# Use of prescribed medicines

Shaun Scholes, Sue Faulding, Jennifer Mindell<sup>1</sup>

# Summary

- This is the first study of nationally-representative samples of people living in the community to report on the use of prescribed medicines. It is based on HSE 2012 and 2013 participants. Unlike data drawn from NHS records, these data reflect prevalence of use of prescribed medicines among the general population, not just those within the healthcare system. The results presented in this chapter are based on self-report of what participants have actually taken, rather than data on what has been prescribed or dispensed.
- 43% of men and 50% of women surveyed reported that they had taken at least one prescribed medicine in the last week. This proportion was higher among young women than young men but increased with age more sharply in men than women.
  22% of men and 24% of women reported that they had taken at least three prescribed medicines in the last week. This proportion increased with age but did not vary by sex.
- The proportion of participants who reported that they had taken at least one prescribed medicine in the last week increased with decreasing income, increasing area deprivation (measured by Index of Multiple Deprivation), and body mass index (BMI). However, there was no statistically significant variation by region in the proportion of participants who reported that they had taken at least one prescribed medicine in the last week.
- The majority of people with a longstanding illness had taken at least one prescribed medicine in the last week. The proportion who reported that they had taken at least three prescribed medicines in the last week was higher for those who reported that their longstanding illness was limiting: 40% of men and 45% of women compared with 30% of men and 28% of women with non-limiting longstanding illness.
- Almost all participants aged 65 and over who needed help with activities of daily living (social care) were taking at least one prescribed medicine and most of them were taking at least three.
- As well as looking at numbers of medicines taken, the chapter examines those taking specific prescribed medicine classes. The most frequently reported prescribed medicine classes were lipid-lowering medicines (16% of men and 12% women), anti-hypertensive medicines (14% and 15% respectively), and, for women, analgesics and/or non-steroidal anti-inflammatory drugs (12%).
- Prevalence of taking each medicine class generally increased with age. For lipidlowering medicines, the increase in prevalence with age was most sharp for men. For anti-hypertensive medicines, the increase was steepest for women.
- Prevalence within specific prescribed medicine classes increased with decreasing income, apart from antibacterials, for which there was no variation. For anti-depressants, the increase in prevalence by decreasing income was more pronounced for women than men (from 7% in the highest two income quintiles to 17% in the lowest).
- As with numbers of medicines, prevalence of taking medicine classes also increased among those with longstanding illnesses, and with increasing BMI.

# 5.1 Introduction

# 5.1.1 Chapter content

Patients depend on medicines to help maintain health, prevent illness, manage chronic conditions and treat disease. Prescribing medicines is the most common intervention provided to patients by the NHS. It is the second highest area of spending in the NHS, after staff costs.<sup>2</sup>

This chapter describes the use of prescribed medicines in the last week by HSE 2012 and 2013 participants. It describes both the number of such medicines and the use of specific classes of medicines among all adult survey participants and by various subgroups of the population. It includes analyses by socio-economic factors, social care need and receipt, obesity, and longstanding illness status.

# 5.1.2 Medicine costs and prescription charges

The cost of medicines in England in 2013 exceeded £15 billion, including costs in hospitals. In 2013, over 1 billion prescription items<sup>3</sup> were dispensed in the community in England. This is an average of 2.7 million items every day. The Net Ingredient Cost (NIC)<sup>4</sup> in 2013 was £8.6 billion, an increase of 1% (£102 million) from 2012. On average, 18.7 prescription items were dispensed per head of population in England in 2013.<sup>5</sup>

Over 307 million prescriptions (30% of the total) were for cardiovascular disease in 2013, with over 65 million of these being for hypertension, heart failure or lipid lowering medicines. There were over 65 million prescriptions for analgesics (for pain relief) and over 50 million each for antidepressants and proton pump inhibitors (to reduce production of acid by the stomach). The most commonly prescribed single medicine in England in primary care during 2013 was simvastatin (a lipid-lowering medicine) with 40 million prescriptions, followed by aspirin with 31 million.

Prescriptions to treat diabetes accounted for the largest NIC by treatment area for the sixth consecutive year in primary care, with a cost of £794 million in 2013.<sup>5</sup> Prescribing for diabetes accounted for 4.4% of total items and 9.5% of the total cost of prescribing in 2013/14.<sup>6</sup> The next five largest NICs by treatment areas in 2013<sup>7</sup> were:

- · corticosteroids for respiratory disease
- painkillers
- anti-epileptic drugs
- bronchodilators for respiratory disease
- antidepressants.

There are international concerns about the over-prescribing of antibacterial medicines, as this leads to increased resistance to these medicines. The UK government introduced a five year national strategy in 2013 to slow the development and spread of antimicrobial resistance, which includes actions to reduce inappropriate prescribing.<sup>8</sup> It set out actions needed to slow the development and spread of antimicrobial resistance, with a focus on antibiotics. There was a 3.8% fall in the number of prescriptions for antibacterials in primary care in 2013, compared with 2012.

Certain prescribed items, such as contraceptives, are exempt from prescription charges ( $\pounds$ 8.05 per item in autumn 2014). In England, there are also a number of population groups who are exempt from these charges, including:

- hospital inpatients
- people aged 60 and over
- young people aged under 16 or aged 16-18 and in full-time education
- women who are pregnant and for 12 months after their child is born
- people on certain benefits<sup>9</sup>
- those with certain medical conditions.<sup>10</sup>

In 2013, nine out of ten community prescriptions in England were dispensed free to the patient. Of these, 60% were for people aged 60 and over and about 5% were dispensed to

young people. In Northern Ireland, Scotland and Wales, prescriptions are free for everyone entitled to NHS care.

# 5.1.3 NICE guidance

The National Institute for Health and Care Excellence (NICE) produces a range of guidance covering clinical, public health and, more recently, social care. The clinical and public health guidelines cover diagnosis, management and treatment of a range of conditions.<sup>11</sup> These include recommendations for the use of medicines and other treatments by the NHS.

Technology Appraisals are reviews of specific interventions, and the majority of these cover specialist medicines such as cancer treatments. This appraisal process supports government policy to fund through the NHS only medicines of proven effectiveness and acceptable cost-effectiveness, given the limited public sector budget and the opportunity costs of any expenditure within the NHS. A threshold of £20,000-£30,000 per QALY (quality-adjusted life year<sup>12</sup>) has been used since 2004 for any treatment to be recommended by NICE. These thresholds have not changed with inflation.<sup>13</sup> Easily accessible information on these decisions by NICE are included in the British National Formulary (BNF).<sup>14</sup>

# 5.2 Methods and definitions

# 5.2.1 Data collection

At the nurse visit, participants were asked: 'Are you taking or using any medicines, pills, syrups, ointments, puffers or injections prescribed for you by a doctor or nurse?' Those who did were then asked the name of each prescribed item. In most cases, participants showed the nurse the actual medicine pack. These were coded by the nurse into medicine classes based on the sub-sections of the British National Formulary.<sup>14</sup> Up to 22 medicines could be recorded (including contraception). For each medicine, a follow up question asked whether they had taken or used that medicine in the last seven days.<sup>15</sup>

A few medicines had two or more possible BNF codes, depending on the formulation (eg steroid cream or inhaler), dose, or reason for taking it. This applied particularly to aspirin, which could be coded as being for arthritis, general analgesia (pain relief), or low dose aspirin for cardiovascular disease prevention. For certain medicines, an additional question was also asked about the reason for that treatment. For example, participants taking cardiovascular medicines were asked whether it was taken to treat hypertension, heart disease, or for another reason.

