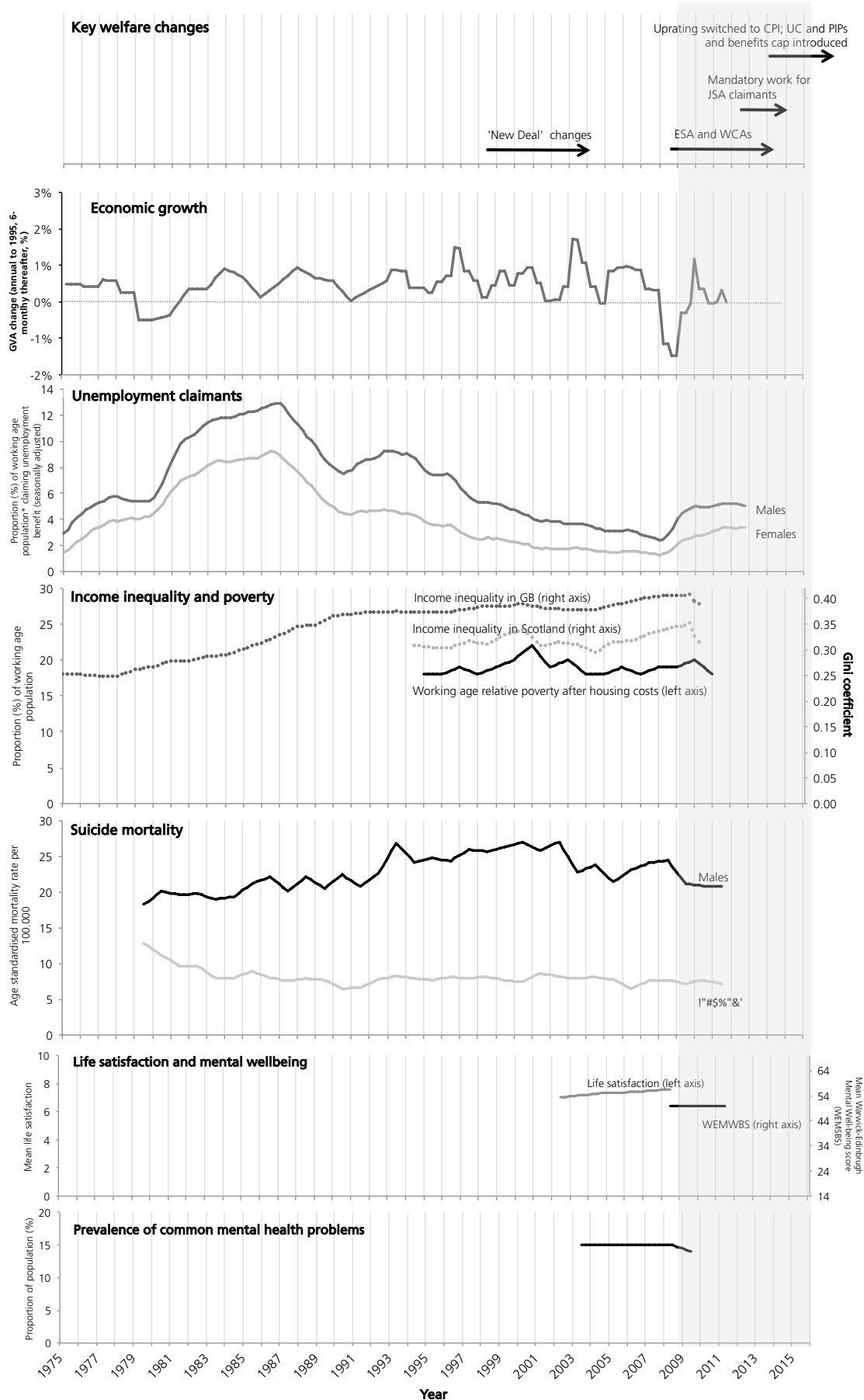


Figure 32: Relation between benefit changes, economic growth, unemployment, income inequality, poverty and suicide, mental wellbeing and the prevalence of mental health problems in Scotland (the post-recession period is shown in grey)



Making a bad situation worse?

