



Context Briefing 1

City-level changes in population, deprivation and health

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GoWell is a collaborative partnership between the Glasgow Centre for Population Health, the University of Glasgow and the MRC/CSO Social and Public Health Sciences Unit, sponsored by the Scottish Government, Glasgow Housing Association, NHS Health Scotland and NHS Greater Glasgow and Clyde.

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Introduction

In this briefing information is provided about changes taking place in Glasgow's population as a whole. Three sets of issues are covered. First we look at the composition of the population and the ways in which its size, shape and diversity are changing. Data from the 2011 Census are used to provide the most up-to-date and robust profile. We then consider levels of deprivation in Glasgow as measured in the Scottish Index of Multiple Deprivation (SIMD). This allows us to see how Glasgow is faring compared with other parts of Scotland, and also to look at the changes that are taking place in the distribution of deprivation within the city. Lastly, we discuss trends in health and health-related behaviours as a backdrop to understanding the related trends that we are seeing within our GoWell study areas.

Population

Glasgow's population is increasing. Glasgow's population has risen in the last ten years after decades of decline, and continues to increase. In 2011 (mid-year estimate) the city had a population size of 593,060. By mid-2012 it had risen by 2,020 (0.3%) to 595,080. Birth and death rates have dropped significantly over the last 150 years in Glasgow, although the birth rate has stabilised in recent years. The birth rate in Glasgow has exceeded the death rate since 2007.

Scotland's population is increasing at a greater rate. The rate of population increase in Glasgow between the 2001 and 2011 Censuses was lower than the rest of Scotland (2.7% compared with 4.6%). This has a range of implications, including a reduction in Glasgow's 'population share' of the Scottish financial pot.

The population is ageing, but Glasgow still has a relatively young population compared with Scotland. Projections suggest that the city's population is likely to get older, with the population over 50 years of age predicted to rise. Between 2010 and 2035 this particular group is expected to increase in number by 72,000 to nearly a quarter of a million people. In 2011, in comparison with Scotland's population, Glasgow had a lower proportion of children (16.1% compared with 17.3%); more adults aged 16-63 (70% compared with 65.9%); and fewer older adults aged 65+ (13.9% compared with 16.8%).

The number of households is rising, and their composition is changing. More people are living alone. In the past decade, the number of households in Glasgow has increased by 5.2%; from 271,596 in 2001 to 285,693 in 2011. This trend is projected (by NROS) to continue, rising to approximately 361,280 households by 2035. Within this longer-term trend, it is predicted that

single adult households will continue to rise and to form the majority of households (54%). The proportion of households in Glasgow which are lone parent households is already the highest in Scotland (11%) and is expected to change very little.

Glasgow has the most ethnically-diverse population in Scotland. In 2001, 7.2% of Glasgow's population were from a minority ethnic group. By 2011 this had risen to 15.4%. The largest numerical increases have been in the 'other White' (+12,600, including 8,400 Polish people) and 'African, Caribbean or Black' (+12,500) groups. There has been a considerable reduction (-34,400 over the ten-year period) in the 'White British/Irish' population in the city.

There is an increase in first generation migrants. Linked to the increase in the numbers for ethnic minorities is a rise in the number of people *born* outside the UK. The non-UK born population of Glasgow rose from 5.7% in 2001 to 12.2% in 2011 (Annual Population Survey). This illustrates the fact that the majority of minority ethnic residents are first generation migrants.

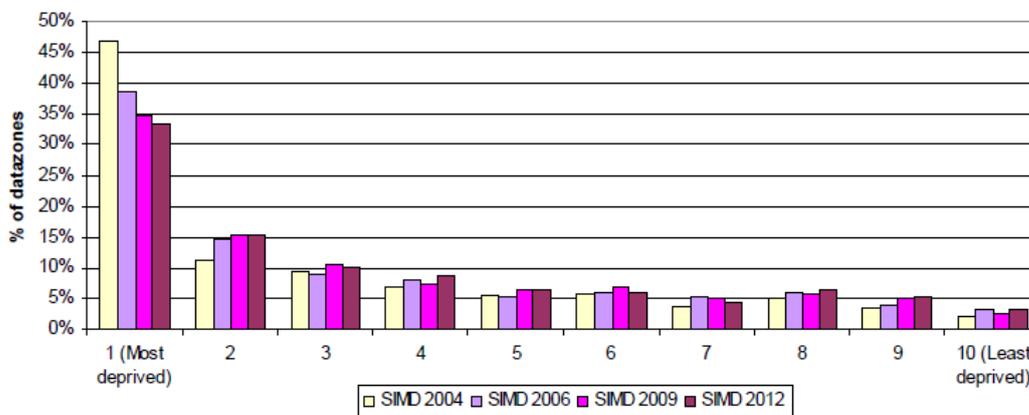
In summary, the ways in which Glasgow's population is changing, mirror the population changes in Scotland as a whole. In some dimensions the Glasgow experience is more moderate (population growth, and population ageing for example); and in others more pronounced (ethnic diversity, recent immigration, single-person living). How these trends are being experienced within the GoWell study areas will be the subject of a separate report to be produced once the relevant small area census data are all available.

