Practice Team Information (PTI)
Annual Update (2009/10)
22 February 2011
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About ISD
Scotland has some of the best health service data in the world combining high quality, consistency, national coverage and the ability to link data to allow patient based analysis and follow up.

Information Services Division (ISD) is a business operating unit of NHS National Services Scotland and has been in existence for over 40 years. We are an essential support service to NHSScotland and the Scottish Government and others, responsive to the needs of NHSScotland as the delivery of health and social care evolves.

Purpose: To deliver effective national and specialist intelligence services to improve the health and wellbeing of people in Scotland.
Mission: Better Information, Better Decisions, Better Health
Vision: To be a valued partner in improving health and wellbeing in Scotland by providing a world class intelligence service.

Official Statistics
Information Services Division (ISD) is the principal and authoritative source of statistics on health and care services in Scotland. ISD is designated by legislation as a producer of ‘Official Statistics’. Our official statistics publications are produced to a high professional standard and comply with the Code of Practice for Official Statistics. The Code of Practice is produced and monitored by the UK Statistics Authority which is independent of Government. Under the Code of Practice, the format, content and timing of statistics publications are the responsibility of professional staff working within ISD.

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- National Statistics (ie assessed by the UK Statistics Authority as complying with the Code of Practice)
- National Statistics (ie legacy, still to be assessed by the UK Statistics Authority)
- Official Statistics (ie still to be assessed by the UK Statistics Authority)
- other (not Official Statistics)

Further information on ISD’s statistics, including compliance with the Code of Practice for Official Statistics, and on the UK Statistics Authority, is available on the ISD website.
Introduction

Practice Team Information (PTI) collects information from a sample of Scottish general practices about face-to-face consultations (in a surgery or the patient's home) between patients and a member of the practice team. The practice team is currently defined for PTI purposes as all GPs including locums and registrars (GPs in training), and practice-employed nurses (referred to on these pages as practice nurses but also including, for example, phlebotomists and health care assistants). Currently there are around 60 practices participating in PTI in Scotland and these are broadly representative of the Scottish population in terms of age, gender, deprivation and urban/rural mix.

The PTI website provides information on the process of data collection and analysis and shows estimates of the numbers of patients consulting and the numbers of consultations, by age and gender, staff discipline, practice or condition. These estimates are used by the Scottish Government, NHS Boards and others within the NHS, charities, researchers and many others to inform policies and develop a better understanding of health and primary health care in Scotland. The PTI web pages are updated annually to include new data and to apply any improved methodology.

This publication provides information on consultations for the financial year 2009/10, and updates figures published previously for the years 2003/04 to 2008/09.
Key points

• GP and practice-employed nurses combined had an estimated 24.2 million face-to-face contacts with patients in 2009/10, with the nurses having a 30% share in this. This represents an increase of roughly 1.0 million compared to the previous year and 2.5 million compared to 2003/04, continuing the upwards trend that was generally observed from 2003/04 to 2009/10 (with the exception of a dip in 2007/08).

• Of the patients registered with a practice, 85% had at least one face-to-face contact with a GP or practice-employed nurse in 2009/10 and 78% saw a GP at least once during the year.

• The most commonly recorded reason to consult either a GP or practice-employed nurse was for "circulatory and respiratory symptoms and signs". For GPs separately, "digestive/abdominal symptoms and signs" topped the list and for the nurses "hypertension" (high blood pressure) was the most common reason for a consultation. This reflects the general character of GP workload as opposed to nurse workload, which focuses more on managing specific long-term conditions.
Results and Commentary

Overall patient contacts in Scotland, by staff discipline

The chart and table below show the estimated total numbers of face-to-face patient contacts for each staff discipline during each of the six financial years 2003/04 to 2009/10. GPs and practice-employed nurses combined had an estimated 24.2 million face-to-face contacts with patients in 2009/10 (with a 95% confidence interval of 23.3 to 25.1 million) with the nurses having a 30% share in this. This represents an increase of roughly 1.0 million per year compared to 2008/09 and 2.5 million compared to 2003/04, continuing the upwards trend that was generally observed from 2003/04 to 2009/10, with the exception of the unexpected dip in 2007/08.

Estimated number of patient contacts (millions) with the general practice team\(^1\), (A) in bar chart format; and (B) in tabular format - showing estimates (‘Est’) including 95% confidence intervals (‘CI’); financial years 2003/04 to 2009/10\(^{2,3,4}\)

A. Bar chart format
B. Tabular format

<table>
<thead>
<tr>
<th>Year</th>
<th>General Practitioner</th>
<th>Practice Nurse</th>
<th>District Nurse</th>
<th>Health Visitor</th>
<th>GP &amp; PN combined</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Est.</td>
<td>(CI)</td>
<td>Est.</td>
<td>(CI)</td>
<td>Est.</td>
</tr>
<tr>
<td>2003/04</td>
<td>15.6</td>
<td>(14.9-16.3)</td>
<td>6.0</td>
<td>(5.5-6.5)</td>
<td>3.3</td>
</tr>
<tr>
<td>2004/05</td>
<td>15.7</td>
<td>(15.0-16.4)</td>
<td>6.3</td>
<td>(5.8-6.8)</td>
<td>3.2</td>
</tr>
<tr>
<td>2005/06</td>
<td>15.9</td>
<td>(15.2-16.6)</td>
<td>6.8</td>
<td>(6.3-7.3)</td>
<td>3.6</td>
</tr>
<tr>
<td>2006/07</td>
<td>16.2</td>
<td>(15.4-17.0)</td>
<td>7.0</td>
<td>(6.4-7.5)</td>
<td>Not available</td>
</tr>
<tr>
<td>2007/08</td>
<td>15.9</td>
<td>(15.1-16.6)</td>
<td>6.4</td>
<td>(5.6-7.1)</td>
<td>Not available</td>
</tr>
<tr>
<td>2008/09</td>
<td>16.4</td>
<td>(15.7-17.1)</td>
<td>6.8</td>
<td>(6.2-7.4)</td>
<td>Not available</td>
</tr>
<tr>
<td>2009/10</td>
<td>16.8</td>
<td>(16.1-17.4)</td>
<td>7.5</td>
<td>(6.8-8.1)</td>
<td>Not available</td>
</tr>
</tbody>
</table>

1 The general practice team includes GPs, practice nurses (PN), district nurses and health visitors. For PTI purposes, ‘practice nurse’ is defined as practice-employed nurses and their clinical assistants (e.g. phlebotomists and health care assistants), and ‘GP’ includes locums and registrars. District nurse and health visitor information is not available from 2006/07 onwards (for more details see ‘What is PTI?’ either on the PTI website or within Appendix 1 of this report).


4 PTI aims to continually improve the interpretation of the data and therefore analysis methods are reviewed and sometimes updated. The rules for dealing with duplication in practice-employed nurse data were expanded for the publication of 22 February 2011 and applied to all new and historic data. This has resulted in slightly lower numbers of consultations for practice nurses than published previously, particularly for the earlier years shown above. Therefore figures shown here are not strictly comparable to those published previously. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.

The estimated annual numbers of face to face contacts with patients generally rose for both GPs and practice-employed nurses between 2003/04 and 2009/10, although there was an interruption in this trend in 2007/08, in particular for practice-employed nurses. The number of GP contacts rose by more than 7% from 15.6 to 16.8 million over the seven years, with only a small dip occurring in 2007/08. Estimated contacts with practice-employed nurses rose by nearly 24% from 6.0 million in 2003/04 to 7.5 million in 2009/10, also showing a continuous rise, with the exception of 2007/08 when the estimated number of consultations dropped quite sharply. Note that the confidence intervals for these estimates are fairly large, so some of these changes may be due to sampling variation.

The drop in 2007/08 was particularly surprising for practice nurses, given the continuing shift of chronic disease management from GPs to nurses. Two factors are likely to have caused a real fall in nurse contacts:

- There is some evidence that practices have become less likely to cover holidays and other absences of regular nurses by employing bank, agency or locum nurses, resulting in a reduction in the numbers of nurse contacts in the year. This is indicated, for example, in the results of the National Primary Care Workforce Survey 2009. Feedback from individual PTI practices also suggests that this is the case.
- Where PTI practices changed their practice IT system (from GPASS to either InPS-Vision or EMIS), brief practice closures during the period of switch-over will have caused short-term drops in contacts with both GPs and nurses. For PTI practices this
would have been a particular issue during 2007, when a relatively large number of practices moved system.

Also, part of the reported decrease in nurse contacts is likely to be due to changes in data recording:

- Changes in the employment status of practice-based nurses impact on whether these nurses record data on their patient consultations for PTI. Information from practice-based nurses employed by the NHS Board will not be reported on by PTI, so the requirement for these nurses to record ceased when District Nurse and Health Visitor reporting was dropped early in 2007. When the distinction between practice-employed and Board-employed nurses became important, there was a brief increase in the number of updates to PTI’s clinician records from broadly defined ‘practice nurse’ to Board-employed practice nurse. These nurses will however typically continue to provide the same services in the practice.

- Face-to-face healthcare assistant or phlebotomist contacts may sometimes be misrecorded as “administration” records (which are not included in PTI analyses). This can occur where staff with some clinical training assist nurses in simple clinical tasks for part of the week, and undertake administrative tasks for the rest of the week. Feedback from individual PTI practices suggests this has become more common in recent years.

This chart and table is available here in Excel format.

Overall patient contacts by practice, by staff discipline

The chart below shows the 2009/10 contact rates (per 1,000 registered patients) for GPs and practice-employed nurses for all 60 PTI practices in the national sample. This chart shows large variation in contact rates between practices, and in the ratio of GP to nurse contact rates.

The total annual contact rate (including all contacts with either a GP or a practice-employed nurse) varied from less than 3,000 to nearly 6,400 contacts per 1,000 registered patients. How this workload is divided between GPs and nurses varies greatly between practices. In most practices the GPs do the bulk of the consultations – typically over two thirds in this sample of PTI practices (and up to 89% in one instance). However, in some practices the practice nurses account for more patient contacts than the GPs (up to 51% in one instance). The estimated combined contact rate based on all 60 practices and standardised to the Scottish population is just over 4,400 per 1,000 patients, with GPs accounting for approximately 69% of the contacts.

