



# Ten Facts

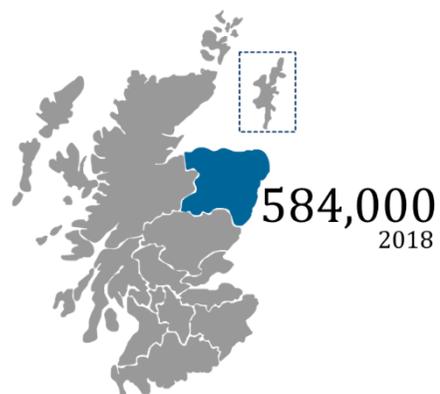
about population health  
in Grampian

NHS Grampian Public Health – Health Intelligence Department, November 2019

1.

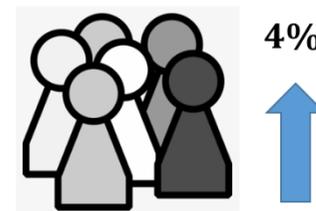
Grampian's population has been increasing and ageing.





The number of people over 85 years in 2018 is **2.6 times** the size it was in 1971  
whilst under 35s reduced by 5%

#### Projections to 2028



One of the biggest challenges facing health and social care is demographic change. The population in Grampian has been increasing year on year since 1981, except for a brief period in each decade. This includes a 1% reduction since 2016. Our funding takes account of capitation so fluctuations in the size of our population relative to the rest of Scotland has a significant impact on our ability to deliver health care.

The ageing of our population has a major effect on economic growth. It also places a burden on health care resources, as older people typically require more care. People aged 85 years and over constitute just 2% of our total population, but in 2018, required 25% of resources following emergency admission to hospital.

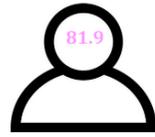
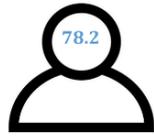
Older people have a significant contribution to make in our communities such as volunteering, mentoring and skills sharing. Our goal is to help maintain independence for as long as possible, by enabling people to live longer, healthier lives with meaning and purpose.

# 2.

Life expectancy has been rising, but the rate of increase has stalled and inequalities have worsened for some.



Average **life expectancy** at birth in 2017



But not everyone enjoys this longevity



**Early deaths amongst middle aged people** in disadvantaged groups are affecting the fall in average life expectancy

While mortality from heart disease and stroke continues to decline, this is being counterbalanced by the rise of new causes of death, such as Alzheimers disease and dementia<sup>i</sup>. These diseases occur at very elderly ages and should not have a major impact on life expectancy trends, but signs of a rise in middle-aged mortality from a variety of causes is beginning to limit longevity. Premature death across our population has been reducing overall but there are certain groups for whom this does not apply. Men aged between 30 to 75 years living in deprived circumstances in Grampian are dying at a younger age now than they were in the 1980s. A worrying rise in drug related morbidity may be contributing to this.

Health care plays a part, but this situation also points to the wider determinants of health where social, economic and environmental factors shape the conditions in which people live<sup>ii</sup>. Hardship for some, and 'in-work' poverty is a problem of our times. The NHS and partners take seriously the wider role beyond health care, helping individuals and families to manage their income and by training staff to signpost people to the right place for support.

# 3.

Main causes of death are changing, and improvements to avoid mortality through prevention and treatment have slowed.





Cancer replaced heart disease as most common cause of death in the 90s



Dementia now second most common cause of death for women and third for men



50%  
drop in 'avoidable'  
deaths over last 36  
years

When looking at the four main causes of death over time, cancer replaced ischaemic heart disease in the 1990s as the most likely cause, and in the last few years dementia/Alzheimer's has become second place for females and third place for males. An estimated 1 million people will have dementia in the UK by 2025<sup>iii</sup>. Stopping smoking and keeping socially connected are two evidence-based ways to reduce the risk of getting this (and other) diseases.<sup>iv</sup> In addition to the human impact for individuals and their families, dementia places a huge burden on formal and informal care. Research suggests that it has higher health and social care costs than cancer and chronic heart disease combined.<sup>v</sup> The NHS Grampian Clinical Strategy suggests ways to think about health need and how our efforts can prevent, delay or alter the extent to which health services are required<sup>vi</sup>.