Figure 33: Relation between benefit changes, economic growth, unemployment, income inequality, poverty and alcohol-related mortality, drug-related mortality, violent incidents and homicide in Scotland (the post-recession period is shown in grey)

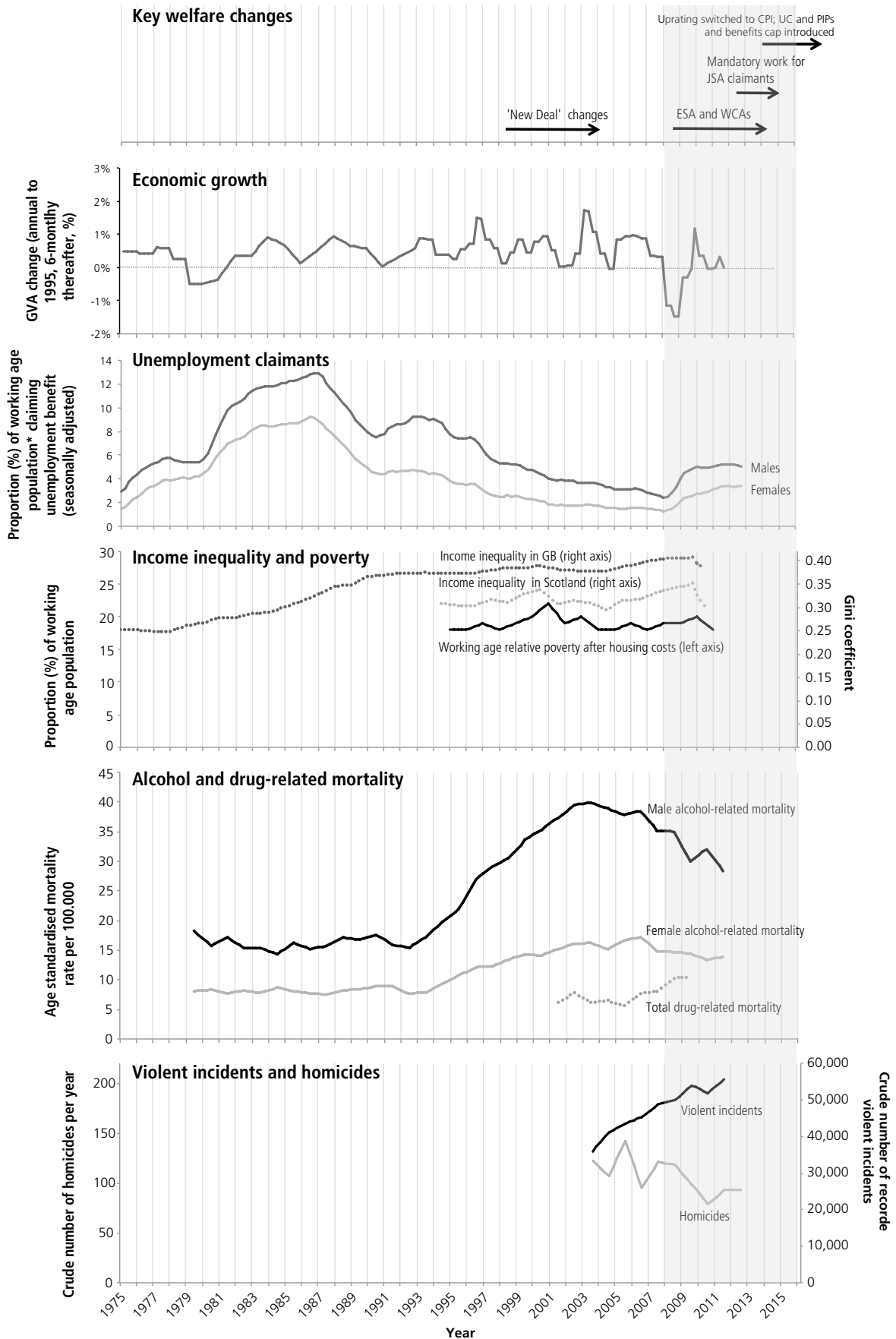
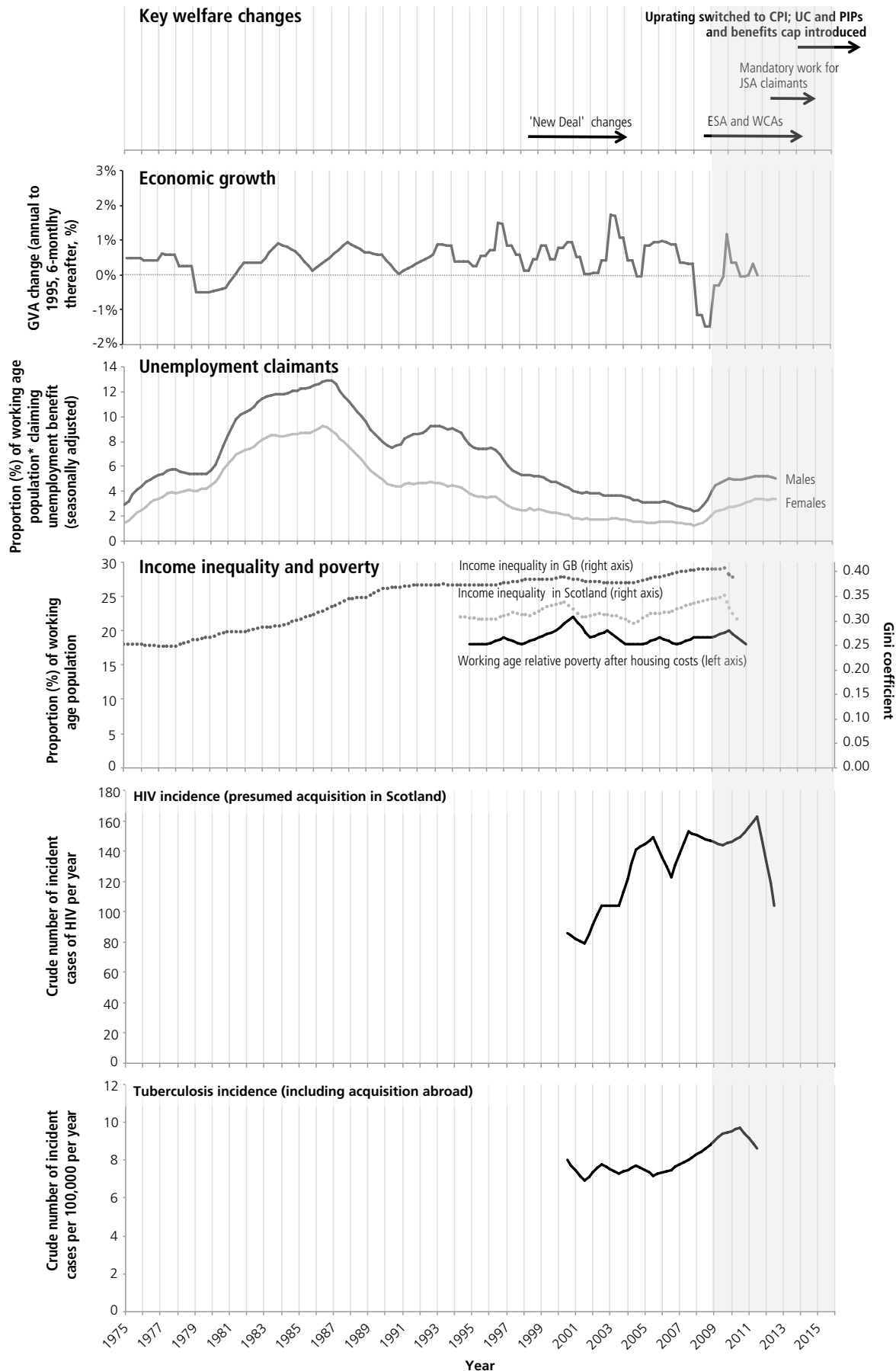