The large variation between practices reflects the makeup of the practice population (older and more deprived populations tend to consult more) and the organisation and staffing arrangements of the practice. Some practices may have more nursing staff than others and the nurses may be deployed in different ways. For example, some practices will use treatment room nurses paid by the NHS Board, whose patient contacts are typically not captured as part of PTI, instead of employing (all of) their own practice nurses, and this may result in the number of practice nurse contacts as measured through PTI appearing lower than may be expected.
Contact rates per 1,000 registered patients by staff discipline (GP and practice nurse\(^1\)), for all PTI practices individually and for Scotland overall\(^2\); financial year 2009/10\(^3\)

\(^1\) For PTI purposes, ‘practice nurse’ is defined as practice-employed nurses and their clinical assistants (e.g. phlebotomists and health care assistants), and ‘GP’ includes locums and registrars.

\(^2\) The estimates for Scotland are based on 60 general practices that submitted complete PTI data for the year ending 31 March 2010 and are standardised by age, gender and deprivation. Note that three of these practices submit data jointly and are therefore shown as a single practice.

\(^3\) Population source: Community Health Index (CHI) record, as at 30 September 2009.

\(^4\) PTI aims to continually improve the interpretation of the data and therefore analysis methods are reviewed and sometimes updated. The rules for dealing with duplication in practice-employed nurse data were expanded for the publication of 22 February 2011 and applied to all new and historic data. This has resulted in slightly lower numbers of consultations for practice nurses than published previously, particularly for the earlier years shown above. Therefore
These charts for financial years 2003/04 to 2009/10 are available here in Excel format.

**Overall contact rates by gender and age group**

The charts below show the annual contact rates for GPs and practice-employed nurses in the year ending March 2010, by age group, for male and female patients separately. With the exception of the very youngest and oldest age groups (0-4 and 75 plus, respectively), contact rates are higher for females than for males, with the very highest contact rates found in males aged 75 and over. Whereas in the younger age categories a large majority of patient contacts (particularly for males) are with GPs (over five times more than with nurses), in the older age categories the practice nurse share increases substantially, up to more than 45% of overall contacts. This may reflect the large contribution nurses make to chronic disease management, which is particularly relevant to older patients. These charts are also available in Excel format (27KB).

The 'All Ages' estimates show that the average (mean) number of GP contacts per registered patient in 2009/10 was 2.5 for males and 3.6 for females (3.0 on average over both genders – see associated Excel table), so that females see their GP on average 1.5 times more often than males. The difference between genders is slightly smaller with regard to number of contacts with a practice-employed nurse; females saw the nurse on average 1.5 times in 2009/10, versus 1.1 times for males. The average over both genders is 1.3 contacts per registered patient. Note that these averages are based on all registered patients - the calculations include patients that did not attend their practice at all during the year.

*GP and practice nurse\(^1\) annual contact rates per 1,000 registered patients\(^2\) for 2009/10\(^3\); by discipline and age group for (A) males and (B) females*
The contact rates by age and gender for all disciplines for the financial years 2003/04 to 2009/10 are provided here in Excel format (141KB).

**Percentage of practice patients seen, by staff discipline**

The chart below shows the percentage of patients registered with a practice that have had at least one face-to-face contact with a member of the practice team during the year, for the financial years 2003/04 to 2009/10. Percentages are shown for each individual staff discipline and for GPs and practice-employed nurses combined. Although the same patient may be counted under more than one discipline, the patient is counted only once in the combined 'GP and practice nurse' category. While clearly GPs see the largest proportion of patients within the practice, a small minority of patients are seen solely by other members of the practice team.

The chart illustrates that the percentage of registered patients seen at least once each year by a GP is quite stable, varying between 76% and 79% over the last seven years. When taking both GPs and practice nurses into account, between 82% and 85% of registered patients had at least one contact with the practice during the year in each of the seven years between 2003/04 and 2009/10, with the highest percentage of 85% seen in 2006/07 and 2009/10. Only a very small percentage of the people registered with a practice were seen exclusively by a community nurse (district nurse or health visitor) in the years...
2003/04, 2004/05 or 2005/06 (figures not shown). The chart shows that each year around 6-7% of registered patients had a consultation with a practice-employed nurse at least once without also seeing a GP in the same year.

For those patients who had at least one contact with a GP in the PTI sample in 2009/10, the mean number of GP contacts per patient was 3.9. However, nearly half of these patients (46%; 53% for males and 41% for females) had only one or two contacts with a GP. 5.6% of patients had more than 10 contacts in the year (4.3% for males and 6.7% for females). Similarly, for patients seeing a practice-employed nurse at least once during the year, the mean number of practice nurse contacts per patient was 2.8 (3.3 for males, 2.5 for females). 43% of these patients had only a single contact (41.8% for males and 43.0% for females). Only 2.8% of this patient group had more than 10 contacts during the year (2.7% for males and 2.3% for females). These figures are not shown in a separate table or graph.

**Estimated percentage of the practice population seen at least once during the year by each staff discipline (separately), by either GP or practice nurse, or by any of the four disciplines**

1 The general practice team includes GPs, practice nurses, district nurses and health visitors. For PTI purposes, ‘practice nurse’ is defined as practice-employed nurses and their clinical assistants (e.g. phlebotomists and health care assistants), and ‘GP’ includes locums and registrars. District nurse and health visitor information is not available from 2006/07 onwards.

2 Based on 59, 53, 51, 49, 48, 58 and 60 PTI practices that submitted complete GP and practice nurse data for the seven years ending 31 March 2004 to 2010, and 47, 45 and 45 practices submitting complete district nurse and health visitor data for the three years ending 31 March 2004 to 2006, respectively. Figures are standardised by age, gender and deprivation.

3 Population source: Community Health Index (CHI) record, as at 30th September 2003 to 2009, respectively.

4 PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The minor changes made for the publication of 22 February 2011 have a minimal impact on estimated numbers of patients; however these make the figures given in this current publication not strictly comparable to those provided prior to 22nd February 2011. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.
The figures underlying this chart are provided [here](#) in Excel format (37KB).

**The impact of inclusion of more staff disciplines on patient counts**

The inclusion of data on patient consultations with nursing disciplines, over and above GP recording gives a much more complete picture of patient care. Many chronic conditions have in recent years been increasingly managed by nurses rather than GPs. For many conditions, including nursing contacts in calculations of numbers of patients consulting will likely result in figures that are closer to the population prevalence compared to figures based on GP contacts only.

This is illustrated by the chart below. It shows the number of patients per 1,000 patients registered who had at least one contact with members of the practice team for selected conditions, for the most recent year for which complete district nurse and health visitor data were available (2005/06). It compares the patient consultation rates calculated from GP-only data to the rates using GP and practice nurse data combined, and also with ‘full’ practice team data (GP, practice nurse, district nurse and health visitor).

The rates for diabetes and asthma notably increase when data from additional staff disciplines within the practices are included, mostly through the addition of the practice nurse contacts. However, for the other two conditions (depression and acute upper respiratory infections), there is little change with the addition of other disciplines. This indicates that although patients may have been seen by members of several disciplines for these conditions, they generally are seen at least once by a GP. Although the effect of adding practice nurse data can be substantial, the addition of community nursing data appears to have a relatively small impact on patient counts.

For three of the conditions included in the chart below (asthma, diabetes and depression) other and more recent information is provided in the "Information on specific conditions" section of this report, including estimated numbers of patients and consultations by age group and gender, for the financial years 2003/04 to 2009/10.
Estimated number of patients consulting\(^1\) in the financial year 2005/06, per 1,000 registered patients\(^2\); for selected conditions\(^3\), using GP-only, GP and practice nurse, or all four disciplines\(^4,5\)

1 The number of patients with at least one contact for the specified condition per 1,000 registered patients during the specified year. Rates are standardised for age, gender and deprivation.
2 Population source: Community Health Index (CHI) record, as at 30 September 2005.
3 Classified using ISD's Read code Groupings (RCGs). Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.
4 Based on 44 PTI practices that submitted complete PTI data for all four clinical disciplines for the year ending 31 March 2006. Acronyms are as follows: GP = General Practitioner (including locums and registrars); PN = Practice Nurse (defined as practice-employed nurses and their clinical assistants, e.g. phlebotomists and health care assistants); DN = District Nurse; HV = Health Visitor
5 PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The minor changes made for the publication of 22 February 2011 have a minimal impact on estimated numbers of patients; however these make the figures given in this current publication not strictly comparable to those provided prior to 22nd February 2011. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.
6 Excluding acute pharyngitis, acute tonsillitis, acute laryngitis & tracheitis.

Figures underlying this chart are provided [here](#) in Excel format (52KB)

**Top 10 conditions most seen by GPs and practice nurses**

The chart below shows the estimated contact rates (per 1,000 registered patients) for the ten conditions most commonly recorded as a reason for consultation with GPs or practice-employed nurses combined. Estimates are standardised by age, gender and deprivation. These analyses are grouped using Read Code Groupings (RCGs) (Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report). 'Top 10' lists are provided for all disciplines separately for 2003/04 to 2009/10 in Excel format (337KB).
The data show that during 2009/10 patients most frequently consulted the GP or practice-employed nurse for circulatory and respiratory symptoms and signs, for example coughs, wheezing or breathlessness. Over 73% of these contacts were with a GP. The most frequent reason to see a GP was for ‘Digestive/Abdominal symptoms & signs’, with the second most frequent reason ‘General Abnormal symptoms & signs’. The most common reason to consult a practice nurse in 2009/10 was hypertension (this will typically be hypertension monitoring, which usually includes measuring blood pressure); with diabetes the second most frequent reason for consulting a nurse. This probably reflects the fact that patients often present to a GP with problems or symptoms rather than with clear-cut diagnoses, whereas nurses more often manage (previously diagnosed) long-term conditions.

**Top 10 conditions¹ ranked on GP and practice nurse (PN)² combined contact rates per 1,000 registered patients³; financial year 2009/10⁴**

<table>
<thead>
<tr>
<th>Condition</th>
<th>GP Contact Rate</th>
<th>PN Contact Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Circulatory and respiratory S&amp;S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General abnormal S&amp;S NEC (5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypertension</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diseases of the skin &amp; subcutaneous tissue (6)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digestive/abdominal S&amp;S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neurological/musculoskeletal S&amp;S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychological S&amp;S</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diabetes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soft tissue disorders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infectious diseases (7)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ Includes signs and symptoms (S&S) that do not necessarily have a confirmed diagnosis, classified according to body system. Classified using ISD’s Read code Groupings (RCGs). Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.

² For PTI purposes, ‘practice nurse’ is defined as practice-employed nurses and their clinical assistants (e.g. phlebotomists and health care assistants), and ‘GP’ includes locums and registrars.