When low dose statins (cholesterol-lowering medicines) became available as 'over-thecounter' (OTC) medicine, available from community pharmacies without a prescription, the HSE introduced a question at the nurse visit asking participants whether they were taking statins bought over the counter. Those answering yes were asked whether they had taken statins in the last seven days.

# 5.2.2 Definitions

This chapter on prescribed medicine excludes both smoking cessation products (nicotine and other medicine) and contraception. Nicotine delivery products are discussed in Chapter 8 on adult smoking.<sup>16</sup>

Analyses of lipid-lowering medicines reported in the main tables are restricted to prescribed medicines. The use of statins (the main class of lipid-lowering medicine) purchased over the counter (OTC) from pharmacies is reported within the text (Section 5.4.1).

Analyses of prescribed medicine are restricted to those reported to have been taken in the last seven days. Throughout the report this is described as 'medicine taken in the last week'.

Table 5A describes the types of medicine and the sections of the British National Formulary (BNF) included for each class of medicine in the later tables in this chapter. The medicine classes within each table are mutually exclusive. Anti-hypertensive medicines are presented separately in Tables 5.8, 5.9 and 5.11. In Table 5.10, they are included within the more general class of cardiovascular medicine.

### Table 5A

Definitions	of	medicine	classes	used in	this chap	ter <sup>a</sup>
-------------	----	----------	---------	---------	-----------	------------------

Class	Medicines included	BNF <sup>b</sup> section(s)
Cardiovascular medicine	Positive inotropic drugs, diuretics, anti-arrhythmic drugs, beta-blockers, medicines affecting the renin-angiotensin system, nitrates, calcium blockers, other antihypertensive medicines	2.1 to 2.6
Anti-hypertensive medicines	Diuretics, beta-blockers, angiotensin-converting enzyme (ACE) inhibitors, angiotensin II receptor blockers (ARBs), renin inhibitors, calcium blockers, other antihypertensive medicines; but only if being taken for hypertension	2.2, 2.4, 2.5, 2.6.2
Lipid-lowering medicines <sup>c</sup>	Statins, other lipid-lowering drugs	2.12
Antiplatelet medicines	Antiplatelet medicines, including low dose aspirin, clopidogrel, dipyridamole, prasugrel, ticagrelor, glycoprotein IIb/IIIa inhibitors	2.9
Proton pump inhibitors	Proton pump inhibitors (e.g. omeprazole)	1.3.5
Analgesics and/or NSAIDs <sup>c,d</sup>	Non-opioid analgesics, opioid analgesics, medicines for neuropathic pain, antimigraine drugs, NSAIDs (including topical NSAIDs)	4.7, 10.1.1, 10.3.2
Antidepressant medicines	Tricyclics and related therapy, monoamine-oxidase inhibitors (MAOIs), selective serotonin re-uptake inhibitors (SSSIs), other antidepressants	4.3
Medicines for asthma or COPD <sup>e</sup>	Bronchodilators, inhaled corticosteroids, cromoglicate and related therapy, leukotriene receptor antagonists, phosphodiesterase type-4 inhibitors, oxygen	3.1, 3.2, 3.3, 3.6
Antidiabetic medicines	Insulin and anti-diabetic medicines	6.1.1, 6.1.2
Antibacterial medicines	Antibacterial medicines	5.1

<sup>a</sup> Medicines were included only if the participant reported they had taken them in the last week.

<sup>b</sup> BNF: British National Formulary.<sup>14</sup>

<sup>c</sup> Medicine was included in the tables only if prescribed.

<sup>d</sup> NSAIDs: Non-steroidal anti-inflammatory drugs.

<sup>e</sup> COPD: Chronic obstructive pulmonary disease (chronic bronchitis and emphysema).

# **5.3 Use of any prescribed medicines in the last week**

# 5.3.1 Number of prescribed medicines, by age and sex

43% of men and 50% of women reported that they had taken at least one prescribed medicine in the last week. The proportion increased with age more sharply in men than women, but more young women than young men had taken at least one prescribed medicine in the last week (see Figure 5A). 22% of men and 24% of women reported that they had taken at least three prescribed medicines in the last week. This proportion also increased with age but showed no variation by sex.

Figure 5B shows in more detail the number of prescribed medicines taken in the last week by different age groups. The steep increase in number with age is very clear, with more than half of those aged 65 and over taking at least three, and more than a third of those aged 75 and over taking at least six medicines. Table 5.1, Figures 5A and 5B

#### Figure 5A

Proportion taking at least one or at least three prescribed medicines in the last week, by age and sex Base: Aged 16 and over with a nurse visit

At least one At least three





Figure 5B Number of prescribed medicines taken in the last week, by age and sex None 1 Base: Aged 16 and over with a nurse visit 2 3 to 5 At least six Women Men 100 100 90 90 80 80 70 70 60 60 Percent Percent 50 50 40 40 30 30 20 20 10 10 0 0 16-24 25-34 35-44 45-54 55-64 65-74 75-84 85+ 16-24 25-34 35-44 45-54 55-64 65-74 75-84 85+ Age group Age group

# 5.3.2 Number of prescribed medicines, by region

There was no statistically significant variation by region in the proportion of participants who reported that they had taken at least one prescribed medicine in the last week. Among both men and women there was slight variation by region in the proportion who reported that they had taken at least three prescribed medicines in the last week. This was lowest in London and the South East (see Figure 5C). Table 5.2, Figure 5C

# 5.3.3 Number of prescribed medicines, by income

Among both men and women, the proportion who reported that they had taken at least one prescribed medicine in the last week increased with decreasing equivalised household income, as shown in Figure 5D. The proportion of participants who reported that they had taken at least three prescribed medicines in the last week also increased with decreasing income. Table 5.3, Figure 5D





# 5.3.4 Number of prescribed medicines, by Index of Multiple Deprivation

The proportion of men and women who reported that they had taken at least one prescribed medicine in the last week increased with increasing area deprivation, measured by Index of Multiple Deprivation (IMD). There was a similar pattern for the proportion who reported that they had taken at least three prescribed medicines in the last week, as shown in Figure 5E.

#### Table 5.4, Figure 5E

# 5.3.5 Number of prescribed medicines, by longstanding illness

Participants were asked whether they had a longstanding illness and if so, whether this limited their day to day activities. Overall, 22% of men and 25% of women reported a limiting longstanding illness, and 16% and 15% respectively reported a non-limiting longstanding illness, while 62% and 59% respectively had none.

As Figure 5F shows, the majority of people with a longstanding illness had taken at least one prescribed medicine in the last week. The proportion who reported that they had taken at least three prescribed medicines in the last week was highest for those who reported a limiting longstanding illness, while those with a non-limiting longstanding illness were more likely to report taking one or two medicines. The majority of people who did not have a longstanding illness had not taken any prescribed medicines in the last week. The majority of people who did not have a longstanding illness had not taken any prescribed medicines in the last week.





# 5.3.6 Number of prescribed medicines, by need for and receipt of social care

Participants aged 65 and over were asked about their ability to do a range of activities of daily living (ADLs) such as getting up and down stairs, having a bath or a shower, and dressing or undressing. Those not needing help could do all activities without difficulty. Those needing help (those who said they could do an activity but with difficulty, those who could do it only with help, and those who were unable to do it) were divided into two groups: those with met need, who did receive help in the last month for any of the relevant activities, and those with unmet need, who did not receive help for all their needs. Overall, 23% of men and 33% of women aged 65 and over needed help with at least one activity, and 19% and 29% had at least some unmet need for help (see Chapter 2 for more detail on social care).