Deprivation

Changes in the city's deprivation profile are described in this section using the Scottish Index of Multiple Deprivation (SIMD). The SIMD is comprised of seven domains: income, employment, health, education, housing, access and crime. All of the datazones across Scotland are scored on each of these domains, and their overall composite scores are ranked. This means that the SIMD rankings are relative, and can improve as a result of other areas declining, as well as through absolute improvements in their own circumstances. The first SIMD rankings were created in 2004, and these have been updated in 2006, 2009 and 2012. Over this period of time, Glasgow's share of the most deprived areas in Scotland has declined steadily.

Figure 1: Distribution of Glasgow City datazones by SIMD.

Decile graph: distribution of Glasgow City's datazones



Over time, there has been a reduction in the proportion of the most extremely deprived areas in Scotland that are located in Glasgow. Of the 325 datazones in the 5% most deprived areas in Scotland, 70% were found in Glasgow in 2004, 52% in 2006, 49% in 2009 and 46% in 2012. In other words, between 2004 and 2012, 78 datazones from other parts of Scotland replaced Glasgow datazones in the most deprived 5% of areas in Scotland. Most of the movement happened between 2004 and 2006.

This trend is also present, though is less striking, if we look at a wider group of deprived areas. A similar pattern is seen in relation to the total group of datazones categorised as 'deprived' (i.e. the bottom 15% in Scotland). In 2004, 38% of the 976 datazones in this category were in Glasgow City and this proportion had fallen to 30% by 2012.

An alternative way of looking at the changes over time is to consider change within Glasgow.

Most of Glasgow's datazones are found in the more deprived SIMD deciles. This has remained the case over the period covered by SIMD, although there has been a clear reduction in the proportion of Glasgow datazones within the most deprived decile.

The proportion of Glasgow datazones falling within the group of Scotland's most deprived areas has reduced over time. In SIMD 2012, 21% of Glasgow City's 694 datazones were within the 5% most deprived, and 42% within the 15% most deprived datazones in Scotland. The figures for 2004 were 33% and 54% respectively. The convention has been that datazones in the bottom 15% have been regarded as 'deprived'. The reduction in the proportion of Glasgow datazones in Scotland's bottom 15% between 2004 and 2012 means that, in effect, 73,400 fewer people in the city were living in 'deprived' areas. Most of this reduction again took place between 2004 and 2006.

There has also been an increase in more affluent areas in Glasgow. The proportion of areas within the city where residents are living in the top half of Scottish society (i.e. in the 51-100% category) has increased from 21% in 2004 to 27% in 2012. Most of the increase again took place between 2004 and 2006.

Nevertheless, a substantial part of Glasgow has been unaffected: 125 datazones in Glasgow remained in the 5% most deprived datazones in all four SIMDs. The danger is that as the experience of much of the city diverges from these datazones, inequalities are likely to increase.

Explanations for the changes include area-based regeneration, employment, and demographic change. Areas making the greatest improvement were those linked to major demolition projects and rebuilding. Several datazones that were in the bottom 15% in 2004, and which have subsequently had all their multi-storey housing demolished, no longer feature in this category. The proportion of Glasgow residents in work has increased, and was the main factor in reducing deprivation in the early part of the decade. Furthermore, as noted earlier, the proportion of the city's population aged between 25 and 44 has increased at a time when it is declining nationally. As this group has the highest employment rate, this shift will have contributed to the overall reduction in deprivation.