Figure 34: Relation between benefit changes, economic growth, unemployment, income inequality, poverty and the incidence of HIV and tuberculosis in Scotland (the post-recession period is shown in grey)



Section 4: Discussion

1 Main findings

The economic recession, which started in 2008, is associated with a rapid rise in the number of unemployment benefit claimants but there are insufficient data currently available to examine the relationship with income inequality, poverty or any of the health outcomes of interest. Although welfare changes have been underway for many years, there were key changes in 2007–08 (with the introduction of ESA and WCA) and subsequently accelerating following the UK Government's 'emergency budget' in 2010 and the passing of the Welfare Reform Act 2012. Again, there are currently insufficient data available to ascertain whether or not there have been any impacts on health resulting from changes to welfare.

2 Strengths and limitations

The data used in this report are largely drawn from robust administrative sources (particularly deaths, hospitalisations and economic data) and well-conducted representative surveys.

There are, however, important limitations that require exposition:

- The time series following the economic recession and the welfare changes are currently too short to draw any conclusions from the descriptive data, and there are too few data points currently available to perform any statistical analyses.
- Almost all data used in this report are aggregated for the whole population and are, therefore, insensitive in terms of exposures (e.g. using Gross Value Added (GVA) for the whole economy rather than broken down by income for particular groups) and outcomes (e.g. the mortality data are not broken down by deprivation category). This is particularly important for the welfare changes which are likely to impact on specific groups (e.g. working age people in receipt of disability benefits) that cannot be examined separately using the data in this report.
- Some data used in this report are derived from surveys (e.g. the Scottish Health Survey). These data are, therefore, subject to differential response rates which are likely to underestimate negative health outcomes and behaviours.
- The exposure and outcomes data are compared on the assumption that it is the same people who are exposed in the population that are experiencing the outcomes (i.e. the analysis is ecological rather than individual). This makes it more difficult to detect real changes because the effects are diluted by the whole population, and can also lead to spurious associations.
- The trends in Scotland, as elsewhere, are likely to be confounded by a range of other factors. This includes the time-lagged effects of previous exposures and secular trends in protective factors such as improving healthcare. In particular, there is a body of work currently underway to examine the lagged impacts of the policy changes introduced during the 1980s and 1990s which was associated with deindustrialisation, increased unemployment and incapacity for work, increased

income inequalities, increased health inequalities and increases in alcohol-related mortality, drug-related mortality, suicide and violence.⁵²

- The lack of a non-exposed comparison group (to either the changing economic context or welfare changes) makes interpretation of the time trends, and in particular the potential for causality, particularly difficult.

3 How it fits with other work

The most convincing explanations for witnessed phenomenon are argued to be the simplest and the most plausible in the light of the available evidence, and that which is most coherent with other observations and explanations.^{76–78} Unfortunately, health trend data in Scotland has proven to be difficult to explain because of likely time-lagged affects and complex interacting factors.^{51,52} This makes it difficult to ascertain the independent impacts of either welfare changes or the economic recession.

Work is currently underway within NHS Health Scotland to better explain the observed trends in alcohol-related, drug-related and suicide mortality; in particular examining the potential explanation of previous exposures impacting on sub-groups of the population (so-called cohort and period effects). This is part of a much larger programme of work to explain the higher mortality in Scotland compared to England and Wales and the rest of Europe before and after accounting for the effects of deprivation and poverty.^{51,52}

More generally, the Scottish Public Health Network have completed a literature review on the likely impacts of the welfare changes,^{48,62} the Scottish Parliament are undertaking an enquiry on the impacts³ and the Scottish Government Analytical Services Division have a large programme of analyses underway.⁸ There is also work underway by a range of academics⁵⁹ and campaign groups.

4 Policy implications

It is too early to be clear what the impacts of this economic recession and the current round of changes to welfare benefits on health are. However, the relationship between social and economic insecurity is strong and the recession and welfare changes will reduce the incomes of many people, some due to multiple benefit changes (as shown in Figure 3). The risk of negative health consequences on vulnerable groups is, therefore, high, with the threat of widening health inequalities. This is reflected in the best available predictions produced by the Scottish Public Health Network and work by University College London, both of which suggest there are likely to be deleterious impacts on health and rising health inequalities.^{62,79} Given these threats to public health, all policy options to: maximise employment (though the provision of good jobs); maximise the incomes of the poorest groups (in particular those most vulnerable to the benefit changes); avoid unsustainable personal indebtedness;⁸⁰ and reduce stigmatisation of benefit recipients should be considered.^{81,82}

Many of the limitations of the routine data analyses are due to the inability to link data from the Department of Work and Pensions (DWP) and Her Majesty's Revenue and Customs (HMRC) with Scottish health data. Some preliminary work is underway to facilitate this, but there are challenges that will require improved coordination with the relevant departments to allow such linkages to take place. This limits the ability to monitor the health impacts of the economic recession and welfare changes.