Almost all participants aged 65 and over who reported needing help with ADLs reported that they had taken at least one prescribed medicine in the last week: levels were similar among those with met and unmet need (see Figure 5G). These participants were also most

Copyright © 2014, The Health and Social Care Information Centre. All rights reserved

likely to report that they had taken multiple prescribed medicines in the last week: most had taken at least three, and substantial proportions had taken at least six.

There is a striking difference between those aged 65 and over needing help – whether with met or unmet need – and those not needing such help. Over 80% of those aged 65 and over had used at least one prescribed medicine, but multiple use was markedly lower among those who did not need help with ADLs. Table 5.6, Figure 5G



# 5.3.7 Number of prescribed medicines, by body mass index

Figure 5H shows the number of prescribed medicines taken in different body mass index (BMI) categories. As well as normal and overweight categories, a distinction is made between two categories of obesity: Obesity I is a BMI of 30 to under 35kg/m<sup>2</sup>, while Obesity II+ is a BMI of 35kg/m<sup>2</sup> or more. The proportion of both men and women who reported that they had taken at least one prescribed medicine in the last week increased consistently with increasing BMI category. There was a similar pattern for the proportion who reported that they had taken at least three prescribed medicines in the last week.



# **5.4 Prevalence of having taken at least one medicine within** specific prescribed medicine classes

# 5.4.1 Age and sex

Figure 5I shows prescribed medicine classes men and women reported they were taking. There were different patterns for each sex. Among men, lipid-lowering and antihypertensive medicines were the most frequently reported, followed by proton pump inhibitors, analgesics and anti-platelet medicine. Among women, antihypertensive medicine, lipid-lowering medicine, analgesics and antidepressants were most frequently reported. Men were considerably more likely than women to report taking lipid-lowering and anti-platelet medicine, while women were more likely to report taking analgesics and antidepressants.

Prevalence generally increased with age within each medicine class (Figures 5J and 5K). The increase with age by sex showed some variation by medicine class. For lipid-lowering medicines, the increase in prevalence with age was most sharp for men. For anti-hypertensive medicines, this increase was steeper for women.

The results above for lipid-lowering medicines refer only to those that were prescribed. A small number of participants (fewer than 1%) reported that they had taken statins bought over the counter (OTC) from a community pharmacy, without prescription. Of these, most had taken over the counter statins in the last week, and most reported that they had also taken at least one prescribed lipid-lowering medicine in the last week. Very few reported that they had taken only statins bought over the counter. Table 5.8, Figures 5I, 5J and 5K



### 5.4.2 Equivalised household income

Figures 5L and 5M show the proportion of participants taking at least one medicine from specific cardiovascular disease (CVD)-related (5L) or other (5M) classes of medicines, by equivalised household income quintile. Prevalence increased with decreasing income for each medicine class, apart from antibacterials, for which there was no variation.

However, the increase in prevalence with decreasing income showed some variation by medicine class between men and women. For antidepressants, the increase in prevalence with decreasing income was more pronounced among women, with more than twice as many women taking these in the lowest quintile compared with the highest two. For analgesics, where prevalence was higher among women than men the gap between the sexes narrowed in the lower income groups. Table 5.9, Figures 5L and 5M





Figure 5L

45-54

55-64

65-74

Age group

75-84

85+



Copyright © 2014, The Health and Social Care Information Centre. All rights reserved

Percent

30

20

10

0

16-44

### Figure 5M

# Prevalence of taking at least one prescribed medicine within other specific medicine classes in the last week, by income and sex (age standardised)

Proton pump inhibitors
 Analgesics & NSAIDs
 Antidepressants
 Medicine for asthma or COPD





# 5.4.3 Longstanding illness

Within each medicine class, prevalence of taking prescribed medicines was lowest for participants who reported no longstanding illness. As Figure 5N shows, the prevalence of having taken analgesics, proton pump inhibitors and antidepressants was higher among participants with a limiting longstanding illness than among those whose longstanding illness was non-limiting. Table 5.10, Figure 5N





# 5.4.4 Body mass index

Within each medicine class, prevalence of taking at least one prescribed medicine increased sharply with increasing BMI, as shown in Figure 50. Table 5.11, Figure 50

# 5.5 Discussion

# 5.5.1 Use of any prescribed medicines in the last week

This is the first study of nationally-representative samples of people living in the community to report on the use of prescribed medicines. Unlike data drawn from NHS patient and prescribing records, these data reflect prevalence of use of prescribed medicines among all in the general population, not just those within the healthcare system. The results presented in this chapter are based on self-report of what participants have actually taken, rather than data on what has been prescribed or dispensed, as recorded in Prescribing Analysis and Cost (PACT)<sup>17</sup> data.

HSE data show more detailed patterns of use of prescribed medicines by age than are routinely available. Over 60% of medicines prescribed and dispensed in the community are for patients aged 60 and over. This is derived from data on exemptions for payment of prescription fee.<sup>5</sup> The Prescribing and Primary Care Services team in the Health and Social Care Information Centre (HSCIC) have developed patient denominators to allow more meaningful comparisons of prescribing data over time and across organisations, by taking patient demographic factors into account. These are weightings based on prescribing practice in primary care in England, for total prescribing (known as ASTRO-PUs) and for specific therapeutic areas (known as STAR-PUs).<sup>18</sup> The ASTRO-PUs show an increase in the use of prescribed medicines with age, with women using more medicines than men, particularly in those aged from 15-24 to 55-64.

Using HSE to monitor use of prescribed medicines enables analyses not only by demographic factors but also by socio-economic and health-related factors, including objective measures of obesity.

The use of prescribed medicines increased as household income fell and as area-based deprivation increased. Participants with limiting or non-limiting longstanding illnesses were more than twice as likely to have taken prescribed medicines in the last week as those without a longstanding illness; those reporting a limiting longstanding illness took more medicines than those whose illness was non-limiting. Similarly, almost all participants who

Copyright © 2014, The Health and Social Care Information Centre. All rights reserved

needed help with activities of daily living were taking at least one prescribed medicine – and most of them were taking at least three.

Analyses were based on prescribed medicine taken in the last week, and therefore did not include medicines that the participant had chosen not to take, or those prescribed in the past but no longer recommended for that patient. Additional questions about the intended frequency and last date of administration of long-acting medicines (implants, injections, etc) were introduced in the 2014 survey to provide fuller and more consistent coverage of these.<sup>19</sup> Future analyses can include such information.

# 5.5.2 Use of specific classes of medicines

With the exception of statins, the use of over-the-counter medicines - such as analgesics and low dose aspirin - was excluded from the survey questions. This chapter does not therefore provide an estimate of the proportion of people using analgesics and other medicines which are available over the counter as well as on prescription. It should be noted that the total proportion of people using analgesics, for example, will be higher than the prescribed medicine figures reported here.

The data from the Quality and Outcomes Framework (QOF) includes prevalence rates for a range of common long term conditions.<sup>20</sup> These are calculated from the numbers of people on general practice registers with a record of the diagnosis of a particular condition, and the total numbers of people on those registers. The data are published annually, and regularly used alongside prescribing data to support investigation of variation in use of medicines.

There are a number of indicators in the QOF which relate to patients with specific conditions receiving certain medicines to manage the condition.<sup>21</sup> National achievement data are published annually for such indicators, including their achievement scores.<sup>20</sup> The QOF indicators show for each group of patients covered by each indicator, the percentage who received the intervention. The data reflect only those patients included in the indicator; indicators should not be summed to create, for example, a total for patients receiving anti-hypertensives. This is because patients with co-morbidities may be counted in multiple indicators.

