SCOTTISH HEALTH SURVEY 2011 – SUMMARY OF KEY FINDINGS

INTRODUCTION
The purpose of the Scottish Health Survey (SHeS) is to provide reliable information on the health and health-related behaviours of people in Scotland living in private households. The survey estimates the prevalence of a range of health conditions and behaviours and monitors progress towards key Scottish Government health targets.

This summary report presents key findings from the 2011 survey, including trends over time based on data from the 1995 survey onwards. The 2011 report has been expanded to include separate volumes on adults and children. Some of the findings presented below are based on pooled datasets drawing on two or four years data combined.

The publication of the 2011 data is the first opportunity since 2003 to publish results for all fourteen NHS Boards in Scotland. This report is accompanied by a set of web tables and an interactive mapping tool breaking down the key results by NHS Board and creates a valuable local data resource. More detailed findings, and full documentation of the survey’s methods and questionnaires, are available in Rutherford, L., Sharp, C. and Bromley, C. (2012). The Scottish Health Survey 2011 Report, published by the Scottish Government. Available from: www.scotland.gov.uk/Topics/Statistics/Browse/Health/scottish-health-survey/Publications

ABOUT THE SURVEY

The sample
The 2008-2011 surveys have two samples: a general population (main) sample in which all adults and up to two children are eligible to be interviewed in each selected household, and a child boost sample in which up to two children in a selected household are eligible to be interviewed. The survey provides national estimates every year for adults and children living in private households, and representative data for adults in each Health Board, and in the 15% most deprived areas of Scotland, over the four year period 2008-11. 7,544 adults and 1,987 children participated in the 2011 survey.

The interview
Prior to 2012, SHeS consisted of two stages: an interview for all adults and up to two children in each selected household; and for some adults, a second stage visit from a nurse. The first stage interview includes questions every year about:

- general health and long-term conditions
- mental health and wellbeing
- cardiovascular disease, hypertension and diabetes
- eating habits, including fruit and vegetable consumption
- smoking and drinking
- physical activity
- dental health
- demographic and other background details.

The interviewers also measured participants’ height and weight, and asked for consent to link participants’ answers to their NHS health records. The nurse asked adults additional questions about medications, food poisoning, depression, anxiety and self-
harm. Nurses also measured waist and hip, blood pressure and lung function, and collected saliva, blood and urine samples.

The 2008-11 surveys were conducted by a collaboration between the ScotCen Social Research, the MRC/CSO Social and Public Health Sciences Unit in Glasgow, and the Department of Epidemiology and Public Health, University College London.

VOLUME 1: ADULT HEALTH

GENERAL HEALTH AND MENTAL WELLBEING  
(Volume 1, Chapter 1)

Self-assessed general health
- In 2011, 76% of adults described their health in general as ‘good’ or ‘very good’, while just 7% described it as ‘bad’ or ‘very bad’. These figures have remained stable since 2008.

Long-term conditions
- In 2011, 44% of adults reported having a long-standing physical or mental condition or disability, a significant increase on the 41% reporting such a condition in 2008. Women were more likely than men to report a long-term condition (30% and 26%).
- Where people lived was significantly associated with presence of long-term conditions, with the proportion reporting such a condition increasing steadily in line with deprivation. Just over a third (35%) of adults living in the 20% least deprived areas in Scotland had a long-term condition compared with half (51%) of those living in the 20% most deprived areas.

Wellbeing
- In 2011, the mean score on the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) was 49.9, and was higher among men (50.2) than women (49.7). There has been no significant change in the mean WEMWBS score for all adults since 2008.
- People aged 25-34 and 65-74 had the highest levels of positive wellbeing and those aged 45-54 and 75 and over had the lowest.
- People in work characterised by low autonomy, high demands, and with low levels of social support in the workplace all had lower levels of wellbeing than those with more positive experiences of their working lives.
- Analysis was carried out to identify factors that were independently associated with having below average wellbeing. Among both men and women, the following groups had increased odd of low wellbeing: younger people, those who were not married or cohabiting, those with poor self-assessed health, people with experience of discrimination, those who have few people to turn to in a crisis, and those with no involvement in their local community.