³ Population source: Community Health Index (CHI) record, as at 30 September 2009.

⁴ Based on 60 PTI practices that submitted complete PTI data for the year ending 31 March 2010.

⁵ NEC= Not Elsewhere Classified.

⁶ Excluding infections and malignancies.

⁷ Excluding meningococcal, skin, respiratory & urinary tract infections, gastroenteritis, & osteomyelitis.

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are reviewed and updated for every publication. For the February 2011 publication the main update was that the rules for dealing with duplication in practice-employed nurse data were expanded. These were applied to all new and historic data, resulting in slightly lower numbers of practice nurse consultations particularly in earlier years. Therefore figures shown here are not strictly comparable to those published previously. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.

Figures underlying this chart and comparable figures for all disciplines for 2003/04 to 2009/10 are provided here in Excel format (337KB).
Top 10 activities carried out most by practice nurses

The chart below shows the estimated contact rates (per 1,000 population) for the ten most common activities recorded for practice nurses. For PTI purposes 'practice nurses' are defined as nurses employed by the practice and their clinical assistants (e.g. phlebotomists and health care assistants). Estimates are standardised by age, gender and deprivation. These analyses are grouped using Read Code Groupings (RCGs) (Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report). 'Top 10' activity lists are provided for all nursing disciplines separately for 2003/04 to 2009/10 in Excel format (277KB).

The data show that the activity carried out most frequently during a practice nurse consultation in the year 2009/10 was taking a blood sample. The contact rate for this activity was more than two times higher than for the second-most common activity, which was administering influenza vaccinations.

![Chart showing top 10 activities ranked on practice nurse contact rates per 1,000 registered patients; 2009/10.](chart)

1Based on ISD's Read code groupings (RCGs) - activity groupings only. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.
2For PTI purposes, 'practice nurses' are defined as practice-employed nurses and their clinical assistants (e.g. phlebotomists and health care assistants).
3Population source: Community Health Index (CHI) record, as at 30 September 2009.
4Based on 60 PTI practices that submitted complete GP and practice nurse data for the year ending 31 March 2010. Figures are standardised by age, gender and deprivation.
5NEC= Not Elsewhere Classified.
6Excluding smoking cessation advice & bereavement counselling.
7Excluding BP & CHD monitoring.

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The rules for dealing with duplication in practice-employed nurse data were expanded for the publication of 22 February 2011 and applied to all new and historic data. This has resulted in slightly lower estimated numbers of consultations for practice nurses than published previously, particularly for the earlier years shown above. Therefore figures shown here are not strictly comparable to those published previously. For further information see 'Note of Revisions' either on the PTI website or within Appendix 1 of this report.
PTI in relation to the Quality and Outcomes Framework (QOF)

The new General Medical Services (nGMS) contract came into effect in April 2004. A significant element of this is the Quality & Outcomes Framework (QOF). The QOF measures achievement by general practices against a range of evidence-based indicators. The largest part of the QOF is its "clinical domain", which comprises an evolving set of indicators relating to people with particular health conditions, or who have other issues that are likely to impact on their health or healthcare needs. Initially (for the years 2004/05 and 2005/06), the management of 11 common chronic conditions was included within the clinical domain of the QOF. These include, for example, asthma, diabetes and CHD. The list of conditions/patient groups has been extended in subsequent years, for example to include patients who need palliative care.

The information collected by general practices for QOF includes a “register” of patients for each category in all participating practices, and an associated “prevalence” rate (calculated using the all-ages practice population as the denominator). These QOF “prevalence” rates are available on the QOF pages of ISD's website at Scotland, NHS Board, Community Health Partnership (CHP) and practice level. What the QOF registers count and why the reported "prevalence" rates are not necessarily a true population prevalence rate is also explained.

PTI information can supplement "prevalence" information from the QOF by giving further insight into the patient contacts associated with the QOF conditions, taking into account age, gender and levels of deprivation (as shown in the ‘Information on specific conditions’ section). In contrast, the data collected for QOF cannot be broken down by factors such as age, gender or deprivation.

PTI data can also be used to examine co-morbidities (i.e. patients who have consulted for more than one condition), where these co-morbidities are recorded by the practice in the consultation record. In contrast, whilst some QOF registers count the total number of a practice's patients who have at least one of a specified list of conditions, the data reported for QOF cannot be broken down to show the extent to which the prevalence of certain conditions may overlap.

The chronic conditions and other healthcare related circumstances included in the QOF clinical domain account for a substantial proportion of patient contacts with a GP or practice nurse. However the QOF covers only a few of the conditions for which patients consult their general practice. The chart below provides information on the number of contacts relating to any of the health conditions or other circumstances covered by QOF registers in 2009/10, as a percentage of all contacts. Note that if for one consultation both a QOF and a non-QOF condition were recorded, this consultation is included in the QOF category only. It should be noted the QOF category does not include consultations that might relate to parts of the QOF other than the clinical domain. For example, the QOF incentivises practices to provide additional services such as cervical screening and child health surveillance. However, in this illustrative analysis the additional services are not considered. The information shown in the graph is also available in an Excel table (27KB).
For GPs and practice nurses combined, 17.6% of face to face patient consultations in 2009/10 related to conditions included in the QOF clinical domain. For GPs, fewer than one in eight (12.1%) consultations were for a QOF-related condition. For practice nurses the share was higher, with 29.6% of consultations relating to at least one QOF condition. This is consistent with their significant role in carrying out the routine monitoring and management of chronic conditions.

Defining the number of contacts relating to the QOF clinical domain conditions is somewhat imprecise and is different from the practice workload strictly due to QOF. Our definition includes those contacts that specify a Read code included in either the QOF business rules (version 16.0 – applicable to the 2009/10 QOF year), or in our own Read Code Groupings defining the conditions that are part of the QOF clinical domain. Some Read codes listed in the QOF business rules are administrative codes (e.g. test results), which will not generally come up in the PTI data on face-to-face contacts. Any patients with these codes, but without activity or morbidity codes relating to the given condition, will be missed (this is a particular issue with Chronic Kidney Disease). Conversely, some codes are specific to a condition but will not trigger inclusion on the QOF register for that condition. By choosing to use the union (combination) of both groups of Read codes, we aim to maximise the number of contacts applicable to the QOF clinical domain conditions and therefore counted under the ‘QOF-related conditions’ category. However, in this illustrative analysis we have not included in the “QOF contacts” group below any contacts that do not mention a QOF clinical condition but instead mention activities that are covered by other (non-clinical) QOF indicators. For example we have not included contacts relating to cervical screening.

**Conditions included in the QOF clinical domain** - contacts as percentage of total contacts; 2009/10

1 The health conditions and care need categories included in the QOF clinical domain for 2009/10 are: asthma, atrial fibrillation, cancer, CHD, chronic kidney disease, COPD, dementia, depression, diabetes mellitus, epilepsy, heart failure, hypertension, hypothyroidism, learning disabilities, mental health, obesity, palliative care and stroke (incl. TIs and TIs).

2 "QOF contacts" are defined as consultations that mention at least one health condition or care need covered by the QOF clinical domain. Contacts that relate to other parts of the QOF (for example cervical screening) are not included in this group. "Other contacts" are defined as consultations that do not mention a condition or care need covered by the QOF clinical domain. Any consultation that mentions both a QOF and non-QOF condition will be included in the QOF category only.

3 Based on 60 general practices that submitted complete GP and practice nurse data for the year ending 31 March 2010.

4 Population source: Community Health Index (CHI) record, as at 30 September 2009.

5 Staff Discipline: GP = General Practitioner; PN = Practice Nurse

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The rules for dealing with duplication in practice-employed nurse data were expanded for the...
Publication of 22 February 2011 and applied to all new and historic data. This has resulted in slightly lower estimated numbers of consultations for practice nurses than published previously, particularly for the earlier years shown above. Therefore figures shown here are not strictly comparable to those published previously. For further information see 'Note of Revisions' either on the PTI website or within Appendix 1 of this report.

Comparison of QOF and PTI rates for the QOF clinical domains

Both PTI and QOF information are used by a variety of different organisations and people as sources of information (from primary care) on the occurrence of health conditions in the population (complementing information from other healthcare settings, registries or other sources). PTI and QOF were developed for different purposes and measure different things. Both are useful in their own right but we would not expect their figures to be the same. Therefore a number of points should be noted before making comparisons between PTI and QOF-based numbers of patients for a given condition:

- PTI reflects active disease problems. It is based on a count of those who consult because of a specific diagnosis during a specified year. For people with a particular problem, a consultation for a different health problem will not be included in statistics for that problem. For example, someone with high blood pressure (hypertension) who has a consultation that is only about backache will be counted as having a backache consultation, but not as having a hypertension consultation.

- QOF "prevalence" is based on inclusion on a practice's disease register (and that register may not include everyone in the practice who has that particular condition). Because of its focus on secondary prevention, each QOF register usually includes all those who have ever had a diagnosis of a condition, even if the patient self-manages the condition and is not currently consulting for it. For example, all patients identified by the practice as having coronary heart disease (CHD) are included on the CHD register, even if the problem initially occurred some time ago and the patient has not consulted with their GP or practice nurse for it recently.

- QOF indicators were developed for quality improvement rather than for epidemiological purposes, and therefore aims to focus effort on those most likely to benefit from review. For example, QOF excludes people with asthma who are not currently on medication, whereas PTI would include any patient who has consulted for asthma at least once over the year, even in the unlikely case this patient was not prescribed any medication.

- Because QOF registers only count the total number of patients in a practice with a given condition, it is not possible to break the register figures down by age, gender or any other sub-division, or to adjust by such factors to allow true epidemiological comparisons between geographical areas with different age or gender profiles.

- Because each QOF register count is derived independently of the others it is not possible to estimate how many people have more than one chronic condition (that is, have co-morbidities). This is feasible with PTI data.

- The QOF "clinical domain" (the largest part of the QOF) covers a limited range of health conditions or care needs that account for less than 18% of contacts within general practice. PTI provides information on all diagnoses and for consultations where no clear diagnosis is made.

Other issues related to specific conditions are discussed below.

**Notes on specific conditions**
**Asthma**

Because of the need to focus on those most likely to benefit from intensive monitoring, the QOF asthma registers exclude patients who have had no prescription for asthma drugs during the last twelve months. Such patients may still have a diagnosis of asthma, but may have mild symptoms not requiring regular treatment. PTI statistics would include such patients if the reason for consultation was stated to be asthma, so the PTI definition is therefore somewhat more inclusive. However it is very unlikely that someone would consult for asthma but not be on any medication, so the difference will be small.