The rest of this section looks at each of the different classes of medicines and makes comparisons with data from other sources.

The HSE data showed that prescribed *lipid-lowering drugs* were used by more men than women; use increased with age but peaked in those aged 75-84. The increase with age was much steeper than the differences by income. The use of lipid lowering medicines is recommended by NICE for patients with a range of cardiovascular conditions. The prescribing measure 'STAR-PU for lipid regulating medicines' also shows similar patterns: very little use in patients aged under 35, increasing use with age, and greater use by men than by women. There were only small numbers of participants who took over-the-counter statins but did not report taking a statin prescribed by a doctor, so omitting these individuals made minimal difference to the results presented in Section 5.4.

**Antiplatelet medicines** were used more often by men than women, as with all cardiovascular medicines other than those for hypertension, but prevalence of use continued to increase into the ninth decade. This probably reflects not only the increasing incidence and prevalence of stroke, transient ischaemic attacks and coronary heart disease with age but also the short term benefits and cost-effectiveness of antiplatelet medicines compared with lipid-lowering medicines that have tended to be restricted to younger patients. QOF data show that use of anti-platelet drugs is high for the management of coronary heart disease (CHD), peripheral arterial disease (PAD) and non-haemorrhagic stroke patients. Over 90% of patients with these conditions (as defined by the QOF) received some form of anti-platelet medicine.<sup>20</sup> The prescribing measure 'STAR-PU for antiplatelet medicines' again shows similar patterns to HSE, with very little use in patients aged under 45, increasing use with age, and greater use by men than by women.<sup>18</sup>

**Antihypertensive medicines** were the second most frequently taken prescribed medicines in men and the most frequently used in women, particularly among women aged 75 and over. The gradient of increasing use with decreasing income quintile was less marked than for lipid-lowering medicines but the rise with increasing BMI was more marked. QOF data demonstrated that in most cases, over 85% of relevant patients received antihypertensive medication.<sup>20</sup> The QOF prevalence rate (percentage of all patients with a recorded diagnosis) for hypertension is 13.7%. This is similar to the HSE reported rates of use of antihypertensive medicines of 14% in men and 15% in women.

*Non-steroidal anti-inflammatory medicines (NSAIDs*, e.g. ibuprofen) were combined with analgesics for the analyses in this chapter as many people take NSAIDs or analgesics such as aspirin, paracetamol and codeine interchangeably for pain relief. Use of these prescribed medicines was particularly marked among participants reporting limiting longstanding illness. Osteoarthritis is the most common long-term disease in the older population.<sup>22</sup> As this condition causes pain and restrictions of mobility but is seldom life-threatening, it is to be expected that use of analgesics and/or NSAIDs would be highest among those with limiting longstanding illness. The prescribing measure 'STAR-PU for analgesics' (which excludes NSAIDs) shows some use across all age groups, with use increasing markedly with age, and greater use in women than in men.<sup>18</sup>

Overall around one in ten adults had taken *proton pump inhibitors* (PPIs), and use increased with age to more than a quarter of those aged 75 and over. PPIs are used not only to control symptoms of peptic ulcers and dyspepsia but also to mitigate the risk of gastro-intestinal side-effects from other medicines, particularly NSAIDs. People with longstanding illness, particularly limiting illness, took a larger number of prescribed medicines in the last week, including analgesics and/or NSAIDs, so it is therefore not surprising that their use of PPIs is relatively high (around one in six with a limiting longstanding illness use PPIs). The prescribing measure 'STAR-PU for proton pump inhibitors' again corresponds with HSE data, showing very little use in patients aged under 35, and increasing use with age. 'STAR-PU' also shows greater use by women than by men, although that was not found in HSE data.<sup>18</sup>

**Antidepressants** were taken by twice as many women as men. Consumption peaked in those aged 45-64 and varied little in older age groups. Prevalence at younger ages was higher in women. However, variation by income was greatest for antidepressants and was also large by longstanding illness. The prescribing measure 'STAR-PU for antidepressants' shows greater use by women than by men, with the highest rates of use in those aged 45-54.<sup>18</sup> The QOF prevalence rate (percentage of all patients with a recorded diagnosis) for depression is 5.8% for those aged over 18. This varies from the HSE reported rates of use of anti-depressants of 11% in women and 6% in men, in part because antidepressants are also taken for other indications such as neuropathic pain.

Medicine for **asthma or chronic obstructive pulmonary disease (COPD)** was the only class where more people aged 16-24 than in the next age group took these medicines. The figures for these medicines combine use for asthma, particularly common in the younger adults, and for COPD, which is rare before the age of 45. The QOF prevalence rate (percentage of all patients with a recorded diagnosis) for asthma is 6%, and for COPD is 1.7%.<sup>20</sup> We know that patients with COPD are fewer in number than those with asthma, but generally require more medicines than those with asthma. This may be why the rates of use of these medicines reported in HSE is seen across all age groups, with an increase in older age.

There has been much concern recently about the use of *antibacterials*. Prevalence was low in HSE 2012/2013 but most prescriptions are for short courses, so the incidence of using such medicines may be high although the prevalence at any one time is low. This was the only class of medicines examined for which there was no variation in use by age. The prescribing measure 'STAR-PU' for antibacterials also shows similar patterns.

**Obesity** was related both to the number of prescribed medicines taken in the last week and to the use of specific classes of medicines. Obesity is a major risk factor for both diabetes and hypertension, each of which increases cardiovascular risk substantially (see Chapter

10). It has been reported from the USA that although obesity remains associated with higher mortality, the relative risk has been lower in recent than in earlier birth cohorts.<sup>23,24</sup> This is thought to be due to the greater use of lipid-lowering and anti-hypertensive medicines among obese patients. That increased use was confirmed in the HSE data, with marked rises in these two classes of medicines with BMI category. Although the use of medicines for diabetes also increased, the prevalence of taking antidiabetic medicines was lower than for taking lipid-lowering and anti-hypertensive medicines, suggesting the latter two were prescribed more widely and not only for secondary prevention in people with diabetes.

Use in the last week of prescribed medicines for **diabetes** was reported by 6% of men and 4% of women, which compares well with the QOF prevalence rate (percentage of all patients with a recorded diagnosis) of diabetes of 6% for those aged over 17.<sup>20</sup> In HSE 2011, 7% of men and 5% of women reported diagnosed diabetes, with more than 2% of other HSE participants having hyperglycaemia at a level indicating undiagnosed diabetes.<sup>25</sup> Even allowing for a proportion of people with diabetes controlling their blood sugar levels through weight loss and dietary means, the proportion taking prescribed medicine indicates that the prevalence of diagnosed diabetes has not increased sufficiently.

Discussion of the health consequences of obesity generally focus on diabetes and cardiovascular disease; HSE data show that both antidepressants and analgesics are also prescribed and taken more often by obese patients, particularly those with more severe obesity. This reflects the known associations of obesity with worse mental health<sup>26</sup> and with osteoarthritis,<sup>27</sup> with obese patients experiencing more joint pain than their slimmer counterparts.<sup>28</sup>

Medicines from a number of other classes were taken by too few people in this general population survey to examine patterns. Where there are no changes in usage, data can be aggregated over more years to include larger numbers, as questions have been unchanged since HSE 2003. Many additional analyses could be done: the data are already available from HSE 1994-2012 in the UK Data Service archive and the HSE 2013 data will be archived early in 2015.