Depression and anxiety
- Between 2008/2009 and 2010/2011 there was no change in the proportion of adults assessed as having depression symptoms of moderate to high severity (two more symptoms on the Revised Clinical Interview Schedule) (8% and 7% respectively). However, in this same period the proportion with one symptom increased from 5% to 12%.
- The prevalence of anxiety symptoms was very similar in 2008/2009 and 2010/2011 with no change in the proportion of adults that had two or more symptoms (9%).
Suicide attempts and deliberate self-harm

- The majority of adults (95%) in Scotland reported that they had never attempted suicide while 5% reported that they had attempted to do so at some point. Women were more likely than men to report having attempted suicide (6% compared with 4%).
- The proportion of adults reporting deliberate self-harm was low (2%) and was strongly associated with age, with 6% of 16-24 year olds and 5% of those aged 35-44 reporting that they had self-harmed compared with no more than 2% for other age groups.

DENTAL HEALTH

Natural teeth

- In 2011, 90% of all adults (aged 16 and over) had some natural teeth (91% of men and 89% of women).
- There was a strong association between area deprivation and prevalence of natural teeth, with people living in the 20% most deprived areas in Scotland least likely to have at least some natural teeth (83% compared with 94% of those living in the 20% least deprived areas of Scotland).

Actions to improve dental health

- In 2009/2011, almost all (96%) adults with teeth said they brushed them daily with fluoride toothpaste.
- Four in ten adults reported using a mouth-wash daily in 2009/2011, though women were more likely than men to do so (45% compared with 36%).
- Women were twice as likely as men to report using dental floss daily (33% versus 17%).

ALCOHOL CONSUMPTION

Weekly alcohol consumption levels

- In 2011, men consumed 15.0 units of alcohol a week on average and women consumed an average of 7.4 units. The equivalent figures for men and women in 2003 were 19.8 units and 9.0 units respectively.
- A quarter of men and just under a fifth of women (18%) were categorized as hazardous or harmful drinkers (defined as men drinking more than 21 units per week and women drinking more than 14) in 2011. Prevalence of hazardous/harmful drinking has declined since 2003, most notably in the 2003 to 2009 period.
Daily alcohol consumption (heaviest drinking day)

- On average, men drank 5.5 units and women 3.2 units on their heaviest drinking day in the week prior to being interviewed (the figure for all adults was 4.3 units). There has been a gradual decline in the mean daily unit consumption since 2003 from 4.9 units to 4.3 units in 2011. Latest figures suggest that the decline is perhaps more apparent among men than women.

- On their heaviest drinking day, four in ten (41%) men and over three in ten (34%) women exceeded their recommended daily limit (4 units for men and 3 units for women).

- One in five adults (25% of men and 17% of women) drank more than twice the recommended daily amount (more than 8 units and more than 6 units respectively) on their heaviest drinking day.

Adherence to weekly and daily drinking advice

- In 2011, two in five (43%) adults drank within both the weekly and daily recommended guidelines. However, a similar proportion (42%) drank outwith either these guidelines with men more likely to do so than women (46% of men and 38% of women).

- While the proportion of people drinking outwith the guidelines has declined since 2003 (from 47% to 42% in 2011), there has been no significant change since 2009.

Number of days alcohol was consumed in last week

- In 2011, men drank alcohol on an average of 2.8 days in the previous week. The equivalent figure for women was 2.5 days.

- One in ten adults (13% of men and 10% of women) drank on more than five days in the last week.

- Between 2003 and 2009 there was a decline in the proportion of adults who drank on more than five days in the previous week from 17% to 12%.
Smoking prevalence

- In 2011, 23% of all adults (aged 16 and over) were current smokers. While smoking rates for men and women were similar (24% and 22% respectively) on average female smokers smoked fewer cigarettes per day than their male counterparts (13.3 cigarettes compared with 14.3 for men).