5 Future work

In due course enough data will be available to allow the trends following the economic recession and the changes to the welfare state to be examined. Statistical testing of the interrupted time series before and after the changes are unlikely to be possible within a reasonable time frame, however, as most data sources are only available at best quarterly, and more commonly, annually. Furthermore, for the welfare changes there is no single, clear date of implementation to facilitate a before-and-after analysis. The use of routine data to allow conclusions to be drawn on the impacts is, therefore, likely to be delayed and only likely to detect large and widespread impacts were they to occur. However, the changes in the economy and welfare state described here could plausibly generate such a scale of impact and will, therefore, remain useful to consider trends in these routine data in the future.⁸³

The power of the routine data to detect health impacts may be improved if the data are broken down by socioeconomic group, age cohort and geographical location (on the basis that some groups are likely to be disproportionately impacted). This is true for both the health outcomes data but also the data on incomes and poverty.

Routine survey data collected in Scotland (e.g. the Scottish Health Survey) includes data on self-reported health, economic activity and benefits received. Furthermore, the individual survey data are linked to hospitalisations and deaths and can therefore be used to evaluate a range of health impacts.

Data are also collected on household finances (in the Scottish Household Survey), the number of people experiencing sanctions on their benefits and on the outcomes of work capability assessments (WCA) which may provide further intermediate outcomes data. More nuanced data on employment status (over and above the number of unemployment benefit claimants) and benefit uptake are available from the Labour Force Survey (LFS) which again could bolster the intermediate outcomes data presented here.

More powerful means of detecting health impacts lie with longitudinal studies of individuals where there are data on the benefits received and employment and income status over time alongside health outcomes. The best means of obtaining such data is to anonymously link DWP benefits data and Revenue and Customs data to hospitalisation and mortality records. Work is currently underway to explore this possibility led by the MRC/CSO Social and Public Health Sciences Unit at Glasgow University.

Another potential means of obtaining longitudinal data on benefit uptake, economic circumstances and health outcomes for individuals is through analyses of existing cohort and panel surveys where data are collected at numerous time points (such as

the Understanding Society study). A scoping project is currently underway to ascertain whether these data can be used for this purpose (specifically in relation to Incapacity Benefit and Employment and Support Allowance), again led by the MRC/CSO Social and Public Health Sciences Unit.

There is a range of qualitative work planned within NHS Health Scotland and various academic institutions (including Glasgow Caledonian University, Glasgow University and the University of the West of Scotland) and mixed methods work (in partnership between the Glasgow Centre for Population Health and NHS Health Scotland) to consider the health and social impacts of welfare change. This will help understand what impacts and mechanisms require measurement and help clarify how and why particular impacts are seen.

Given the uncertainty in the outcomes that are expected as a result of the economic context and welfare reforms, it may be prudent to monitor for other unexpected outcomes as part of the work. However, if there is a lack of theoretical justification for other outcomes, there is a greater danger of spurious findings arising (i.e. any negative trend in an outcome which occurs simultaneously with the changes in welfare or economy could be erroneously linked). Therefore, a cautious approach to monitoring trends in other health outcomes data and an assessment of the plausibility of a link to the economy and welfare reforms is required.

Conclusion

There is significant concern within the public health community that the current wave of welfare changes may cause negative health impacts for those in receipt of benefits and widen health inequalities. These benefit changes are occurring at the same time as a deep and prolonged economic recession, which is likely to have some positive short-term and negative long-term health impacts.

It is too soon to evaluate the impacts of either the economic recession or welfare changes using routine health data. However, it will be difficult to detect anything other than large and widespread impacts because the routine data are not currently linked to benefits uptake or economic activity, nor are concurrent comparison groups available who are not exposed. More could be done in the future to disaggregate the routine data by socio-demographic characteristics and geography, which may facilitate more sensitive measures of the impacts. However, linking benefits and taxation data to health data, and the use of longitudinal studies, are likely to be more sensitive still to detect real impacts. Further work should be undertaken to evaluate the impacts of the current economic recession and welfare changes in the future when more data are available.

Although the health impacts remain uncertain, the threats to public health are grave and all policy options to: maximise employment (though the provision of good jobs); maximise the incomes of the poorest groups (in particular those most vulnerable to the benefit changes); and reduce stigmatisation of benefit recipients should be considered.

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