Everyone will die eventually but an 'avoidable death' (such as heart disease and type 2 diabetes) is one that may have been prevented using healthcare or public health interventions. Avoidable deaths have halved over the last 36 years, but with little change over the last five of those. Additionally, these are occurring at progressively younger ages throughout our population but particularly for people living in deprived circumstances.

# 4.

The population is healthier now in many respects, but for some the burden of long term conditions continues to rise.

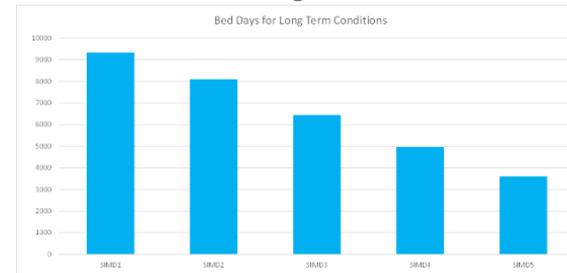




**2 in 5** people in Grampian have a long term condition

of which 27% have a limiting long term condition, rising to 45% in people 65 years +

**There is a strong social gradient. 61% less days in hospital are needed by people from more advantaged areas**



We are getting healthier in many ways. Across Scotland, fewer years of life are now lost due to ischaemic heart disease and cerebrovascular disease, with reductions in the last 15 years of 48% and 42% respectively<sup>vii</sup>. However these are now being replaced with other long term health conditions particularly dementia and drug use. 114,000 (20%) people in Grampian now live with either asthma, osteoarthritis or depression. 28,000 people live with diabetes which is projected to double by 2026<sup>viii</sup>. More encouragingly, new cases of type 2 diabetes (associated with obesity) have reduced by 13% since 2010. However with the increase in people who are overweight or obese in the past four years (see section 6), it is reasonable to expect this to translate into an increase in type 2 diabetes.

A common theme throughout this profile is that the burden of disease is greatest in areas of deprivation. In Scotland, drug use disorders were 17 times higher and chronic obstructive pulmonary disease 6 times higher amongst more deprived populations<sup>vii</sup>. In Grampian 61% fewer days were spent in hospital for long term conditions between the most and least affluent groups.

# 5.

Common mental health problems are increasing.





7%

of people in Grampian  
are living with anxiety  
disorders



75%

increase in antidepressant  
prescriptions in past 9 years

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The Grampian population reports better mental health and well-being than most other parts of Scotland<sup>xvi</sup>. Positive affect, relationships and functioning have improved in the past four years with no change in reports from the general health questionnaire on mental distress.

However over 37,000 adults in Grampian are living with depression and there has been a significant increase in the use of antidepressants over the last 9 years<sup>ix</sup>. Scottish population surveys also indicate a decline in the mental well-being of adolescents, particularly among young girls<sup>x</sup>.

Adult mental health and well-being is linked to deprivation. In Scotland, adults living in the most deprived areas were significantly more likely to report signs of severe mental distress than people in the least deprived areas. Reports of well-being were also significantly lower as deprivation increased.

# 6.

Fewer people are smoking but obesity continues to rise.



Since 1999,  
**smoking** has  
reduced from   
**29% to 16%**



**2 in every 3 adults**  
are overweight or obese

In the past 4 years an  
**additional**   
**10,000** people  
have become overweight  
and obese

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There are many lifestyle choices that affect health. Obesity and smoking are among the leading risk factors for morbidity, associated with a whole host of conditions including cardiovascular disease, musculoskeletal conditions, respiratory diseases, diabetes and most cancers.

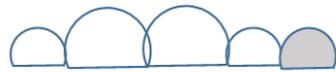
The proportion of people who smoke continues to fall and is at an all-time low. One sixth of the adult population are regular smokers but it is significantly higher amongst certain population groups<sup>xi</sup>. For example, women living in more deprived communities are six times more likely to smoke whilst pregnant than women living in advantaged areas. Our strategy is for prevention, protection and cessation targeted at four main population groups where smoking rates are enduringly high<sup>xii</sup>.