#### 5.5.3 Conclusions

Using HSE to monitor the use of prescribed medicines enhances the interpretation of the routinely available prescribing data, by providing insights on the influence of socioeconomic and health-related factors. The HSE provides good evidence to support the assumptions made about the impact of a range of such factors, such as the impact of inequalities.

The report also supports and reinforces the patient weightings developed by the HSCIC derived from sample prescribing data. The HSE has collected data on medicines since the earliest surveys, and the continuing accumulation of information from the HSE report on medicines taken will provide further information and allows for trends to be monitored.

#### **References and notes**

- 1 We thank Paul Brown and Oliver Smith, from Prescribing and Primary Care Services department, Health and Social Care Information Centre, for their analyses of PACT and QOF data for this chapter.
- 2 NHS England. *Medicines Optimisation*. NHS England, Leeds, 2014. www.england.nhs.uk/ourwork/pe/mo-dash/
- 3 A prescription item is an individual medicine specified on a prescription; a single prescription may include more than one item.
- 4 The Net Ingredient Cost (NIC) is the cost of the drug before any NHS discounts. It does not include any dispensing costs or fees and also ignores any contribution paid by patients through prescription charges (see www.nhsbsa.nhs.uk/PrescriptionServices/2122.aspx)
- 5 Health and Social Care Information Centre. Prescriptions Dispensed in the Community, England 2003-13. HSCIC, Leeds, 2014. www.hscic.gov.uk/catalogue/PUB14414/pres-disp-com-eng-2003-13-rep.pdf

- 6 Health and Social Care Information Centre. Prescribing for Diabetes England 2005-06 to 2013-14. HSCIC, Leeds, 2014. www.hscic.gov.uk/catalogue/PUB14681/pres-diab-eng-200506-201314-rep.pdf
- 7 The NIC for the 20 British National Formulary (BNF) sections with the largest NIC in 2013 are shown in Table A9 in *Prescriptions Dispensed in the Community* report (see endnote 5).
- 8 Department of Health, Department for Environment, Food & Rural Affairs. *UK 5 Year Antimicrobial Resistance Strategy 2013 to 2018*. DH, London, 2013. www.gov.uk/government/publications/uk-5-year-antimicrobial-resistance-strategy-2013-to-2018
- 9 People on the following benefits are exempt from paying prescription charges: Universal Credit; Income Support; Income-based Jobseeker's Allowance; Income-related Employment and Support Allowance; and Pension Credit Guarantee Credit.
- 10 People with certain medical conditions are exempt from prescription charges if they meet one of the following criteria and hold a medical exemption certificate:
  - Treatment for cancer, including treatment for the effects of cancer, or treatment for the effects of current or previous cancer treatment
  - A permanent fistula requiring dressing
  - Forms of hypoadrenalism such as Addison's disease
  - Diabetes insipidus and other forms of hypopituitarism
  - Diabetes mellitus, except where treatment is by diet alone
  - Hypoparathyroidism (underactive parathyroid)
  - Myxoedema (underactive thyroid) where thyroid hormone replacement is necessary
  - Myasthenia gravis (a long term condition that causes certain muscles to become weak)
  - Epilepsy requiring continuous anticonvulsive medicine
  - A continuing physical disability which means that the patient cannot go out without help from another person.
- 11 National Institute for Health and Clinical Excellence (NICE). *Published clinical guidance*. www.nice.org.uk/guidance/published?type=CG
- 12 QALYs (quality adjusted life years) are the units used by NICE in economic appraisal. It takes into account both the duration and the quality of future expected life. It is obtained by multiplying life expectancy by quality of life, a number that is generally between zero (equivalent to being dead) and one (perfect health). In theory, values below zero are also possible for the quality of life measure (see: Bandolier. QALY.

www.medicine.ox.ac.uk/bandolier/booth/glossary/QALY.html).

- 13 An earlier study had proposed increasing the threshold (see Devlin N, Parkin D. Does NICE have a cost effectiveness threshold and what other factors influence its decisions? A discrete choice analysis. Department of Economics Discussion Paper Series No. 03/01. London, City University, 2003. https://www.city.ac.uk/\_\_data/assets/pdf\_file/0015/90501/0301\_devlin-parkin.pdf). More recently, another study has provided evidence for reducing this threshold to around £13,000 per QALY, because of the opportunity costs to the NHS of spending money on more expensive treatments for fewer people (see Claxton K, Martin S, Soares M, et al. Methods for the estimation of the NICE cost effectiveness threshold. CHE Research Paper 81. Revised report following referees' comments. York, Centre for Health Economics, University of York, 2013) although the assumptions underlying that paper have been challenged (see Barnsley P, Towse A, Schaffer SK et al. Critique of CHE Research Paper 81: Methods for the Estimation of the NICE Cost Effectiveness Threshold. Occasional Paper 13/01. London, Office of Health Economics, 2013).
- 14 British National Formulary. www.bnf.org
- 15 For long-acting medicine, additional questions have been introduced in 2014 asking first what the intended interval was between doses and secondly, how long it had been since the most recent dose. This information was not available in HSE 2013 or earlier years, so is not included in this report.
- 16 For the purposes of this chapter, smoking cessation products are approved/licensed medicines (whether providing nicotine or acting in another way) to help people stop smoking cigarettes or using other forms of tobacco. Chapter 8 on adult smoking refers to a broader class of nicotine delivery products including e-cigarettes and nicotine replacement products such as patches and chewing gum (regardless of whether prescribed or not).
- 17 Prescribing analysis and cost data (PACT) record the cost of volume of prescriptions issued by general practitioners. This has now been replaced by electronic Prescribing & Financial Information for Practices (ePFIP). See www.ppa.org.uk/systems/pop/par.htm
- 18 Health and Social Care Information Centre. Patient Denominators in Prescribing measures, indicators and comparators. www.hscic.gov.uk/prescribing/measures
- 19 With a long-acting medicine a participant may not always be clear whether they should include it as something taken within the last week, for instance if their injection was a couple of months earlier.
- 20 Health and Social Care Information Centre. Quality and Outcomes Framework: Achievement, Prevalence and Exceptions data, 2012/13. www.hscic.gov.uk/catalogue/PUB12262

- 21 Examples of such indicators include CHD10, the percentage of patients with coronary heart disease who are currently treated with a beta blocker (76% in 2012/13) and STROKE12, the percentage of patients with a stroke shown to be non-haemorrhagic, or a history of TIA (transient ischaemic attack), who have a record that an anti-platelet agent (aspirin, clopidogrel, dipyridamole or a combination), or an anti-coagulant is being taken (94% in 2012/13).
- 22 Falaschetti E, Hirani V, Mindell J. Chronic diseases and quality of care. Chapter 3 in Craig R, Mindell J (eds). Health Survey for England 2005. Volume 2. Chronic diseases. The health of older people. Health and Social Care Information Centre, London, 2007.
- 23 Flegal KM, Graubard BI, Williamson DF et al. *Excess deaths associated with underweight, overweight, and obesity*. JAMA. 2005;**293**:1861-1867.
- 24 Flegal KM, Graubard BI, Williamson DF et al. *Cause-specific excess deaths associated with underweight, overweight, and obesity.* JAMA. 2007;**298**:2028-2037.
- 25 Moody A. Diabetes and hyperglycaemia. Chapter 4 in Craig R, Mindell J (eds). Health Survey for England 2011. Volume 1. Health, social care and lifestyles. Health and Social Care Information Centre, Leeds, 2012.

www.hscic.gov.uk/catalogue/PUB09300/HSE2011-Ch4-Diabetes.pdf

- 26 Moody A. Adult anthropometric measures. Chapter 10 in Craig R, Mindell J (eds). Health Survey for England 2012. Volume 1. Health, social care and lifestyles. Health and Social Care Information Centre, Leeds, 2013. www.hscic.gov.uk/catalogue/PUB13218
- 27 Cooper C, Inskip H, Croft P et al. *Individual risk factors for hip osteoarthritis: obesity, hip injury and physical activity.* Am J Epidemiol. 1998;**147**:516-522.
- 28 Weiss E. Knee osteoarthritis, body mass index and pain: data from the Osteoarthritis Initiative. Rheumatology. 2014;**53**:2095-2099.