**Atrial Fibrillation**

The QOF register for atrial fibrillation (AF) includes all those who currently have a clinical diagnosis of AF, whenever this diagnosis was made in the past, including those who have paroxysmal (intermittent) AF. PTI figures will only include those who consult because of AF, and these figures are therefore likely to be much lower.

**Cancer**

The QOF cancer register excludes people with cancer where the diagnosis was made before 1st April 2003. PTI does not have the facility to select on this criterion and relies on a cancer diagnosis being recorded for a primary care contact during the year, whereas much cancer treatment takes place in the secondary care setting. For cancer prevalence and incidence in Scotland, more useful statistics are available elsewhere on ISD’s cancer information pages.

**Coronary Heart Disease**

The QOF register includes people who have ever had coronary revascularisation, myocardial infarction (heart attack) or other Coronary Heart Disease (CHD) diagnoses, even if they do not have a current active diagnosis of CHD. PTI statistics include such patients only if the reason for a consultation was stated to be CHD and only if they consulted for CHD in the year of analysis.

**Chronic Kidney Disease**

The QOF indicator requires a register of people, aged over 18, with stages 3-5 of the disease, based on their estimated Glomerular Filtration rate (eGFR) (this is a measure of kidney function). It is very unlikely that the eGFR will be recorded as a reason for consultation within PTI statistics, and PTI data are not likely to be suitable to measure the prevalence of this condition.

**COPD**

The QOF rules do not allow patients to be on both the asthma and the COPD registers, while PTI allows people with both diagnoses to be included in estimates for both diseases. This is likely to affect only a small number of cases. It is generally accepted that some patients with COPD have reversible airways obstruction. The QOF rules do not allow these patients to be included on the COPD register, but PTI statistics include such patients if the reason for consultation was stated to be COPD. This might result in the QOF prevalence being lower than the estimate based on PTI.

**Dementia**

The QOF indicator definition applies to all people diagnosed with dementia either directly by the GP or through referral to secondary care. PTI figures will include only those consultations where dementia was specifically recorded as the reason for consultation.
**Depression**

Since 2006/07 there have been two different QOF registers and indicators related to depression, each based on different criteria. The first indicator relates to case finding of depression among patients with diabetes and/or Coronary Heart Disease (CHD). Because PTI data are based on reasons for consultation and not specifically whether a patient has one or more of these underlying conditions, a direct comparison with QOF register information is not possible. The second indicator relates to any patient newly diagnosed with depression. Because PTI cannot routinely and reliably distinguish between new diagnoses and existing conditions, a direct comparison between PTI and QOF is difficult.

**Diabetes**

QOF guidance assumes that a diabetes review will be carried out annually. Unlike the QOF, PTI statistics reflect only those patients who consult for a condition in a given year. If reviews are carried out less frequently than once a year, or patients do not attend for their review, the number of patients derived from PTI data will be smaller than those who are on the QOF register.

The QOF rules exclude people aged less than 17 years and those with gestational (pregnancy) diabetes. The diabetes prevalence rate is then calculated using only those aged 17 and over in the numerator but the whole practice population (including those under 17) as the denominator. This means that the crude QOF-reported prevalence rate for diabetes does not relate to all ages, and underestimates the actual diabetes prevalence for the age group it does relate to due to the larger denominator used. In contrast, PTI patient rates are calculated using data from patients of any age, including under 17.

**Epilepsy**

QOF rules restrict the epilepsy register to those currently receiving drug treatment. PTI includes epilepsy patients who are not on epilepsy drugs (though this is likely to be a fairly small number of people) as long as they have an epilepsy-related face-to-face contact in the relevant year. It appears that the frequency with which patients consult their practice for epilepsy (as derived from PTI) is a lot lower than the numbers of people actually with epilepsy (as derived from the QOF), indicating that many patients manage their condition themselves.

A further complexity is that QOF epilepsy registers exclude patients under 18 years of age. The epilepsy prevalence rate is then calculated using only those aged 18 or over in the numerator but the whole population (including those under 18) as the denominator. This means that the crude QOF-reported prevalence rate for epilepsy does not relate to all ages, and underestimates the actual epilepsy prevalence for the age group it does relate to due to the larger denominator used. In contrast, PTI patient rates include patients of any age, but only if they have consulted their practice for their epilepsy.

**Heart Failure**

As with other conditions, PTI estimates would be based only on consultations where heart failure was specified, so might be expected to give a lower estimate compared to the QOF heart failure register.

**Hypertension**

The QOF rules include guidance about defining hypertension. Consultations coded for PTI record hypertension based only on the judgement of the member of the practice team seeing the patient.

**Hypothyroidism**

The QOF rules exclude patients from the register if they are not taking thyroxine, while PTI includes all patients consulting the practice team because of a diagnosis of hypothyroidism.
This difference is unlikely to be important in practice, as patients with hypothyroidism would generally be expected to be receiving thyroid replacement therapy.

**Learning Disabilities**
The QOF register includes people aged 18 and over who have learning disabilities. PTI data reflect current active problems and such patients would be included in statistics only if one of the reasons for consultation in that particular year was explicitly stated to be their learning disability. Because patients are not likely to consult regularly for learning disability, the patient rate as derived from PTI is expected to be much lower than the QOF-based prevalence.

**Mental health**
The criteria for inclusion on QOF mental health registers depend on a clinical judgment about the nature of the problem and cannot easily be equated to a particular list of diagnoses. This makes it difficult to compare PTI and QOF estimates of the frequency of mental health problems. Since April 2006, the QOF definition has included only patients with serious mental illness (defined as schizophrenia, bipolar affective disorder or other psychoses). Previously, QOF relied upon a more generalised set of mental health conditions and also only included patients who required, and had consented to, regular follow-up.

**Obesity**
This new QOF indicator includes all people aged 16 years and over with a BMI of at least 30. PTI consultations will record "obesity" where it is the reason for consultation, but do not necessary use a consistent BMI definition of this term. As a result, direct comparison of QOF and PTI figures would not be appropriate.

**Palliative Care**
The QOF register for palliative care is essentially a snapshot, counting those practice patients in need of palliative or supportive care at one particular date in the year (known in QOF as “National Prevalence Day”). Comparable figures are not available from PTI data but codes to indicate that face-to-face palliative care was provided by GPs or practice nurses at any time during the year can be used.

**Conditions assessed for smoking**
This QOF register counts patients with one or more specified health conditions (such as CHD, diabetes or COPD) as the QOF then requires that practices assess the smoking status of these patients and offer smoking cessation advice where applicable. Because PTI data are based on reasons for consultation and not specifically whether a patient has one or more of these underlying conditions, a direct comparison with this QOF register information is not possible.

**Stroke and Transient Ischaemic Attack (TIA)**
The QOF register includes people who have ever had a stroke or TIA. PTI statistics reflect current active problems and include such patients only if the reason for consultation was stated to be stroke or TIA.
Co-morbidity information: example for CHD, diabetes and hypertension

PTI can supplement QOF data with information on the patient contacts related to QOF conditions. It allows analyses that take into account age, gender and levels of deprivation (as shown in the 'Information on specific conditions' section). In addition PTI enables examination of instances where patients have consulted for one, two or more conditions during the course of a year (whether or not these conditions are included in the QOF).

The diagram below shows the degrees of overlap between patients consulting for any of three of the chronic conditions included in the QOF; CHD, diabetes and hypertension, for the year ending March 2010. Percentages are colour coded to show the condition they relate to, so that for example the red figure of 7.3% at the top of the diagram indicates that 7.3% of people consulting for CHD in 2009/10 also consulted for diabetes (without hypertension ever being coded as a reason for consultation). Nearly one third (32.3% - i.e. 28.0% + 4.3%) of patients who consulted for CHD in 2009/10 also consulted their practice for hypertension in the year, whilst one quarter (26.8% - i.e. 23.4% + 3.4%) of people consulting for diabetes also consulted with hypertension.

These overlaps are not surprising, but they emphasise the close relationship between these conditions and the potential for intervening simultaneously for multiple clinical risk factors.

Percentage of patients consulting for CHD (figures in red), diabetes (figures in blue) or hypertension (figures in green) who also consulted a GP or practice nurse for the other conditions; 2009/10¹, ²

¹ Based on 60 PTI practices that submitted complete GP and practice nurse data for the year ending 31 March 2010.
² Population source: Community Health Index (CHI) record, as at 30 September 2009.
Specific Conditions

The estimated number of consultations and the estimated number of patients consulting based on PTI data is shown for 16 specific conditions.

Angina

**Number of patients consulting**

The graph below shows the estimated number of patients in Scotland (per 1,000 registered with a general practice) who consulted either a GP or practice-employed nurse for angina at least once in the year ending 31 March 2010, by gender and age group. Figures are standardised by deprivation to the Scottish population to account for differences between the PTI sample population and the Scottish practice population in levels of deprivation.

The chart shows, as expected, an increase with age in the number of patients consulting for angina. In all age groups, substantially more males than females consulted for this condition relative to the number of patients registered.

These figures and comparable figures for 2003/04 to 2008/09 are provided in tabular format in an Excel document (96KB) which also contains 95% confidence intervals for all estimates. The Excel table shows a total estimate of around 36,000 patients seen in the most recent year for angina, with a 95% confidence interval between 29,000 and 44,000 patients. The fairly wide confidence intervals reflect limited precision of these estimates, which can be expected when variation between practices is large (in particular for any estimate based on relatively small numbers).

**Angina** - estimated number of patients in Scotland consulting a GP or practice nurse at least once in the financial year 2009/10 \(^2\) per 1,000 patients registered; by gender and age group
The chart below shows the estimated numbers of consultations in Scotland for angina for the seven financial years 2003/04 to 2009/10, by staff discipline. Figures are standardised to the Scottish population by age, sex and deprivation to account for any differences in these characteristics between the PTI sample population and the Scottish practice population. These figures are provided in tabular format in an Excel document (31KB), which includes 95% confidence intervals for all estimates.