Managing conditions associated with obesity places a significant burden on the NHS with annual costs estimated to range from £363 million to £600 million<sup>xiii</sup>. Worryingly this figure could become worse, with one third of children aged 2 to 15 in Grampian on an overweight or obese trajectory.

# 7

There have been improvements in child health but inequalities remain.





83% of Primary 7 children have no dental decay

25% of Primary 1 children are overweight



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There are over 10,000 children living in poverty in Grampian. Whilst this is lower than the average for Scotland, the consequences and life-long effects they experience are the same as for children in Glasgow, Lanarkshire or Dundee<sup>xiv</sup>.

Education has an important impact on life chances and consequently, on health. The proportion of children leaving school with one or more qualification at SCQF Level 6 has increased from 49% in 2009 to 60% in 2015. Children living in poorer areas lag behind at 35%, although the good news is that the gap between the least and most affluent groups has narrowed by 8% over the past 5 years<sup>xv</sup>.

83% of Primary 7 children had no obvious dental decay in 2018, a 10% improvement over the past five years. A success story, largely as a result of targeted, sustained effort and investment. Inequalities remain however, despite a narrowing gap, where across Scotland, the difference in dental decay in children is 18% between least and most affluent areas.

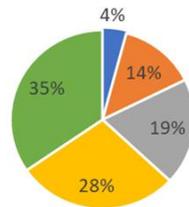
Almost a quarter of five year old children are overweight and one in ten are obese. This means 11,000 overweight and 15,000 obese children in Grampian<sup>xvi</sup>. The prevalence of obesity in children increases alongside deprivation<sup>xvii</sup>.

# 8

- Variations in social and economic factors are important drivers of health inequalities and they are dispersed throughout the population.



4% of the Grampian population live in highest deprivation category



■ Q1 (most deprived) ■ Q2 ■ Q3 ■ Q4 ■ Q5 (least deprived)

Yet inequalities are spread throughout our communities

	% of income deprived people living in each SIMD quintile	% of employment deprived people living in each SIMD quintile
SIMD 5 (least deprived)	12.9	13.5
SIMD 4	19.5	20.2
SIMD 3	23.9	24.3
SIMD 2	26.8	26.8
SIMD 1 (most deprived)	15.1	15.2

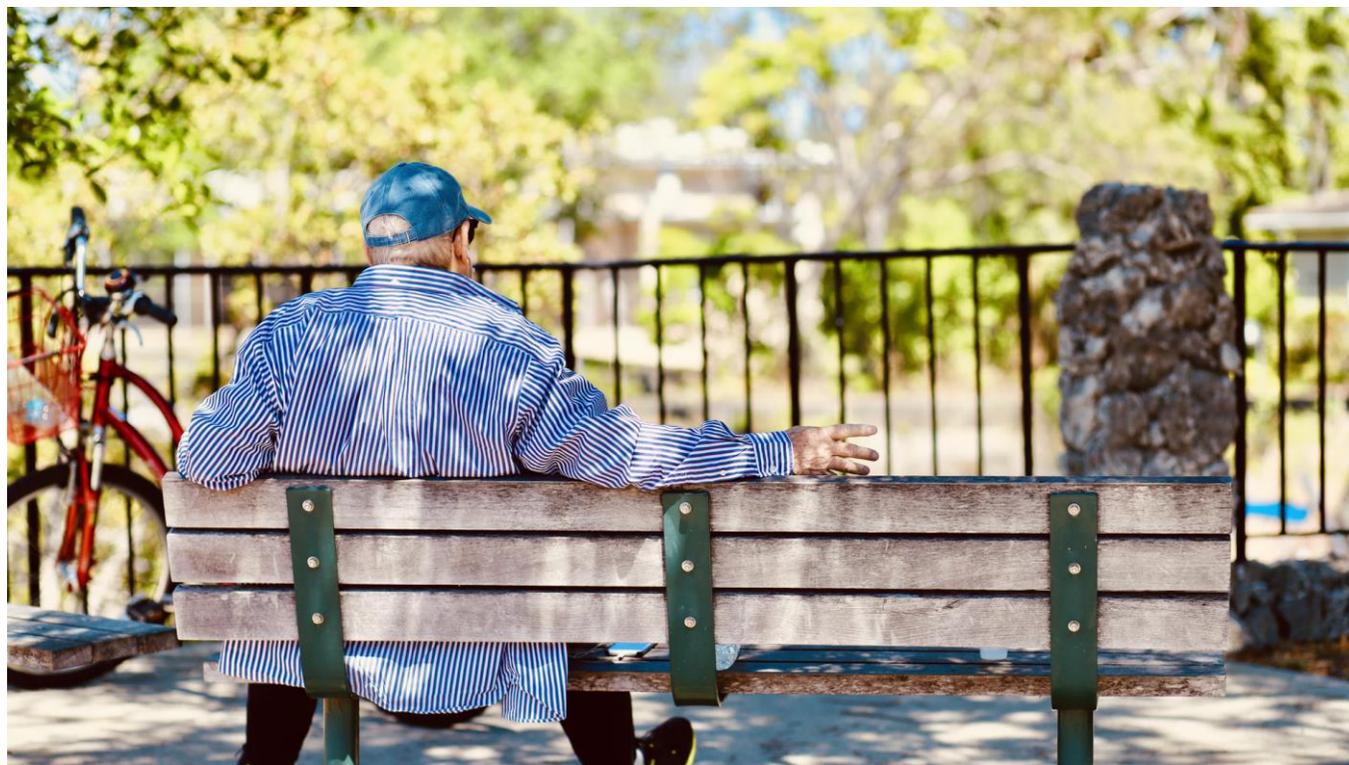
Inequalities in health is a recurring theme highlighted in this report. Lifestyle choices, the prevalence of long term conditions, premature deaths, even educational attainment - all are influenced by deprivation and social inequality. NHS Grampian strives to be 'inequalities sensitive' in strategic decision-making and in strengthening our contribution to community planning.