- Since 2003, the smoking rate for adults has declined from 28% to 23% in 2011. The two percentage point drop in the prevalence between 2010 and 2011 represented a statistically significant decline.

- An estimate of the percentage of people who mis-report themselves as non-smokers was made by comparing self-reported smoking estimates with cotinine levels. In 2008-2011, the under-estimation of current smoking was 3 percentage points. Mis-reporting was greatest among men aged 16-24 and 65 and over (6 percentage point difference between self-reported and cotinine adjusted estimates).

**Figure 2**

Current cigarette smoking (age-standardised), by Scottish Index of Multiple Deprivation quintile, and mean cigarettes per current smoker per day, by sex, 2011

Exposure to second-hand smoke

- The sharp decrease in non-smokers’ exposure to second-hand smoke seen in the decade between 1998 and 2008 was maintained in 2011. In 2011, 8% of non-smokers reported being exposed to smoke in public places.

- Non-smokers’ exposure to second-hand smoke in their own or someone else’s home fell from 25% in 2003 to 14% in 2011.

- Exposure to other people’s smoke was also measured objectively using geometric mean cotinine levels. Since 2003 there has been a significant decline in the mean cotinine level of non-smokers (from 0.40ng/ml to 0.11ng/ml in 2010/2011). There was no change between 2008/2009 and 2010/2011.

- Deprivation was strongly associated with non-smokers’ cotinine levels. Non-smokers living in the 20% most deprived areas in Scotland had a mean cotinine level three times higher than that of those living in the least deprived group (0.20ng/ml compared with 0.07ng/ml).
DIET

(Volume 1, Chapter 5)

Fruit and vegetable consumption

- The proportion of adults meeting the recommended daily intake of five or more portions of fruit and vegetables has not changed significantly over time. In 2011, one in five (22%) adults (20% of men and 23% of women) met the recommendation.
- In 2011, adults consumed an average of 3.2 portions of fruit and vegetables per day, with women consuming slightly more than men (3.3 portions compared with 3.1).
- One in ten (9%) adults did not consume any fruit and vegetables in the day prior to interview. People aged 16-24 were least likely to consume 5 or more portions (15%).

Urinary sodium levels

- There is a commitment to reduce population-level salt intake to no more than 6g per day (2.4g or 100mmol/l of sodium). In SHeS, dietary salt intake is measured via sodium excretion in urine.
- In the 2008-2011 period the mean urinary sodium level for adults was 106.9mmol/l. This was significantly lower than the 2003 level of 116.1mmol/l.
- Men had a higher mean sodium level than women (119.4mmol/l compared with 95.0mmol/l), and the mean level declined with age for both sexes (from 122.0mmol/l for 16-44 year olds to 87.2 mmol/l for those aged 65 and over).
- In 2008-2011, a quarter of adults took some type of vitamin or mineral supplement, with women more likely to do so than men (27% compared with 20%).
- While there was only a small change in the overall proportion taking any dietary supplements between 2003 and 2008-2011 (26% and 24%, respectively), among some sub-groups, most notably women aged 45-64, there was a much higher than average decrease in supplement use (of eight to ten percentage points).

PHYSICAL ACTIVITY

(Volume 1, Chapter 6)

- In 2011, 39% of adults (aged 16 and over) met the physical activity recommendations (at least 30 minutes of moderate activity on most days of the week) with men more likely to do so than women (45% compared with 33%).
- Since 2008, there has been no significant change in the proportion of adults meeting the recommendations.
- The proportions of men and women meeting the recommended activity levels varied significantly with age in 2011. Among men, 63% of those aged 16-24 met the recommendation this then declined to 11% of those aged 75 and over. Among women, those aged 25-34 were most likely to meet the recommendations (45%), and again the proportion meeting them then declined to just 6% of those aged 75 and over.
- Activity levels were related to household income, with those living in highest income households (highest income quintile) more likely than those with lower incomes to meet the recommended activity levels. For example, 38% of women in the highest income group met the recommendations compared with 27% in the lowest.
- Deprivation was also strongly related to activity levels with adults living in the two most deprived SIMD quintiles least likely to meet the recommendations (34%-35%) compared with 42% in the two least deprived quintiles.
**Overweight and obesity**