- 5.1 Number of prescribed medicines taken in the last week, by age and sex
- 5.2 Number of prescribed medicines taken in the last week (age-standardised), by region and sex
- 5.3 Number of prescribed medicines taken in the last week (age-standardised), by equivalised household income and sex
- 5.4 Number of prescribed medicines taken in the last week (age-standardised), by Index of Multiple Deprivation (IMD) and sex
- 5.5 Number of prescribed medicines taken in the last week (age-standardised), by self-reported longstanding illness and sex
- 5.6 Number of prescribed medicines taken in the last week (age-standardised), by need for and receipt of social care within the last month and sex
- 5.7 Number of prescribed medicines taken in the last week (age-standardised), by body mass index (BMI) category and sex
- 5.8 Prevalence of taking at least one medicine within specific prescribed medicine classes in the last week, by age and sex
- 5.9 Prevalence of taking at least one medicine within specific prescribed medicine classes in the last week (age-standardised), by equivalised household income and sex
- 5.10 Prevalence of taking at least one medicine within specific prescribed medicine classes in the last week (age-standardised), by selfreported longstanding illness and sex
- 5.11 Prevalence of taking at least one medicine within specific prescribed medicine classes in the last week (age-standardised), by body mass index (BMI) category and sex

## Notes on the tables

- 1. The group on which the figures in the table are based is stated at the upper left corner of the table.
- 2. The data in most tables have been weighted. See Volume 2, Chapter 7 of this report for more detail. Both unweighted and weighted sample sizes are shown at the foot of each table.
- 3. Apart from tables showing age breakdowns, data have been age-standardised to allow comparisons between groups after adjusting for the effects of any differences in their age distributions. See Volume 2, Chapter 8.4 of this report for more detail.
- 4. The following conventions have been used in tables:- no observations (zero value)
  - 0 non-zero values of less than 0.5% and thus rounded to zero [] used to warn of small sample bases, if the unweighted base is less than 50. If a group's unweighted base is less than 30, data are normally not shown for that group.
- 5. Because of rounding, row or column percentages may not add exactly to 100%.
- 6. 'Missing values' occur for several reasons, including refusal or inability to answer a particular question; refusal to co-operate in an entire section of the survey (such as the nurse visit or a self-completion questionnaire); and cases where the question is not applicable to the participant. In general, missing values have been omitted from all tables and analyses.

# Number of prescribed medicines taken in the last week, by age and sex

Aged 16 and over with a nurse visit2012-2013									
Number of prescribed	Age gr	oup							Total
medicines taken <sup>a</sup>	16-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	
	%	%	%	%	%	%	%	%	%
Men									
None	86	83	70	57	38	19	9	12	57
1	7	10	13	15	16	12	7	7	12
2	6	4	7	11	13	13	11	7	9
3	1	1	4	5	8	13	11	8	5
4	1	0	3	4	7	12	12	12	5
5	-	1	1	2	5	9	14	11	3
6	-	0	1	2	3	7	10	7	2
7	-	0	0	2	3	5	7	12	2
8 or more	-	0	1	3	6	11	19	23	4
At least one	14	17	30	43	62	81	91	88	43
At least three	1	2	10	18	32	57	73	73	22
Women									
None	74	74	65	50	33	18	8	4	50
1	17	16	17	20	20	14	9	6	17
2	7	6	8	12	13	16	11	10	10
3	2	2	3	5	10	11	12	16	6
4	0	1	2	4	6	9	13	12	4
5	0	1	1	3	4	8	11	16	3
6	0	0	1	1	3	8	8	6	3
7	-	-	1	1	3	5	8	11	2
8 or more	0	0	1	3	8	12	21	19	5
At least one	26	26	35	50	67	82	92	96	50
At least three	3	4	9	18	34	52	72	80	24
Bases (unweighted)									
Men	410	596	763	910	902	928	480	108	5097
Women	580	915	1064	1217	1062	980	550	174	6542
Bases (weighted)									
Men	817	954	1000	1005	826	616	364	79	5661
Women	836	987	1012	1019	849	666	461	147	5978

<sup>a</sup> Prescribed medicines exclude smoking cessation products and contraceptives.

# Number of prescribed medicines taken in the last week (age-standardised), by region and sex

Aged 16 and over with a n	urse visit							20	12-2013
Number of prescribed	Region								
medicines taken <sup>a</sup>	North East	North West	Yorkshire & the Humber	East Midlands	West Midlands	East of England	London	South East	South West
	%	%	%	%	%	%	%	%	%
Men									
None	54	55	56	57	55	58	59	61	60
1	10	14	11	13	12	11	12	11	12
2	9	9	11	9	9	10	8	8	7
3	5	5	6	5	5	5	5	5	6
4	6	5	3	3	5	4	4	6	4
5	3	3	4	3	3	4	3	3	4
6	4	3	3	3	3	3	2	2	2
7	1	3	2	2	3	2	2	2	2
8 or more	7	4	4	4	5	4	5	3	4
At least one	46	45	44	43	45	42	41	39	40
At least three	27	23	22	22	24	21	20	20	22
Women									
None	49	47	48	50	50	46	52	51	50
1	16	17	17	17	15	19	16	16	16
2	10	8	11	9	9	10	10	12	11
3	6	7	6	6	7	7	6	6	5
4	5	5	4	5	5	5	4	3	4
5	3	4	4	3	3	3	4	3	4
6	3	3	1	3	3	2	2	2	3
7	2	3	3	2	2	2	1	2	2
8 or more	6	7	6	6	5	5	5	5	4
At least one	51	53	52	50	50	54	48	49	50
At least three	25	28	24	24	26	25	22	21	23
Bases (unweighted)									
Men	475	704	466	481	528	546	549	797	551
Women	599	873	605	600	660	675	761	1065	704
Bases (weighted)									
Men	291	774	551	503	601	628	832	894	587
Women	298	782	604	512	622	643	907	994	617

<sup>a</sup> Prescribed medicines exclude smoking cessation products and contraceptives.

# Number of prescribed medicines taken in the last week (age-standardised), by equivalised household income and sex

Aged 16 and over with a nurse visit2012-2013								
Number of	Equivalise	ed housel	hold inco	me quin	tile			
prescribed medicines taken <sup>a</sup>	Highest	2nd	3rd	4th	Lowest			
	%	%	%	%	%			
Men								
None	61	60	59	56	47			
1	14	11	12	10	13			
2	7	9	8	9	10			
3	5	5	5	6	6			
4	4	5	6	4	5			
5	3	4	3	5	3			
6	2	2	3	3	4			
7	2	1	2	2	4			
8 or more	2	4	3	6	8			
At least one	39	40	41	44	53			
At least three	17	19	21	25	30			
Women								
None	57	54	49	45	42			
1	16	16	17	18	17			
2	10	9	11	10	9			
3	5	5	6	6	7			
4	3	5	4	5	5			
5	2	4	3	4	4			
6	2	3	2	2	4			
7	1	1	2	2	3			
8 or more	4	4	5	7	8			
At least one	43	46	51	55	58			
At least three	17	21	23	27	31			
Bases (unweighted)								
Men	904	1011	867	785	719			
Women	1040	1129	1094	1092	1055			
Bases (weighted)								
Men	1020	1102	909	801	858			
Women	951	1018	969	947	978			

<sup>a</sup> Prescribed medicines exclude smoking cessation products and contraceptives.