The Scottish Index of Multiple Deprivation (SIMD) identifies small areas of multiple deprivation in our communities. It is a statistical method used to describe outcomes between people living in different geographies, for example differences in life expectancy. Yet it does not always follow that because you live in SIMD 1 (most deprived) that you will experience the lowest life span.

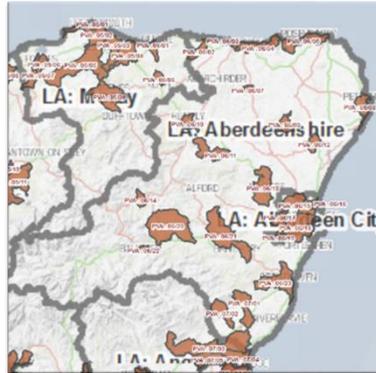
Social inequalities in Grampian are dispersed. Income and employment deprivation is spread throughout our communities. We will not improve outcomes and reduce health inequalities by focussing solely on areas formally classified as having the greatest disadvantage. We are addressing many of these social determinants by working in partnership, particularly through community planning mechanisms. As we do this, what is crucial is that we target people and not just places.

# 9

The physical environment is affecting our health and well-being.



Potentially vulnerable flooding areas in Grampian



Estimated 180 deaths per year in Grampian due to air pollution (PM2.5)



Flooding in Grampian is becoming a more common event. The Scottish Environment Protection Agency acknowledges that even rare one-in-200 year events are becoming more common. The immediate risk to health includes death, gastro-intestinal infections and hypothermia, but it is often the longer term psychological and economic effects that affect people more. Community resilience and emergency preparedness is crucial and partnership working through community planning is helping with this.

Air pollution is a major public health issue. It has multiple effects on health including child development, cardiovascular and respiratory disease, cancer and diabetes. Carbon emissions from vehicles cause the biggest problem and there are concerns that even 'safe' levels are considered to be harmful to health<sup>xviii</sup>. Moves towards electric and hybrid vehicles for NHS business, a reduction in 'travel miles' for patients, and support for active staff travel are some of our efforts to improve clean air and environmental sustainability.

# 10.

It is getting harder to protect our population from some infectious diseases.