The chart shows that after a steady decrease in estimated numbers of contacts for angina over the first four years, in more recent years the number of consultations with GPs and practice-employed nurses has stayed fairly steady. The decrease in the earlier years may be a result of changes in the definitions of acute coronary syndromes (increasingly, unstable angina with raised troponin levels is classified as a heart attack (AMI)), improvements in treatments and risk factor levels or changes in the natural history of ischaemic heart disease. It may also relate to the introduction of the Quality & Outcomes Framework (QOF) as part of the new GP contract in April 2004. Angina is one of the conditions covered by QOF indicators and it may be that clinicians have become more precise in their coding for QOF conditions; if patients with suspected angina used to be coded as having angina, now they will only get an angina code once the diagnosis has been confirmed. This would have had the largest impact on PTI figures in the earlier years of QOF, but in the more recent years coding for QOF has become well-embedded in practices’ daily routine.
Angina\(^1\) - estimated number of consultations with a GP or practice-employed nurse in Scotland in the financial years 2003/04 to 2009/10\(^2\)\(^,\)\(^3\); by staff discipline

![Graph showing estimated number of consultations by staff discipline for different financial years](image)

\(^1\) Health visitor and district nurse data are not available from the financial year 2006/07 onwards.

\(^1\) Based on ISD's Read Code Grouping (RCG) 'Angina'. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.

\(^2\) Based on 59, 53, 51, 49, 48, 58 and 60 general practices that submitted complete data to the PTI scheme for the years ending 31 March 2004 to 2010, respectively. Figures are standardised by age, gender and deprivation.

\(^3\) Population source: Community Health Index (CHI) record, as at 30 September 2003 to 2009.

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The rules for dealing with duplication in practice-employed nurse data were expanded for the publication of 22 February 2011 and applied to all new and historic data. This has resulted in slightly lower estimated numbers of consultations for practice nurses than published previously, particularly for the earlier years shown above. Therefore figures shown here are not strictly comparable to those published previously. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.

Anxiety

**Number of patients consulting**

The graph below shows the estimated number of patients in Scotland (per 1,000 registered with general practices) who have consulted either a GP or practice-employed nurse for anxiety or other stress-related and somatoform disorders at least once in the year ending 31 March 2010, by gender and age group. Somatoform disorders are a group of psychiatric disorders characterised by physical symptoms suggesting a medical disorder, without these symptoms being fully explained by this medical disorder, substance use, or another mental disorder. Figures are standardised by deprivation to the Scottish population to account for differences between the PTI sample population and the Scottish practice population in levels of deprivation.

The graph shows a large difference between genders in that the proportion of patients consulting for anxiety was more than twice as high for females as males in almost all age groups. For females the rates peaked in the 35-44 years age group and for males in the 25-34 years age group.
These estimates and comparable figures for 2003/04 to 2008/09 are provided in tabular format in an Excel document (85KB), which also contains 95% confidence intervals for all estimates. The Excel table shows a total estimate of around 240,000 patients seen in the most recent year for anxiety and related conditions, with a 95% confidence interval between 206,000 and 273,000 patients. Fairly wide confidence intervals reflect limited precision of the estimate, and can be expected when variation between practices is large (in particular for any estimate based on relatively small numbers, for example in the youngest age group).

**Anxiety and related conditions¹ – estimated number of patients in Scotland consulting a GP or practice nurse at least once in the financial year 2009/10²,³ per 1,000 patients registered; by gender and age group**

![Bar chart showing estimated number of consultations by gender and age group.](image)

¹ Based on ISD’s Read code groupings (RCGs) ‘Anxiety and other stress-related and somatoform disorders’. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.

² Based on 60 general practices that submitted complete GP and practice nurse data to the PTI scheme for the year ending 31 March 2010. Rates are standardised by deprivation.

³ Population source: Community Health Index (CHI) record, as at 30 September 2009.

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The minor changes made for the publication of 22 February 2011 have a minimal impact on estimated numbers of patients; however these make the figures given in this current publication not strictly comparable to those provided prior to 22nd February 2011. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.

**Number of consultations**

The chart below shows the estimated numbers of consultations in Scotland for anxiety or other stress-related and somatoform disorders for the seven financial years 2003/04 to 2009/10, by staff discipline. These figures are provided in tabular format in an Excel document (22KB), which also shows 95% confidence intervals for all estimates. Figures shown were standardised to the Scottish population by age, gender and deprivation to account for differences in these characteristics between the PTI sample population and the Scottish practice population.

The estimated numbers of consultations for anxiety and related conditions have declined steadily over the first five years, although most markedly from 2004/05 to 2005/06. This is likely to be a result of a general improvement in coding precision due to coding.
requirements for the Quality & Outcomes Framework (QOF). Although anxiety is not one of the conditions for which the QOF requires a patient register to be maintained, it may well have benefited from improved coding for other conditions that are part of the QOF. Whereas previously patients with anxiety-like symptoms may have been given a code referring to diagnosed anxiety, now clinicians may use a more general code for a psychological symptom or sign and not use an anxiety code until the diagnosis has been confirmed. In the most recent year a slight rise was observed in the estimated number of consultations. However, the estimated number of patients involved in these consultations has not increased (see Excel document), suggesting that individual patients have been seen more often as part of their treatment for anxiety or related conditions.

Anxiety and related conditions\textsuperscript{1} - estimated number of consultations with a GP or practice-employed nurse in Scotland in the financial years 2003/04 to 2009/10\textsuperscript{2, 3}; by staff discipline

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{anxiety_graph.png}
\caption{Anxiety and related conditions - estimated number of consultations with a GP or practice-employed nurse in Scotland in the financial years 2003/04 to 2009/10; by staff discipline}
\end{figure}

\textsuperscript{*} Health visitor and district nurse data are not available from the financial year 2006/07 onwards.

\textsuperscript{1} Based on ISD’s Read Code Grouping (RCG) ‘Anxiety and other neurotic, stress-related, and somatoform disorders’. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.

\textsuperscript{2} Based on 59, 53, 51, 49, 48, 58 and 60 general practices that submitted complete data to the PTI scheme for the years ending 31 March 2004 to 2010, respectively. Figures are standardised by age, gender and deprivation.

\textsuperscript{3} Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The rules for dealing with duplication in practice-employed nurse data were expanded for the publication of 22 February 2011 and applied to all new and historic data. This has resulted in slightly lower estimated numbers of consultations for practice nurses than published previously, particularly for the earlier years shown above. Therefore figures shown here are not strictly comparable to those published previously. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.

\section*{Asthma}

\textbf{Number of patients consulting}

The graph below shows the estimated number of patients in Scotland (per 1,000 registered with a general practice) who consulted either a GP or practice-employed nurse for asthma at least once in the year ending 31 March 2010, by gender and age group. Figures are standardised by deprivation to the Scottish population to account for any differences
between the PTI sample population and the Scottish practice population in levels of deprivation. These estimates and comparable figures for 2003/04 to 2008/09 are also provided in tabular format in an Excel document (87KB), which also contains 95% confidence intervals for all estimates.

In most age categories the rate of patients consulting for asthma was higher in females than in males, except amongst children aged 14 and under. In males the proportion of patients seen for asthma was highest in the 5-14 age category, whereas in females more older patients (between 45 and 74 years of age) were seen. The Excel table shows a total estimate of around 296,000 patients seen in the most recent year for asthma, with a 95% confidence interval between 271,000 and 320,000 patients. The confidence intervals for asthma estimates are relatively small compared to some other conditions, which is associated with higher precision of the estimates. This is likely due to the relatively large numbers involved and relatively small variation between practices.

Asthma$^1$ – estimated number of patients in Scotland consulting a GP or practice nurse at least once in the financial year 2009/10$^2$. per 1,000 patients registered; by gender and age group

<table>
<thead>
<tr>
<th>Age group</th>
<th>Patients consulting per 1,000 registered</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 years &amp; under</td>
<td>Males: 15</td>
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<td>65-74 years</td>
<td>Males: 25</td>
</tr>
<tr>
<td>75 years and over</td>
<td>Males: 20</td>
</tr>
</tbody>
</table>

$^1$ Based on ISD’s Read Code Grouping (RCG) ‘Asthma’. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.

$^2$ Based on 60 general practices that submitted complete GP and practice nurse data to the PTI scheme for the year ending 31 March 2010. Rates are standardised by deprivation.

$^3$ Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The minor changes made for the publication of 22 February 2011 have a minimal impact on estimated numbers of patients; however these make the figures given in this current publication not strictly comparable to those provided prior to 22nd February 2011. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.

Number of consultations

The chart below shows the estimated numbers of consultations in Scotland for asthma for the seven financial years 2003/04 to 2009/10, by staff discipline. All estimates are standardised to the Scottish population by age, gender and deprivation to account for any differences in these characteristics between the PTI sample population and the Scottish
practice population. These figures are provided in tabular format in an Excel document (30KB), which includes 95% confidence intervals for all estimates.

The chart shows that contacts for asthma were more frequently with a practice nurse than a GP, reflecting the fact that routine monitoring of asthma is often carried out by nurses. The total numbers of consultations appear to have dropped from 2004/05 to 2007/08, however, this is not associated with an appreciable drop in patient numbers; these have stayed fairly stable (see the Excel document). Therefore there has been a decrease in the average number of contacts per asthma patient over this time period, which could be a result of improved efficiency in the practice, or improved treatment methods requiring less clinical intervention and/or allowing patients to manage the condition better themselves. In more recent years the estimated numbers of consultations as well as patients has risen again back to levels comparable to 2005/06. It must be noted that there was substantial variation in asthma consultation rates between practices in the PTI sample, which means that the estimated figures for Scotland have sizeable confidence intervals. Therefore some of the apparent differences between years could be due to changes to the practice sample.

The jump in estimated numbers of asthma contacts between 2003/04 and 2004/05 may relate, at least in part, to the introduction of the Quality & Outcomes Framework (QOF) as part of the new GP contract in April 2004. Asthma is one of the conditions covered by QOF indicators and it is likely that the use of appropriate coding to identify asthma contacts improved around this time.

**Asthma** – estimated number of consultations with a GP or practice-employed nurse in Scotland in the financial years 2003/04 to 2009/10; by staff discipline

![Asthma chart](chart.png)

*1 Health visitor and district nurse data are not available from the financial year 2006/07 onwards.
1 Based on ISD’s Read Code Grouping (RCG) ‘Asthma’. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.
2 Based on 59, 53, 51, 49, 48, 58 and 60 general practices that submitted complete data to the PTI scheme for the years ending 31 March 2004 to 2010, respectively. Figures are standardised by age, gender and deprivation.
3 Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The rules for dealing with duplication in practice-employed nurse data were expanded for the publication of 22 February 2011 and applied to all new and historic data. This has resulted in slightly lower estimated numbers of consultations for practice nurses than published previously, particularly for the earlier years shown above.
Therefore figures shown here are not strictly comparable to those published previously. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.