# Number of prescribed medicines taken in the last week (age-standardised), by Index of Multiple Deprivation (IMD)<sup>a</sup> and sex

Aged 16 and over with a nurse visit 2012-2013							
Number of	IMD quintil	е					
prescribed medicines taken <sup>b</sup>	Least deprived	2nd	3rd	4th d	Most eprived		
	%	%	%	%	%		
Men							
None	61	60	57	57	51		
1	13	12	12	11	12		
2	8	9	10	8	9		
3	4	5	4	6	6		
4	4	4	5	5	5		
5	4	3	3	4	3		
6	2	2	3	3	5		
7	1	1	2	2	3		
8 or more	3	3	5	5	7		
At least one	39	40	43	43	49		
At least three	18	19	21	24	29		
Women							
None	55	52	49	50	41		
1	16	17	16	16	15		
2	11	11	10	8	10		
3	5	6	6	6	7		
4	4	4	4	5	5		
5	3	3	4	4	4		
6	2	2	3	3	4		
7	1	1	2	3	3		
8 or more	4	3	6	6	10		
At least one	45	48	51	50	59		
At least three	19	21	25	26	33		
Bases (unweighted)							
Men	1111	1141	1063	921	861		
Women	1390	1417	1357	1232	1146		
Bases (weighted)							
Men	1135	1229	1189	1069	1038		
Women	1217	1266	1252	1163	1081		

<sup>a</sup> The Index of Multiple Deprivation 2010 combines a number of indicators, chosen to cover a range of economic, social and housing issues, into a single deprivation score at the small area level in England.

<sup>b</sup> Prescribed medicines exclude smoking cessation products and contraceptives.

# Table 5.5

# Number of prescribed medicines taken in the last week (age-standardised), by self-reported longstanding illness and sex

Aged 16 and over with a nurse visit 2012-2013						
Number of	Longstanding	illness <sup>b</sup>				
prescribed medicines taken <sup>a</sup>	No longstanding illness	Non-limiting longstanding illness	Limiting longstanding illness			
	%	%	%			
Men						
None	74	31	31			
1	10	20	16			
2	6	19	12			
3	3	9	8			
4	2	7	8			
5	2	6	4			
6	1	3	5			
7	1	2	5			
8 or more	1	3	10			
At least one	26	69	69			
At least three	10	30	40			
Women						
None	66	25	22			
1	15	27	21			
2	8	20	13			
3	4	10	9			
4	3	7	6			
5	2	4	6			
6	1	3	5			
7	0	1	5			
8 or more	1	3	13			
At least one	34	75	78			
At least three	10	28	45			
Bases (unweighte	ed)					
Men	2818	1015	1261			
Women	3597	1180	1760			
Bases (weighted)	)					
Men	3478	982	1198			
Women	3469	995	1511			

<sup>a</sup> Prescribed medicines exclude smoking cessation products and contraceptives.

<sup>b</sup> Longstanding illness is any physical or mental health condition or illness lasting or expected to last 12 months or more. A limiting longstanding illness is one that reduces a person's ability to carry out day-to-day activities.

Number of prescribed medicines taken in the last week (agestandardised), by need for and receipt of social care within the last month and sex

Aged 65 and over with a

nurse visit <sup>a</sup>	20	12-2013	
Number of prescribed	Need for social of	or and re care <sup>c</sup>	ceipt of
medicines taken <sup>b</sup>	No need	Met need	Unmet need
	%	%	%
Men	Need for and receipt of social care <sup>c</sup> No      Met need      Unmet need        %      %      %        18      4      5        12      4      3        13      8      6        13      10      8        12      15      13        11      16      12        7      10      10        5      5      8        9      30      33        82      96      95        58      85      85        16      5      8        12      7      10        9      90      32        7      6      11        4      14      10        8      50      30		
None	18	4	5
1	12	4	3
2	13	8	6
3	13	10	8
4	12	15	13
5	11	16	12
6	7	10	10
7	5	5	8
8 or more	9	30	33
At least one	82	96	95
At least three	58	85	85
Women			
None	16	2	7
1	14	-	5
2	16	5	8
3	14	8	8
4	12	7	10
5	9	9	12
6	7	6	11
7	4	14	10
8 or more	8	50	30
At least one	84	98	93

Bases (unweighted)			
Men	1163	55	298
Women	1176	61	464
Bases (weighted)			
Men	1111	56	295
Women	1184	68	503

54

94

80

At least three

<sup>a</sup> Limited to people aged 65 and over as questions about need for and receipt of social care were not asked of younger people.

<sup>b</sup> Prescribed medicines exclude smoking cessation products and contraceptives.

See Chapter 2 for details of social care questions. Participants aged 65 and over were asked about their ability to do a range of activities of daily living (ADLs) and instrumental activities of daily living (IADLs). This table shows information on ADLs only. Those not needing help could do all activities without difficulty. Those needing help were defined as those who said they could do an activity but with difficulty, those who could do it only with help, and those who were unable to do it. Unmet need was defined as those needing help but

not receiving help in the last month for the relevant activity/activities.

# Table 5.7

Number of prescribed medicines taken in the last week (age-standardised), by body mass index (BMI) category and sex

2012-2013

Aged 16 and over with a nurse visit and valid height and weight measurements

Number of	BMI category <sup>b,c</sup>								
prescribed medicines taken <sup>a</sup>	Normal	Overweight	Obesity I	Obesity II+					
	%	%	%	%					
Men									
None	64	59	53	47					
1	12	12	12	10					
2	9	8	9	10					
3	4	6	5	5					
4	2	5	5	7					
5	3	4	3	4					
6	1	2	4	5					
7	2	1	2	4					
8 or more	3	3	5	8					
At least one	36	41	47	53					
At least three	15	21	25	33					
Women									
None	56	50	43	37					
1	17	17	17	14					
2	9	10	11	12					
3	6	7	8	7					
4	4	4	5	6					
5	3	3	4	4					
6	1	2	3	6					
7	1	2	2	4					
8 or more	3	4	5	10					
At least one	44	50	57	63					
At least three	17	22	28	37					
Bases (unweighted)									
Men	1282	2059	932	348					
Women	2242	1937	929	572					
Bases (weighted)									
Men	1646	2162	964	365					
Women	2145	1719	810	488					

<sup>a</sup> Prescribed medicines exclude smoking cessation products and contraceptives.

<sup>b</sup> Normal 18.5 to less than 25kg/m<sup>2</sup>

Overweight 25 to less than 30kg/m<sup>2</sup> Obesity I 30 to less than 35kg/m<sup>2</sup> Obesity II+ 35kg/m<sup>2</sup> or more.

<sup>c</sup> This table excludes participants who were underweight (less than 18.5kg/m<sup>2</sup>) because the bases are too small for robust analysis.