The size of the population living in areas of deprivation in Glasgow has declined. In 2004, 53% of the city's population lived in datazones in the bottom 15%, and 32% lived in datazones in the bottom 5%. By 2012, the proportions were 39% and 20% respectively. This reflects population movement out of the city's more deprived areas as well as the reduction in the number of 'deprived' areas in the city.

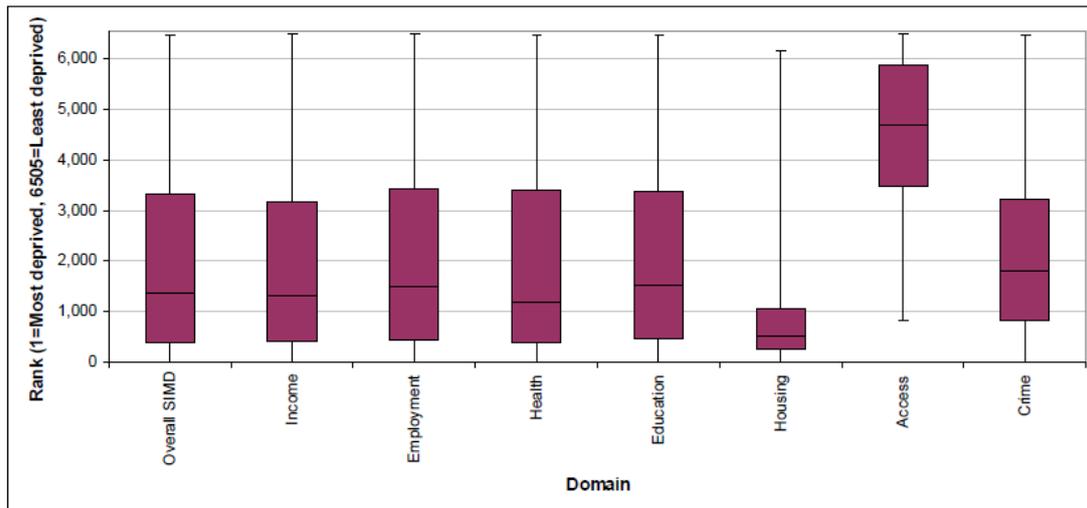
The SIMD is comprised of seven domains: income, employment, health, education, housing, access and crime. Glasgow's median, minimum and maximum values for each of these domains in 2012 are shown in the following box plot. Particularly low median scores are apparent for the

housing, health and income domains. In contrast, access to services and amenities is relatively good in Glasgow compared with other parts of Scotland.

In summary, these SIMD data provide an encouraging overall picture illustrating a reduction in area-based deprivation in Glasgow and an increase in the proportion of the city falling within the top half of Scottish society. Most of the change took place between 2004 and 2006. Explanations include improvements in employment rates, demographic change, and the effects of housing change. However, a substantial part of the city has been unaffected by these changes. One hundred and twenty-five datazones (18%) have stayed in the bottom 5% throughout the whole period. With a datazone having a population of 500-1,000 residents, this represents a considerable number of the residents whose experiences are potentially diverging from the rest of the city.

Figure 2: Ranking of Glasgow City in the overall and individual SIMD domains.

Box plot: Glasgow City's ranks in the overall SIMD 2012 and individual SIMD domains. Boxes show the middle 50% of values and the middle (median) value; whiskers show the minimum and maximum ranks.