Back pain

Number of patients consulting

The graph below shows the estimated number of patients in Scotland (per 1,000 registered with a practice) who consulted either a GP or practice nurse for back pain at least once in the year ending 31 March 2010, by gender and age group. Estimates are standardised by deprivation to the Scottish population to account for any differences between the PTI sample population and the Scottish practice population in levels of deprivation.

The graph suggests that older people are more likely to consult because of back pain. In all age groups there were a larger number of females consulting compared to males. However, surveys suggest that back pain is more common in men than women, and these apparent differences may only reflect the fact that women are more likely than men to consult their practice.

These figures and comparable figures for 2003/04 to 2008/09 are also provided in tabular format in an Excel document (116KB). This table also contains the 95% confidence intervals for all estimates. The Excel table shows a total estimate of around 364,000 patients seen in the most recent year for back pain, with a 95% confidence interval between 350,000 and 378,000 patients. The confidence intervals for back pain estimates are generally fairly narrow (except for the youngest age groups), which means that the estimates are relatively precise. This can be expected when the numbers of patients are large and variation between practices is relatively small.

Back pain - estimated number of patients in Scotland consulting a GP or practice nurse at least once in the financial year 2009/10, per 1,000 patients registered; by gender and age group
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2 Read codes are specifically selected for analysis of this condition. Please refer to the PTI team for further clarification.
3 Based on 60 PTI practices that submitted complete GP and practice nurse data for the year ending 31 March 2010.
4 Rates are standardised by deprivation.

Population source: Community Health Index (CHI) record, as at 30 September 2009.

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The minor changes made for the publication of 22 February 2011 have a minimal impact on estimated numbers of patients; however these make the figures given in this current publication not strictly comparable to those provided prior to 22nd February 2011. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.

**Number of consultations**

The chart below shows the estimated numbers of consultations in Scotland for back pain for the seven financial years 2003/04 to 2009/10, by staff discipline. Estimates are standardised to the Scottish population by age, gender and deprivation to account for any differences in these characteristics between the PTI sample population and the Scottish practice population. These figures are provided in tabular format in an Excel document (22KB), which includes 95% confidence intervals for all estimates.

After slight falls in 2006/07 and 2007/08 in the estimated numbers of patients consulting for back pain, the number rose again in 2008/09 and 2009/10. However these changes should be interpreted with caution as the differences are relatively small and not likely to be statistically significant. The changes from year to year in the estimated numbers of patients seen for back pain (see the Excel document referred to in the Number of Patients section above) show a similar pattern but differences are even smaller. Most of the contacts for back pain were with the GP, with a very small proportion of practice nurse contacts.

**Back pain** - estimated number of consultations with a GP or practice-employed nurse in Scotland in the financial years 2003/04 to 2009/10, by staff discipline

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1 Read codes are specifically selected for analysis of this condition. Please contact the PTI team for further clarification.
2 Based on 59, 53, 51, 49, 48, 58 and 60 PTI practices that submitted complete data for the years ending 31 March 2004 to 2010, respectively. Figures are standardised by age, gender and deprivation.
3 Population source: Community Health Index (CHI) record, as at 30 September 2003 to 2009.
Coronary Heart Disease (CHD)

Number of patients consulting

The graph below shows the estimated number of patients in Scotland (per 1,000 registered with a practice) who consulted either a GP or practice-employed nurse for coronary heart disease (CHD) at least once in the year ending 31 March 2010, by gender and age group. Estimates were standardised by deprivation to the Scottish population to account for any differences between the PTI sample population and the Scottish practice population in levels of deprivation.

The chart shows the expected pattern of higher numbers of patients consulting in males compared to females, coupled with a sharp increase in consultations with increasing age.

These figures and comparable figures for 2003/04 to 2008/09 are also provided in tabular format in an Excel document (98KB). This table also contains the 95% confidence intervals for all estimates. The Excel table shows a total estimate of around 171,000 patients seen in the most recent year for CHD, with a 95% confidence interval between 158,000 and 183,000 patients. The confidence intervals for CHD estimates are generally quite wide although less so for the older age groups, which means that the estimates, more so for the younger ages, have limited precision. This can be expected when the variation between practices is relatively large.

Coronary heart disease¹ - estimated number of patients in Scotland consulting a GP or practice nurse at least once in the financial year 2009/10², ³ per 1,000 patients registered; by gender and age group

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Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The rules for dealing with duplication in practice-employed nurse data were expanded for the publication of 22 February 2011 and applied to all new and historic data. This has resulted in slightly lower estimated numbers of consultations for practice nurses than published previously, particularly for the earlier years shown above. Therefore figures shown here are not strictly comparable to those published previously. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.
Based on ISD's Read code groupings (RCGs) 'Angina', 'Acute myocardial infarction', 'Ischaemic heart diseases excluding angina & acute myocardial infarction' and 'CHD monitoring'. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.

Based on 60 PTI practices that submitted complete GP and practice nurse data for the year ending 31 March 2010. Rates are standardised by deprivation.

Population source: Community Health Index (CHI) record, as at 30 September 2009.

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The minor changes made for the publication of 22 February 2011 have a minimal impact on estimated numbers of patients; however these make the figures given in this current publication not strictly comparable to those provided prior to 22nd February 2011. For further information see 'Note of Revisions' either on the PTI website or within Appendix 1 of this report.

**Number of consultations**

The chart below shows the estimated numbers of consultations in Scotland for CHD for the seven financial years 2003/04 to 2009/10, by staff discipline. All estimates are standardised to the Scottish population by age, sex and deprivation to account for any differences in these characteristics between the PTI sample population and the Scottish practice population. These figures are provided in tabular format in an Excel document (22KB), which includes 95% confidence intervals for all estimates.

The chart shows that following a steady drop between 2004/05 and 2007/08, the numbers have started rising again over the last three years. The initial drop is less apparent in the estimated numbers of patients seen over the same time period (see the Excel document). This suggests that over the 2004/05 to 2007/08 time period the average number of contacts per CHD patient somewhat decreased, perhaps because of improved efficiency in the practice or improved treatment methods requiring less intervention. In 2009/10 both numbers of patients and numbers of consultations rose, indicating there may be a real increase in numbers of patients treated for CHD, although sizeable confidence intervals suggest that these changes may not be statistically significant. The initial increase from 2003/04 to 2004/05 may relate in part to the introduction of the Quality & Outcomes Framework (QOF) as part of the new GP contract in April 2004. CHD is one of the conditions covered by QOF indicators and it may be that practices increased their use of CHD-related coding around this time.

A high proportion of the contacts for CHD were with a practice nurse, reflecting the fact that chronic disease management is often carried out by nurses. In some practices there may be increased involvement in CHD care by nursing staff not employed by the practice (and hence not recording data for PTI) resulting in a reduction in the number of contacts by GPs and practice-employed nurses reported here. This may in particular explain the notable drop in practice nurse contacts from 2006/07 to 2007/08. The relatively large overall drop in practice nurse contacts recorded by PTI in 2007/08 is discussed in more detail on the ‘Total Contacts by Staff Discipline’ page of this report.
Coronary heart disease\(^1\) - estimated number of consultations with a GP or practice-employed nurse in Scotland in the financial years 2003/04 to 2009/10\(^2\), \(^3\); by staff discipline

\[\text{Number of patients consulting} \]

The graph below shows the estimated number of patients in Scotland (per 1,000 patients registered) who consulted either a GP or practice-employed nurse for COPD (chronic obstructive pulmonary disease) at least once in the year ending 31 March 2010, by gender and age group. All estimates are standardised by deprivation to the Scottish population to account for any differences between the PTI sample population and the Scottish practice population in levels of deprivation.

As expected, consultation rates for COPD increase with increasing age. The rates of males consulting for COPD were higher than for females in the older age categories (65-74 and 75+), but in the younger age groups females were more likely to contact their practice for COPD.

These figures and comparable figures for 2003/04 to 2008/09 are also provided in tabular format in an Excel document (98KB), which also contains 95% confidence intervals for all
estimates. The Excel table shows a total estimate of around 108,000 patients seen in the most recent year for COPD, with a 95% confidence interval between 94,000 and 122,000 patients. The confidence intervals are substantial for all age classes, suggesting limited precision of the estimates. Large confidence intervals would be expected when variation between practices is large, in particular for estimates based on relatively small numbers of patients.

**COPD\(^1\) - estimated number of patients in Scotland consulting a GP or practice nurse at least once in the financial year 2009/10\(^2,3\) per 1,000 patients registered; by gender and age group**

![Chart showing estimated number of patients consulting per 1,000 registered by gender and age group]

1. Based on ISD's Read code groupings (RCGs) 'COPD'. Further information on RCGs can be found either on the [PTI website](#) or within Appendix 1 of this report.
2. Based on 60 PTI practices that submitted complete GP and practice nurse data for the year ending 31 March 2010.
3. Rates are standardised by deprivation.

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The minor changes made for the publication of 22 February 2011 have a minimal impact on estimated numbers of patients; however these make the figures given in this current publication not strictly comparable to those provided prior to 22nd February 2011. For further information see ‘Note of Revisions’ either on the [PTI website](#) or within Appendix 1 of this report.

**Number of consultations**

The chart below shows the estimated numbers of consultations in Scotland for chronic obstructive pulmonary disease (COPD) for the seven financial years 2003/04 to 2009/10, by staff discipline. All estimates are standardised to the Scottish population by age, gender and deprivation to account for any differences in these characteristics between the PTI sample population and the Scottish practice population. The figures in the chart below are also provided in tabular format in an [Excel document](#) (22KB), including 95% confidence intervals for all estimates.

The estimated number of contacts with GPs decreased markedly over the first four to five years of this time period, but this was largely counterbalanced by an increase in the estimated number of contacts with practice nurses. This reflects the fact that routine monitoring of many chronic conditions has, over the period of time shown, been increasingly carried out by nurses. The number of patients seen by either GPs or practice
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nurses has not changed substantially over this time period (see the Excel document). Over the last year in particular the number of GP contacts appears to have grown again, and the same rise was seen in the estimated numbers of patients. This is consistent with a rise in the prevalence of COPD as reported by other sources (see for example the ScotPHO website).

**COPD**¹ - estimated number of consultations with a GP or practice-employed nurse in Scotland in the financial years 2003/04 to 2009/10², ³; by staff discipline

![COPD graph](image)

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¹ Health visitor and district nurse data are not available from the financial year 2006/07 onwards.
² Based on ISD's Read Code Grouping (RCG) 'COPD'. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.
³ Population source: Community Health Index (CHI) record, as at 30 September 2003 to 2009.