- In 2011, just under two-thirds (64.3%) of adults (aged 16 and over) were either overweight or obese (BMI of 25 kg/m² and over) while over a quarter (27.7%) were obese. Men were more likely than women to be overweight or obese (69.2% versus 59.6%).

- Since 1995, the proportion of adults aged 16-64 who were overweight or obese has increased from 52.4% to 62.2%. Obesity prevalence increased from 17.2% to 26.5% over this same period. The greatest increases occurred between 1995 and 2008 with figures remaining broadly stable since then.

- The mean BMI of adults aged 16-64 has also increased over time from 25.8 kg/m² in 1995 to 27.3 kg/m² in 2011.

**Waist circumference**

- In the 2010/2011 period, the mean waist circumference was 96.3cm for men and 89.0cm for women. Half (49.1%) of women and three in ten (31.7%) men had a raised waist circumference.

- Since 1995, there has been a steady increase in the mean WC of men aged 16-64 from 90.2 to 95.3 cm in 2008/2009 and 95.1 cm in 2010/2011. Over this same period there was an even greater increase in the mean WC for women, rising from 78.5 cm in 1995 to 87.2 cm in 2008/09 and 87.9 cm in 2010/2011.

**Disease risk based on waist circumference and Body Mass Index (BMI)**

- Based on a combination of their BMI and waist circumference measurements, women were more likely than men to be classified as being at high (or greater) risk of conditions like type 2 diabetes, hypertension and CVD (45.4% compared with 34.4% of men).

- 15.7% of men were overweight according to their BMI but when the combined measure of BMI and waist circumference was used they were classified as being at no increased risk of obesity related diseases. The comparable figure for women was just 4.1%.

- Socio-economic classification and household income were both significantly associated with disease risk. For example, women living in semi-routine and routine households...
were the most likely to be classified as at a high (or greater) risk of disease, while those in professional and managerial households were least likely to be (52.1% compared with 41.0%).

- People living in Scotland’s most deprived areas (SIMD quintile 1) were most likely to be classified as having high (or greater) risk of disease (38.8% of men and 54.3% of women).

CARDIOVASCULAR DISEASE (CVD), HYPERTENSION AND DIABETES

(Volume 1, Chapter 8)

Prevalence of cardiovascular conditions and diabetes

- In 2011, 15.6% of men and 13.8% of women had cardiovascular disease.
- Prevalence of CVD or diabetes was higher among men than women in 2011 (19.2% and 17.0%, respectively) and increased markedly with age for both sexes.
- Between 1995 and 2011 there was a significant increase in the proportion of men aged 16-64 with CVD or diabetes (from 9.4% to 12.7%). There was no clear trend in the figures for women over this same period.
- In 2011, 6.1% of men and 4.9% of women aged 16 and over had doctor diagnosed diabetes.
- 2.4% of adults (2.6% of men and 2.1% of women) had a glycated haemoglobin level consistent with undiagnosed diabetes (HbA1C>=6.5%) in the 2008-2011 period an increase from 1.1% in 2003.

Hypertension

- In 2010/2011, a third of men (33%) and women (32%) aged 16 and over had hypertension. Prevalence increased significantly by age for both sexes.
- Almost one in five (18.5%) men and one in six (15.7%) women had untreated hypertension in 2010/2011.