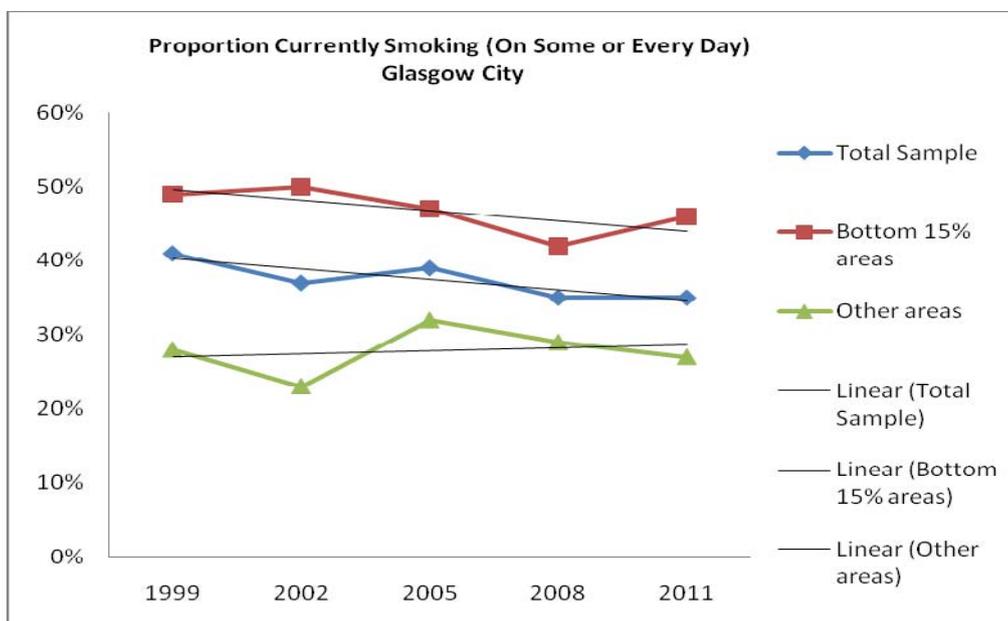
Health

Glasgow's health record is well documented, and current information about a range of dimensions of the city's health can be found within the Understanding Glasgow project and the Scottish Public Health Observatory website. In the text that follows, some headline messages are presented about trends in health indicators relevant to issues being examined within the GoWell programme. These fall into the categories of: (i) health-related behaviours; (ii) self-reported health and wellbeing; and (iii) use of health services. Data are drawn from the NHS Greater Glasgow and Clyde (NHSGGC) Health and Wellbeing Survey and from the Scottish Health Survey and Scottish Household Survey. Where possible, data from the GoWell areas are also presented.

Health-related behaviours

The prevalence of smoking is steadily declining in all areas of the city, as it is across Scotland as a whole, but there is still a large gap between affluent and more deprived areas. Figure 3 shows the proportion of the Glasgow population who smoke on some days or every day. Findings from the Scottish Household Survey show that in 2012, 27% of adults in Glasgow were current smokers compared to a national figure of 23%.

Figure 3: Proportion of people 'currently' smoking over time.



Source: NHS Greater Glasgow and Clyde 2011 Health and Wellbeing Survey. An explanation of trends 1999-2011 in Glasgow City.

Smoking within GoWell Intervention Area Types is in line with the general levels and trend for the bottom 15% areas in Glasgow, shown above. Smoking prevalence declined slightly (by $\leq 5\%$) between 2006 and 2011 in all area types except the Wider Surrounding Areas, where the prevalence barely

changed over this period of time. In 2011, the lowest prevalence of smoking was found in the Transformational Regeneration Areas (34% current tobacco smokers) and the highest prevalence was in the Peripheral Estates (49%). Within all IATs, cigarette smoking is most common among respondents who are of White British ethnicity. In the Transformational Regeneration Areas, for example, 57% of White British respondents were cigarette smokers, compared with 12% of refugees and 19% of asylum seekers.

Only about 40% of the Scottish population achieves the recommended level of at least 30 minutes of moderate physical activity on five or more days of the week and there has been little change over time. Levels of activity vary by age, gender and deprivation.

The picture for Glasgow mirrors the national picture. Four in ten adults in Glasgow achieve the recommended weekly levels of physical activity, and this is in line with other Scottish cities. Fewer women than men achieve the recommended levels and physical activity decreases markedly with age. Fifty-one per cent of people in the least deprived quintile of areas of the city achieve the recommended amount of activity, compared with only 35% in the most deprived quintile. [Scottish Health Survey data from Understanding Glasgow site – charts available if helpful]

We asked GoWell participants how many days during the past week they walked in their neighbourhood for at least 20 minutes at a time. This level of activity does not match the national recommendation, and we found that just over a third of respondents achieve this level of walking most days of the week (five or more days). We also looked at the total levels of activity that participants reported, and found that 63% were not achieving the recommended national levels. This is slightly higher than the figure quoted above for Scotland as a whole, and considerably higher than the figure of 50% quoted for Glasgow City from the 2011 NHSGGC Health and Wellbeing survey.

The GoWell programme has collected a limited amount of self-reported data on alcohol consumption (we have a high proportion of participants who report that they do not drink alcohol) and eating (we see a small reduction over time in the percentage of respondents who report having at least one main meal from a fast food/takeaway outlet in the last seven days).