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**Dementia**

**Number of patients consulting**

The graph below shows the estimated number of patients in Scotland (per 1,000 registered with a general practice) who have consulted either a GP or practice nurse for dementia at least once in the year ending 31 March 2010, by gender and age group. All estimates are standardised by deprivation to the Scottish population to account for any differences between the PTI sample population and the Scottish practice population in levels of deprivation.

As expected, the estimated proportions of patients consulting for dementia were very low in the age groups up to and including 55-64 years and highest for those aged 75 years and
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over. There is some variation between individual years as to whether consultation rates in the over 75s are higher in males or females. However, because dementia becomes more prevalent with age, and women live on average longer than men, the absolute numbers of women consulting for dementia in the oldest age group are invariably higher than the numbers of men.

These figures and comparable figures for 2003/04 to 2008/09 are also provided in tabular format in an Excel document (90KB), which also contains 95% confidence intervals for all estimates. The Excel table shows a total estimate of around 22,000 patients seen in the most recent year for dementia, with a 95% confidence interval between 19,000 and 26,000 patients. The width of the confidence intervals is inversely correlated to the precision of the estimates, and can be expected to be large when variation between practices is large (in particular for any estimate based on relatively small numbers, for example in small age categories).

Dementia\(^1\) - estimated number of patients in Scotland consulting a GP or practice nurse at least once in the financial year 2009/10\(^2\), \(^3\) per 1,000 patients registered; by gender and age group

![Bar chart showing patients consulting per 1,000 registered by gender and age group]

\(^1\) Based on ISD’s Read Code Grouping (RCG) 'Dementia'. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.

\(^2\) Based on 60 PTI practices that submitted complete GP and practice nurse data for the year ending 31 March 2010. Rates are standardised by deprivation.

\(^3\) Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The minor changes made for the publication of 22 February 2011 have a minimal impact on estimated numbers of patients; however these make the figures given in this current publication not strictly comparable to those provided prior to 22nd February 2011. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.

**Number of consultations**

The chart below shows the estimated numbers of consultations in Scotland for dementia for the seven financial years 2003/04 to 2009/10, by staff discipline. All estimates are standardised to the Scottish population by age, gender and deprivation to account for any differences in these characteristics between the PTI sample population and the Scottish
practice population. These figures are provided in tabular format in an Excel document (22KB), which includes 95% confidence intervals for all estimates.

After an initial drop from 2003/04 to 2004/05, the estimated number of GP or practice-employed nurse contacts for dementia has steadily been rising. The rise in consultations over this time period may in part be a result of an ageing population in Scotland, and since 2006/07 it may also reflect incentives to review dementia care that were introduced as part of the Quality & Outcomes Framework (QOF) for 2006/07. Clearly district nurses also play a major part in the care of dementia patients, as demonstrated by the figures up to 2005/06 (equivalent district nurse data are not available for more recent years – for further details see ‘What is PTI?’ on either the PTI website or in Appendix 1 of this report).

Dementia\(^1\) - estimated number of consultations in Scotland in the financial years 2003/04 to 2009/10\(^2,3\), by staff discipline

![Graph showing estimated number of consultations by staff discipline for selected financial years from 2003/04 to 2009/10.](image)

\* Health visitor and district nurse data are not available from the financial year 2006/07 onwards.
\(^1\) Based on ISD's Read Code Grouping (RCG) 'Dementia'. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.
\(^2\) Based on 59, 53, 51, 49, 48, 58 and 60 PTI practices that submitted complete data for the years ending 31 March 2004 to 2010, respectively. Figures are standardised by age, gender and deprivation.
\(^3\) Population source: Community Health Index (CHI) record, as at 30 September 2003 to 2009.

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The rules for dealing with duplication in practice-employed nurse data were expanded for the publication of 22 February 2011 and applied to all new and historic data. This has resulted in slightly lower estimated numbers of consultations for practice nurses than published previously, particularly for the earlier years shown above. Therefore figures shown here are not strictly comparable to those published previously. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.

**Depression**

**Number of patients consulting**

The graph below shows the estimated number of patients in Scotland (per 1,000 registered with a practice) who consulted either a GP or practice-employed nurse for depression and other affective (mood related) disorders at least once in the year ending 31 March 2010, by
gender and age group. All estimates are standardised by deprivation to the Scottish population to account for any differences between the PTI sample population and the Scottish practice population in levels of deprivation.

As expected on the basis of other evidence\(^1\), the rates were higher for females than for males in all age groups. The total numbers of females estimated to consult for depression annually are more than double the estimate for males.

These figures and comparable figures for 2003/04 to 2008/09 are also provided in tabular format in an [Excel document](#) (110KB), which also contains 95% confidence intervals for all estimates. The Excel table shows a total estimate of around 158,000 patients seen in the most recent year for depression, with a 95% confidence interval between 134,000 and 183,000 patients. Fairly wide confidence intervals reflect limited precision of the estimate, and can be expected when variation between practices is large and when the estimate is based on relatively small numbers of patients (for example in the youngest age group).

### Depression\(^2\) - estimated number of patients in Scotland consulting a GP or practice nurse at least once in the financial year 2009/10\(^3, 4\) per 1,000 patients registered; by gender and age group


\(^2\) Based on ISD's Read Code Grouping (RCG) 'Depression and other affective disorders'. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.

\(^3\) Based on 60 PTI practices that submitted complete GP and practice nurse data for the year ending 31 March 2010. Rates are standardised by deprivation.

\(^4\) Population source: Community Health Index (CHI) record, as at 30 September 2009.

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The minor changes made for the publication of 22 February 2011 have a minimal impact on estimated numbers of patients; however these make the figures given in this current publication not strictly comparable to those provided prior to 22nd February 2011. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.
**Number of consultations**

The chart below shows the estimated numbers of consultations in Scotland for depression for the seven financial years 2003/04 to 2009/10, by staff discipline. All estimates are standardised to the Scottish population by age, gender and deprivation to account for any differences in these characteristics between the PTI sample population and the Scottish practice population. These figures are provided in tabular format in an [Excel document (22KB)](#), which includes 95% confidence intervals for all estimates.

It is clear from the chart that the vast majority of consultations for depression were with a GP and that the proportions involving the other disciplines were relatively small. The total numbers of consultations where depression was coded as a reason for consultation have decreased considerably from 2003/04 to 2007/08, but the decrease is much smaller over the more recent years. The decline is likely mainly a result of clinicians having become more precise in their coding. Previously, patients with depression-like symptoms may have been given a code referring to diagnosed depression, whereas now they may use a more general code for a psychological symptom or sign and not use a depression code until the diagnosis has been confirmed. The inclusion in 2006/07 of depression as a condition monitored through the [Quality & Outcomes Framework (QOF)](#) of the new GP contract, with its associated rules around coding depression, may have had a particular impact, particularly in relation to the relatively larger drop in depression codes used in consultation data between 2005/06 and 2006/07.

**Depression**¹ - estimated number of consultations with a GP or practice-employed nurse in Scotland in the financial years 2003/04 to 2009/10²,³; by staff discipline

![Depression consultations chart](#)

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¹ Based on ISD's Read Code Grouping (RCG) 'Depression and other affective disorders'. Further information on RCGs can be found either on the [PTI website](#) or within Appendix 1 of this report.

² Based on 59, 53, 51, 49, 48, 58 and 60 PTI practices that submitted complete data for the years ending 31 March 2004 to 2010, respectively. Figures are standardised by age, gender and deprivation.

³ Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The rules for dealing with duplication in practice-employed nurse data were expanded for the publication of 22 February 2011 and applied to all new and historic data. This has resulted in slightly lower estimated numbers of consultations for practice nurses than published previously, particularly for the earlier years shown above.
Therefore figures shown here are not strictly comparable to those published previously. For further information see 'Note of Revisions' either on the PTI website or within Appendix 1 of this report.

Diabetes

**Numbers of patients consulting**

The graph below shows the estimated number of patients in Scotland (per 1,000 patients registered with a practice) who consulted either a GP or practice-employed nurse for diabetes at least once in the year ending 31 March 2010, by gender and age group. Figures are standardised by deprivation to the Scottish population to account for any differences between the PTI sample population and the Scottish practice population in levels of deprivation.

The chart shows that in most age groups relatively more males than females consulted for diabetes, and that rates largely increase with age. The clinical codes used in data recording for PTI mean that it is often not possible to distinguish between patients consulting for type 1 versus type 2 diabetes, therefore the figures published here refer to both types combined.

These figures and comparable figures for 2003/04 to 2008/09 are also provided in tabular format in an Excel document (110KB), which also contains 95% confidence intervals for all estimates. The Excel table shows a total estimate of around 221,000 patients seen in the most recent year for diabetes, with a 95% confidence interval between 207,000 and 235,000 patients. Fairly wide confidence intervals reflect limited precision of the estimate, and can be expected when variation between practices is large (in particular for any estimate based on relatively small numbers).

The Scottish Public Health Observatory (ScotPHO) website (see http://www.scotpho.org.uk/home/Healthwell-beinganddisease/Diabetes/diabetes_keypoints.asp) provides more information on diabetes from a number of sources. It also provides useful links to other sites, among these for the annual Scottish Diabetes Survey. The most recent survey carried out in 2009 can be found at the publications section of the Diabetes in Scotland website. The all ages/both genders estimate from PTI of the number of patients consulting in 2009/10 was 40.3 per 1,000 registered patients, which is broadly consistent with the survey findings.
Diabetes\(^1\) - estimated number of patients in Scotland consulting a GP or practice nurse at least once in the financial year 2009/10\(^2\), \(^3\) per 1,000 patients registered; by gender and age group

![Bar chart showing estimated number of consultations per age group and gender.](image)

\(^1\) Based on ISD's Read Code Grouping (RCG) 'Diabetes'. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.

\(^2\) Based on 60 PTI practices that submitted complete GP and practice nurse data for the year ending 31 March 2010. Rates are standardised by deprivation.

\(^3\) Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The minor changes made for the publication of 22 February 2011 have a minimal impact on estimated numbers of patients; however these make the figures given in this current publication not strictly comparable to those provided prior to 22nd February 2011. For further information see 'Note of Revisions' either on the PTI website or within Appendix 1 of this report.