Blood analytes

- Between 1995 and 2008-2011 mean total cholesterol in men aged 16-64 declined from 5.6 to 5.2 mmol/l. The equivalent figures for women were 5.6mmol/l and 5.3 mmol/l. Most of this decline occurred between 1995 and 1998. These figures include people taking lipid lowering drugs such as statins so it is likely that the decline is almost entirely due to the increased use of such drugs.
- There was no change in mean HDL cholesterol of adults between 2003 and 2008-2011. Levels were lower in men than in women (mean of 1.3 mmol/l compared with 1.6mmol/l).
- There was an increase in mean fibrinogen levels for 16-74 year olds between 1998 and 2008-2011 (from 2.6g/l to 2.9g/l in men, and from 2.8g/l to 3.1g/l in women).
- Women had higher mean C-reactive protein (CRP) levels than men (3.4 mg/l compared with 2.9mg/l) in 2008-2011 and levels generally increased with age for both sexes. The mean CRP for women declined from 3.8mg/l in 2003 to 3.3mg/l in 2008-2011.
GENERAL HEALTH AND MENTAL WELLBEING

- The vast majority (95%) of children (aged 0-15) were described as having 'good' or 'very good' health in 2010/2011, while just 1% described their health as 'bad' or 'very bad'.

- Since 1998, there has been an increase in the proportion reporting 'very good' as opposed to 'good' health. In 1998 60% of children had 'very good' health and 34% had 'good' health. The equivalent figures in 2010/2011 were 68% and 28% respectively.

- One in six (15%) children (17% of boys and 14% of girls) had a long-term condition in the 2008-2011 period; 9% had non-limiting conditions, while 7% had limiting ones.

- Prevalence of long-term conditions was significantly associated with household income with children in the lowest income group most likely to have a long-term condition (20% compared with 11% in the highest income group).

- There was no significant change in GHQ scores for 13-15 year olds between 2003 and 2008-2011.

- In 2008-2011, two-thirds of children aged 13-15 had a GHQ12 score of zero while one in ten (9%) had a score of four or more indicating a possible psychiatric disorder. Girls were more likely than boys to have a GHQ12 score of four or more (11% compared with 7%).

- The Strengths and Difficulties Questionnaire (SDQ) was used to assess the presence of social, emotional and behavioural problems in children aged 4-12. Based on the total SDQ scores in 2010/2011, 86% of children had no problems, 7% were assessed as borderline and 8% (10% of boys and 5% of girls) had an abnormal score.

ACCIDENTS

- In 2009/2011, 16% of boys and 12% of girls (aged 0-15) reported having had at least one accident in the previous year where advice was sought from a doctor, nurse or other health professional, or which required a visit to hospital, or time to be taken off school.

- Boys had a significantly higher accident rate than girls in the 2009/2011 period (20 per 100 persons compared with 14 per 100 persons).

- There was a significant reduction in the accident rate for children aged 2-15 between 1998 and 2009/2011 from 21 per 100 persons to 18 per 100.

- The most common cause of accidents for boys and girls was a fall, slip or trip (52%).

- 38% of accidents to children occurred in the home or garden. This was a particularly likely accident location for children aged 0-7 (62%).

- The most commonly mentioned injuries were swelling or tenderness in some part of the body (30% of accidents); cuts or grazes (27%) and bruising, pinching or crushing (23%).
In 2011, children aged 2-15 consumed 2.7 mean portions of fruit and vegetables per day (2.6 for boys and 2.7 for girls). 13% of boys and 12% of girls met the recommended daily intake of five or more portions of fruit and vegetables per day.

Since 2003, there has been no significant change in the mean portions of fruit and vegetables consumed per day by children aged 5-15, or the proportion of children meeting the recommended daily intake of five or more portions.

Children’s mean daily fruit and vegetables consumption varied significantly with age, from 3.2 portions among those aged 2-4 to 2.5 for those aged 13-15.

Children with at least one parent who met the recommended daily intake of fruit and vegetables consumed more portions on average, and were more likely to meet the recommended daily intake, than children with parents who did not meet the recommendations.