**Child immunisation** in  
Grampian is below the levels  
needed for population immunity



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Historically, public health protection has had a major influence on reducing death rates from infectious diseases. A century ago, these constituted 32% of deaths compared to 8% in 2015<sup>xix</sup>. Much of the improvement was due to immunisation and use of antibiotics.

Of particular concern in Grampian is the change in child immunisation. With less than 95% uptake of the 6 in 1 vaccine, and the combined vaccine for measles, mumps and rubella<sup>xx</sup>, there are valid concerns about herd immunity.

Measles is highly contagious. It can be very serious causing permanent deafness, lung disease, inflammation of the brain, and death. There have had been no confirmed cases for several years in Grampian, however there are current cases in Scotland and several outbreaks in England. There is a high risk of importation of a case of measles into Grampian which will result in a significant outbreak in the population. When this happens, public health capacity to respond will be severely stretched.

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- <sup>i</sup> Nimmo F. Trends in Mortality since 1980. Health Intelligence, NHS Grampian October 2019
- <sup>ii</sup> The Marmot Review. Fair Society, Healthy Lives. February 2010
- <sup>iii</sup> Prince, M et al (2014) Dementia UK: Update Second Edition report produced by King's College London and the London School of Economics for the Alzheimer's Society
- <sup>iv</sup> Frankish H, Horton R. Prevention and management of dementia: a priority for public health. Lancet VOLUME 390, ISSUE 10113, P2614-2615, DECEMBER 16, 2017
- <sup>v</sup> Luengo-Fernandez R, et al. (2015) UK research spend in 2008 and 2012: comparing stroke, cancer, coronary heart disease and dementia BMJ Open 2015;5:e006648. doi: 10.1136/bmjopen-2014-00664
- <sup>vi</sup> NHS Grampian. Clinical Strategy 2016-2016. October 2016
- <sup>vii</sup> <https://www.scotpho.org.uk/comparative-health/burden-of-disease/sbod-results-2016/>
- <sup>viii</sup> <https://sctt.org.uk/programmes/home-and-mobile-monitoring/long-term-conditions/>
- <sup>ix</sup> ISD (2019) Mental Health Prescriptions available from <https://www.isdscotland.org/Health-Topics/Prescribing-and-Medicines/Publications/2019-10-22/2019-10-22-PrescribingMentalHealth-Report.pdf>
- <sup>x</sup> <https://www.gov.scot/publications/scottish-schools-adolescent-lifestyle-substance-use-survey-salsus-2015-mental-9781786529626/>
- <sup>xi</sup> Scottish Survey Core Questions, 2018 <https://statistics.gov.scot/data/smoking-sscq>
- <sup>xii</sup> NHS Grampian. Tobacco Strategic Plan for the North East of Scotland 2018-2022
- <sup>xiii</sup> <https://www.gov.scot/publications/obesity-indicators/pages/2/>
- <sup>xiv</sup> NHS Grampian. Director of Public Health Annual Report 2015/16
- <sup>xv</sup> ScotPHO(2019) Profiles available at: [https://scotland.shinyapps.io/ScotPHO\\_profiles\\_tool/](https://scotland.shinyapps.io/ScotPHO_profiles_tool/)
- <sup>xvi</sup> Scottish Health Survey 2010 to 2016
- <sup>xvii</sup> Bromley C, Todd E, McCartney G (2017) Obesity and health inequalities in Scotland: Summary Report [www.scotpho.org.uk/media/1154/scotpho170727-obesity-and-health-inequalities-in-scotland-summaryreport.pdf](http://www.scotpho.org.uk/media/1154/scotpho170727-obesity-and-health-inequalities-in-scotland-summaryreport.pdf)
- <sup>xviii</sup> Beelen et al. Effects of long term exposure to air pollution on natural-cause mortality: an analysis of 22 European cohorts within the multicentre ESCAPE project. Lancet Vol 383 Issue 9919 P785-795 March 01 2014
- <sup>xix</sup> <https://www.sehd.scot.nhs.uk/publications/his0/his0-02.htm>
- <sup>xx</sup> <https://www.isdscotland.org/Health-Topics/Child-Health/Publications/2019-09-24/2019-09-24-Childhood-Immunisation-Summary.pdf>