The NHSGGC Health and Wellbeing survey findings provide evidence of a slight decline between 1999 and 2011 in the proportion of the city's adult population drinking more than the weekly recommended sensible drinking levels. Nationally, 43% of the adult population in 2011 were drinking more than the daily and/or weekly recommended limits. While the proportion of people in Scotland drinking outwith the guidelines has declined since 2003 (from 47% to 42% in 2011), there has been no significant change since 2009.

Nationally, changes in diet show a mixed and complex pattern that cannot easily be summarised. However, a visible consequence of the low levels of physical activity described above and the large numbers of calories being

consumed is the rise in obesity. Obesity rates have been rising over the last ten years both in Scotland and in Greater Glasgow. Nationally and locally, over a quarter of adults are obese and approximately two-thirds are defined as overweight (BMI = 25+).

Self-reported health and wellbeing

In Scotland the WEMWBS¹ score is used to monitor mental wellbeing. There has been no change in the average score for adults in Scotland in recent years. In 2011, the WEMWBS mean score for adults in Scotland was 49.9; and the mean score for GoWell respondents was 51.8. The WEMWBS was also used in the GoWell survey in 2008 and, in line with the national picture, there is no evidence of any change in levels of wellbeing between 2008 and 2011.

Self-reported health more generally is measured by a question asking respondents to rate their health as 'excellent, very good, good, fair or poor'. In the Scottish Health Survey 76% of respondents in 2011 rated their health as being at least 'good', and there was little change since 2008. In GoWell area types, however, this proportion has declined over time – the steepest decline in the percentage of respondents reporting good or better than good health being seen in the Wider Surrounding Areas (from 81% in 2008 to 66% in 2011).

Use of primary care services

For Scotland as a whole, health service use at the local practice level has increased in recent years. GPs and practice-employed nurses combined had an estimated 24.2 million face-to-face consultations with patients in 2011/12². This is a rise of nearly 2.5 million compared with 2003/04 when Practice Team Information (PTI) recording started. The number of GP consultations rose by almost 6% from 15.6 million to 16.5 million over the nine years, whereas the practice nurse consultations rose by 25% from 6.1 million to 7.6 million over the same period.

Consultation rates are higher in the more deprived areas of Scotland (except for the oldest age groups) and on average patients consult 4.4 times/year. Just under one in five people have no consultation in a year.

The relevant items on the GoWell questionnaire specify consultations with GPs and are therefore not comparable with the figures above; respondents being asked if they had spoken to a GP in the last 12 months about any health issue relating to themselves. The figures have been relatively stable in the GoWell surveys over time. At each wave roughly three out of every four participants stated they had consulted a GP in the previous year. Consultations for anxiety, depression, or other mental, nervous or emotional

¹ WEMWBS = Warwick-Edinburgh Mental Wellbeing Score. A higher score equates to better mental wellbeing.

² Information Services Division. *Practice Team Information (PTI) Annual Update (2011/12)*. ISD Scotland and NHS National Services Scotland: Edinburgh, 2012.

problems (including stress) have increased over time in all of the GoWell Intervention Area Types.

In summary, where it is possible to compare GoWell findings with Glasgow- or Scotland-level trends and rates, a high degree of consistency is found. Where we have the data to enable comparison, the prevalence of health-related behaviours is in line with the more deprived parts of Scotland and trends and subgroup differences are similar. Mental wellbeing and levels of self-reported health are not significantly different from Scottish levels, although the latter does appear to be deteriorating in GoWell areas whereas it is relatively stable for Scotland as a whole.

Summary

The findings from any evaluation of a social policy intervention need to be interpreted in relation to background changes taking place in the population as a whole. Using the most current data available, this briefing has summarised several of the ways in which Glasgow has changed in recent years. We have seen that some of these mirror national trends, while others are more or less extreme. Several of the variables described here relate to individual characteristics (age and ethnicity for example), others (such as household composition) reflect social structures and others describe contextual influences (deprivation levels in the city) – but all are strongly related to health outcomes.

GoWell is studying change in some of Glasgow's least healthy, most diverse and least affluent communities. A future report will detail how the populations in these parts of the city have changed between the 2001 and 2011 Censuses.

References and sources

The facts and figures incorporated into this briefing have been drawn from the sources that follow.

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