Consumption of oily fish (once a week or more) among children aged 2-15 rose from 8% in 2003 to 14% in 2010/2011. White fish consumption (once a week or more) increased from 42% to 49% in this period.

Since 2003, the proportion of children aged 2-15 consuming crisps (once a day or more) decreased from 52% to 38% in 2010/2011. Consumption of chips (two or more times a week) also fell from 54% in 2003 to 42% in 2010/2011.

There has however been a slight decrease in the proportion of children eating tuna fish once a week or more (from 33% to 29% in 2010/2011) and an increase in the proportion eating red meat two or more times a week (from 53% to 58% in 2010/2011).

In 2011, 73% of children (76% of boys and 70% of girls) met the physical activity recommendations (at least 60 minutes daily) including school-based activity. Although there was little change between 2008 and 2011 in this measure for boys, the proportion of girls meeting the recommendations increased from 64% in 2008.
• Seven in ten children aged 2-4 were active at the recommended level (including school based activity) in 2011; this increased to 80%-81% for children aged 5-10, declined to 75% at age 11-12 and dropped further still to 59% of those aged 13-15. The decline with age was particularly apparent among girls (48% of girls aged 13-15 met the recommendations compared with 69% of boys).

• There was a significant association between physical activity levels and area deprivation (SIMD) for boys, with those living in the 20% least deprived areas in Scotland more likely to meet the recommendations than those living elsewhere (81% compared with 72%-77%).

• Children were more likely to meet the physical activity recommendations if their mothers did so also: 80% of boys and 72% of girls whose mothers met the adult recommendations met the recommendations themselves. Activity levels were not associated with the activity levels of their father.

**OBESITY** (Volume 2, Chapter 4)

• In 2011, two-thirds (65.6%) of children had a healthy weight (BMI >5th percentile and <85th percentile), a decrease from 70.3% in 1998. Girls were significantly more likely than boys to be a healthy weight (68.0% compared with 63.4%).

• 31.6% of children were overweight or obese in 2011 (BMI ≥85th percentile), a slight increase since 1998 when the prevalence was 28.0%.

• 15.7% of children were obese (BMI ≥95th percentile and ≤98th percentile) or morbidly obese (BMI >98th percentile) in 2011, representing a small rise in prevalence from 13.0% in 1998.

• The trend has largely been driven by change among boys as there has been little change in the overweight/obesity prevalence among girls since 1998.

*Figure 5*
Percentage of children aged 2-15 with BMI in the healthy weight range by sex

• Boys were significantly more likely than girls to be overweight or obese (32.7% compared with 28.0%) in 2008-2011.

• Boys aged 10-11 and girls aged 12-13 had the highest prevalence of overweight or obesity (41.9% and 33.4%, respectively).
Healthy weight prevalence was significantly associated with area deprivation. Children living in the 20% most deprived areas in Scotland were less likely to be a healthy weight and more likely to be obese than those living in the least deprived areas. 19.4% were obese/morbidly obese compared with 12.1% of those in the least deprived SIMD quintile.

There was a strong association between a child’s BMI and that of their parent. Children with parents who were either a healthy weight or underweight were less likely than those with overweight or obese parents to be obese (21.0% compared with 40.1%).
A NATIONAL STATISTICS PUBLICATION FOR SCOTLAND

The United Kingdom Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics.

Designation can be broadly interpreted to mean that the statistics:

- meet identified user needs;
- are well explained and readily accessible;
- are produced according to sound methods, and
- are managed impartially and objectively in the public interest.

Once statistics have been designated as National Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.

Further information about Official and National Statistics can be found on the UK Statistics Authority website at www.statisticsauthority.gov.uk

SCOTTISH GOVERNMENT STATISTICIAN GROUP

Our Aim
To provide relevant and reliable information, analysis and advice that meet the needs of government, business and the people of Scotland.

For more information on the Statistician Group, please see the Scottish Government website at www.scotland.gov.uk/statistics

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