# Prevalence of taking at least one medicine within specific prescribed medicine classes in the last week, by age and sex

Aged 16 and over with a nu	ırse visit							201	2-2013
	Age gr	oup							Total
Prescribed medicine	16-24	25-34	35-44	45-54	55-64	65-74	75-84	85+	
classes	%	%	%	%	%	%	%	%	%
Men									
Lipid-lowering medicines	-	0	3	11	28	48	53	47	16
Anti-hypertensive medicine	es <sup>a</sup> -	1	4	12	24	40	42	39	14
Proton pump inhibitors	0	2	4	9	13	19	28	34	9
Analgesics and/or NSAIDs	<sup>b</sup> 0	3	5	9	12	17	21	21	8
Antiplatelet medicines	-	1	2	4	12	25	35	37	8
Medicine for asthma or CO	PD <sup>c</sup> 6	2	5	7	8	9	10	7	6
Antidepressants	1	4	7	8	6	6	7	4	6
Antidiabetic medicine	1	1	2	5	9	14	15	9	6
Antibacterials	2	2	1	1	2	2	3	1	2
Women									
Lipid-lowering medicines	-	0	2	6	17	33	45	35	12
Anti-hypertensive medicine	es <sup>a</sup> -	0	3	10	22	38	52	53	15
Proton pump inhibitors	0	1	5	8	16	21	29	28	10
Analgesics and/or NSAIDs	<sup>b</sup> 3	3	8	11	17	22	31	31	12
Antiplatelet medicines	-	0	0	2	6	15	27	33	6
Medicine for asthma or CO	PD <sup>c</sup> 7	5	7	7	11	13	11	9	8
Antidepressants	5	7	11	16	16	14	11	14	11
Antidiabetic medicine	1	1	2	4	7	8	10	9	4
Antibacterials	4	2	1	2	3	3	3	4	2
Bases (unweighted)									
Men	410	596	763	910	902	928	480	108	5097
Women	580	915	1064	1217	1062	980	550	174	6542
Bases (weighted)									
Men	817	954	1000	1005	826	616	364	79	5661
Women	836	987	1012	1019	849	666	461	147	5978

<sup>a</sup> Medicines are included in this category only if they were specifically prescribed for hypertension.

<sup>b</sup> NSAIDs: Non-steroidal anti-inflammatory drugs.

<sup>c</sup> COPD: Chronic obstructive pulmonary disease.

Prevalence of taking at least one medicine within specific prescribed medicine classes in the last week (age-standardised), by equivalised household income and sex

Aged 16 and over with a nurse visit 2012-2013							
Prescribed	Equivalis	ed house	ehold inc	ome qu	intile		
medicine classes	Highest	2nd	3rd	4th	Lowest		
	%	%	%	%	%		
Men							
Lipid-lowering medicines	14	14	16	16	21		
Anti-hypertensive medici	nes <sup>a</sup> 12	13	14	14	17		
Proton pump inhibitors	7	9	8	10	12		
Analgesics and/or NSAID	s <sup>b</sup> 4	6	6	12	16		
Antiplatelet medicines	7	8	8	9	11		
Medicine for asthma or C	OPD <sup>c</sup> 5	6	6	6	10		
Antidepressants	4	4	4	8	11		
Antidiabetic medicine	4	4	5	7	6		
Antibacterials	2	2	1	2	3		
Women							
Lipid-lowering medicines	10	11	10	14	15		
Anti-hypertensive medicing	nes <sup>a</sup> 13	15	15	16	17		
Proton pump inhibitors	6	9	11	11	12		
Analgesics and/or NSAID	s <sup>b</sup> 8	9	12	13	17		
Antiplatelet medicines	4	5	6	7	7		
Medicine for asthma or C	OPD <sup>c</sup> 6	7	8	10	11		
Antidepressants	7	7	14	13	17		
Antidiabetic medicine	2	3	3	6	6		
Antibacterials	2	3	3	2	2		
Bases (unweighted)							
Men	904	1011	867	785	719		
Women	1040	1129	1094	1092	1055		
Bases (weighted)							
Men	1020	1102	909	801	858		
Women	951	1018	969	947	978		

<sup>a</sup> Medicines are included in this category only if they were specifically prescribed for hypertension.

<sup>b</sup> NSAIDs: Non-steroidal anti-inflammatory drugs.

<sup>c</sup> COPD: Chronic obstructive pulmonary disease.

Prevalence of taking at least one medicine within specific prescribed medicine classes in the last week (age-standardised), by self-reported longstanding illness and sex

Aged 16 and over with	th a nurse visit		2012-2013			
Prescribed	Longstanding illness <sup>a</sup>					
medicine classes	No longstanding illness	Non-limiting longstanding illness	Limiting longstanding illness			
Men	%	%	%			
Cardiovascular medi	cines <sup>b</sup> 11	29	28			
Proton pump inhibito	ors 5	10	16			
Analgesics and/or NSAIDs <sup>c</sup>		6	21			
Antidepressants		6	16			
Medicine for asthma	or COPD <sup>d</sup> 2	13	13			
Women						
Cardiovascular medi	cines <sup>b</sup> 12	25	26			
Proton pump inhibito	ors 5	9	18			
Analgesics and/or N	SAIDs <sup>c</sup> 4	7	29			
Antidepressants	5	13	28			
Medicine for asthma	or COPD <sup>d</sup> 3	15	17			
Bases (unweighted)						
Men	2818	1015	1261			
Women	3597	1180	1760			
Bases (weighted)						
Men	3478	982	1198			
Women	3469	995	1511			

<sup>a</sup> Longstanding illness is any physical or mental health condition or illness lasting or expected to last 12 months or more. A limiting longstanding illness is one that reduces a person's ability to carry out day-to-day activities.

<sup>b</sup> Cardiovascular medicines include positive inotropic drugs, diuretics, anti-arrhythmic drugs, beta-blockers, medicines affecting the renin-angiotensin system, nitrates, calcium blockers, and other antihypertensive medicines. Hypertensive medicines are included whether or not they were specifically prescribed for hypertension. See Table 5A in the chapter text.

<sup>c</sup> NSAIDs: Non-steroidal anti-inflammatory drugs.

<sup>d</sup> COPD: Chronic obstructive pulmonary disease.

Prevalence of taking at least one medicine within specific prescribed medicine classes in the last week (age-standardised), by body mass index (BMI) category and sex

#### Aged 16 and over with a nurse visit and valid height and weight measurements

2012-2013

Prescribed	BMI category <sup>a,b</sup>				
medicine classes	Normal	Overweight	Obesity I	Obesity II+	
	%	%	%	%	
Men					
Lipid-lowering medicines	10	16	19	21	
Anti-hypertensive medicin	es <sup>c</sup> 7	14	19	22	
Analgesics and/or NSAIDs	s <sup>d</sup> 5	8	10	13	
Antidepressants	4	4	6	12	
Antidiabetic medicine	3	4	8	13	
Women					
Lipid-lowering medicines	7	11	17	19	
Anti-hypertensive medicin	es <sup>c</sup> 10	14	19	24	
Analgesics and/or NSAIDs	s <sup>d</sup> 8	11	13	22	
Antidepressants	9	11	14	17	
Antidiabetic medicine	1	3	7	10	
Bases (unweighted)					
Men	1282	2059	932	348	
Women	2242	1937	929	572	
Bases (weighted)					
Men	1646	2162	964	365	
Women	2145	1719	810	488	

<sup>a</sup> Normal 18.5 to less than 25kg/m<sup>2</sup> Overweight 25 to less than 30kg/m<sup>2</sup> Obesity I 30 to less than 35kg/m<sup>2</sup> Obesity II+ 35kg/m<sup>2</sup> or more.

<sup>b</sup> This table excludes participants who were underweight (less than 18.5kg/m<sup>2</sup>) because bases are too small for robust analysis.

 $^{\rm C}$  Medicines are included in this category only if they were specifically prescribed for hypertension.

<sup>d</sup> NSAIDs: Non-steroidal anti-inflammatory drugs.