**Number of consultations**

The chart below shows the estimated numbers of consultations in Scotland for diabetes for the seven financial years 2003/04 to 2009/10, by staff discipline. Figures are standardised to the Scottish population by age, sex and deprivation to account for any differences in these characteristics between the PTI sample population and the Scottish practice population. These figures also provided in tabular format in an Excel document (22KB), which includes 95% confidence intervals for all estimates. Because from PTI it is often not possible to distinguish between patients consulting for type 1 versus type 2 diabetes, the figures published here refer to both types of the condition combined.

The chart shows that the majority of the patient contacts were with a nurse rather than a GP, and data from the years 2003/04 to 2005/06 suggests that district nurses also play a major part in caring for patients with diabetes. The estimated numbers of GP and practice nurse contacts for diabetes have risen gradually over the seven-year time period, with a slight dip in 2007/08. The apparent dip is a consequence mainly of a decrease in the number of practice nurses contacts being recorded for the PTI data scheme (a particular issue in 2007/08), potentially because of a shift to diabetes clinics being run by nurses employed by the Board rather than the practice (Board-employed nurses do not usually
record data for PTI). See for further discussion of this issue the 'Total Contacts by Staff Discipline' page of this report.

**Diabetes**\(^1\) - estimated number of consultations with a GP or practice-employed nurse in Scotland in the financial years 2003/04 to 2009/10\(^2,3\); by staff discipline

![Graph showing estimated number of consultations by staff discipline](Image)

\(^1\) Health visitor and district nurse data are not available from the financial year 2006/07 onwards.

\(^2\) Based on ISD's Read Code Grouping (RCG) 'Diabetes'. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.

\(^3\) Based on 59, 53, 51, 49, 48, 58 and 60 PTI practices that submitted complete data for the years ending 31 March 2004 to 2010, respectively. Figures are standardised by age, gender and deprivation.

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The rules for dealing with duplication in practice-employed nurse data were expanded for the publication of 22 February 2011 and applied to all new and historic data. This has resulted in slightly lower estimated numbers of consultations for practice nurses than published previously, particularly for the earlier years shown above. Therefore figures shown here are not strictly comparable to those published previously. For further information see 'Note of Revisions' either on the PTI website or within Appendix 1 of this report.

**Eating Disorders**

**Number of patients consulting**

The graph below shows the estimated number of patients in Scotland per 1,000 patients registered with a practice who consulted either a GP or practice-employed nurse for eating disorders at least once in the year ending 31 March 2010, by gender and age group. Included in the definition of eating disorders are anorexia nervosa, bulimia and other less common eating disorders. Figures are standardised by deprivation to the Scottish population to account for any differences between the PTI sample population and the Scottish practice population in levels of deprivation.

The graph confirms that eating disorders are a particular issue in 15 to 24 year old females. Numbers of consultations for older patients are much lower and are therefore are not shown subdivided into finer age categories.
These figures and comparable figures for 2003/04 to 2008/09 are also provided in tabular format in an Excel document (80KB), which also contains 95% confidence intervals for all estimates. The Excel table shows a total estimate of around 4,400 patients seen in the most recent year for eating disorders, with a 95% confidence interval between 3,100 and 5,600 patients. Eating disorders are not recorded very frequently as reason for consultation so the estimates are based on low numbers of patients and there is sometimes substantial variation between individual practices in the numbers reported. This is reflected in fairly wide confidence intervals, which means that these estimates have limited precision. This should be kept in mind when interpreting these figures.

Eating disorders\(^1\) - estimated number of patients in Scotland consulting a GP or practice nurse at least once in the financial year 2009/10\(^2\); per 1,000 patients registered; by gender and age group

<table>
<thead>
<tr>
<th>Age group</th>
<th>Patients consulting per 1,000 registered</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 years &amp; under</td>
<td>0.5 (Males); 0.5 (Females)</td>
</tr>
<tr>
<td>15-24 years</td>
<td>3.5 (Males); 3.5 (Females)</td>
</tr>
<tr>
<td>25 years and over</td>
<td>1.0 (Males); 1.0 (Females)</td>
</tr>
</tbody>
</table>

1. Read codes are specifically selected for analysis of this condition. Please contact the PTI team for further clarification.
2. Based on 60 PTI practices that submitted complete GP and practice nurse data for the year ending 31 March 2010. Rates are standardised by deprivation.
3. Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The minor changes made for the publication of 22 February 2011 have a minimal impact on estimated numbers of patients; however these make the figures given in this current publication not strictly comparable to those provided prior to 22nd February 2011. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.

Number of consultations

The chart below shows the estimated numbers of consultations in Scotland for eating disorders for the seven financial years 2003/04 to 2009/10, by staff discipline. All estimates are standardised to the Scottish population by age, sex and deprivation to account for any differences in these characteristics between the PTI sample population and the Scottish practice population. These figures are provided in tabular format in an Excel document (22KB), which includes 95% confidence intervals for all estimates.

The chart shows that most of the consultations for eating disorders were with GPs, with a generally much smaller estimated number for practice nurses. There was no clear pattern in the number of consultations for eating disorders over the seven years although estimates
for 2009/10 seem to be the highest so far, but given the large confidence intervals the differences between the years should not be considered significant.

**Eating disorders**\(^1\) - estimated number of consultations with a GP or practice-employed nurse in Scotland in the financial years 2003/04 to 2009/10\(^2,3\), by staff discipline

![Graph showing estimated number of consultations](image)

\(^*\) Health visitor and district nurse data are not available from the financial year 2006/07 onwards.
\(^1\) Read codes are specifically selected for analysis of this condition. Please contact the [PTI team](#) for further clarification.
\(^2\) Based on 59, 53, 51, 49, 48, 58 and 60 PTI practices that submitted complete data for the years ending 31 March 2004 to 2010, respectively. Figures are standardised by age, gender and deprivation.
\(^3\) Population source: Community Health Index (CHI) record, as at 30 September 2003 to 2009.

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The rules for dealing with duplication in practice-employed nurse data were expanded for the publication of 22 February 2011 and applied to all new and historic data. This has resulted in slightly lower estimated numbers of consultations for practice nurses than published previously, particularly for the earlier years shown above. Therefore figures shown here are not strictly comparable to those published previously. For further information see ‘Note of Revisions’ either on the [PTI website](#) or within Appendix 1 of this report.

**Epilepsy**

**Number of patients consulting**

The graph below shows the estimated number of patients in Scotland per 1,000 patients registered with a practice who consulted either a GP or practice-employed nurse for epilepsy at least once in the year ending 31 March 2010, by gender and age group. Figures are standardised by deprivation to the Scottish population to account for any differences between the PTI sample population and the Scottish practice population in levels of deprivation. These figures and comparable figures for 2003/04 to 2008/09 are also provided in tabular format in an [Excel document](#) (111KB), which includes 95% confidence intervals for all estimates. These estimates are based on small numbers, with wide confidence intervals. Estimates will therefore have limited reliability, which needs to be kept in mind when interpreting the figures shown here.
The chart shows that the estimated rates of patients consulting for epilepsy, are on the whole highest for adults aged 35 and over and substantially lower in children. However, there is a lot of fluctuation between years in the rates for different age groups, and in differences between the genders, which is likely to reflect small numbers of patients. There is some evidence that people with well-controlled epilepsy do not consult frequently, and as a result the total figure of just over 32,000 patients seen for epilepsy in 2009/10 (with a confidence interval between 28,000 and 36,000) as shown in the Excel file (based on annual consultation rates) is much lower than the true population prevalence of epilepsy in Scotland.

**Epilepsy**¹ - estimated number of patients in Scotland consulting a GP or practice nurse at least once in the financial year 2009/10²,³ per 1,000 patients registered; by gender and age group

![Chart showing estimated number of patients consulting for epilepsy by age and gender]

¹ Based on ISD's Read Code Grouping (RCG) 'Epilepsy'. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.
² Based on 60 PTI practices that submitted complete GP and practice nurse data for the year ending 31 March 2010. Rates are standardised by deprivation.
³ Population source: Community Health Index (CHI) record, as at 30 September 2009.

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The minor changes made for the publication of 22 February 2011 have a minimal impact on estimated numbers of patients; however these make the figures given in this current publication not strictly comparable to those provided prior to 22nd February 2011. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.

**Number of consultations**

The chart below shows the estimated numbers of consultations in Scotland for epilepsy for the seven financial years 2003/04 to 2009/10, by staff discipline. All estimates are standardised to the Scottish population by age, sex and deprivation to account for any differences in these characteristics between the PTI sample population and the Scottish practice population. These figures are provided in tabular format in an Excel document (22KB), which includes 95% confidence intervals for all estimates.
The estimated number of GP and practice nurse contacts for epilepsy appears to fluctuate substantially over the years with a large rise from 2003/04 to 2004/05 but a decrease in the following two years. However, these estimates have large confidence intervals (see the Excel document) so the variability suggested by this chart needs to be interpreted with caution. Practice nurses are shown to have a small but appreciable role in the care of epilepsy patients.

**Epilepsy** - estimated number of consultations with a GP or practice-employed nurse in Scotland in the financial years 2003/04 to 2009/10\(^1\), by staff discipline

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* Health visitor and district nurse data are not available from the financial year 2006/07 onwards.
1. Based on ISD's Read Code Grouping (RCG) 'Epilepsy'. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.
2. Based on 59, 53, 51, 49, 48, 58 and 60 PTI practices that submitted complete data for the years ending 31 March 2004 to 2010, respectively. Figures are standardised by age, gender and deprivation.
3. Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The rules for dealing with duplication in practice-employed nurse data were expanded for the publication of 22 February 2011 and applied to all new and historic data. This has resulted in slightly lower estimated numbers of consultations for practice nurses than published previously, particularly for the earlier years shown above. Therefore figures shown here are not strictly comparable to those published previously. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.

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**Hypertension**

**Number of patients consulting**

The graph below shows the estimated number of patients in Scotland (per 1,000 patients registered with a practice) who consulted either a GP or practice-employed nurse for hypertension (high blood pressure) at least once in the year ending 31 March 2010, by gender and age group. All estimates are standardised by deprivation to the Scottish population to account for any differences between the PTI sample population and the Scottish practice population in levels of deprivation.
The graph shows that the rates increased sharply with age, and that differences in consultation rates between males and females are small.

These figures and comparable figures for 2003/04 to 2008/09 are provided in tabular format in an Excel document (106KB), which also contains 95% confidence intervals for all estimates. The Excel table shows a total estimate of around 1,201,000 patients seen in the most recent year for hypertension, with a 95% confidence interval between 1,091,000 and 1,312,000 patients. Because hypertension is quite common, confidence intervals are relatively narrow, indicating better precision of the estimates.

**Hypertension**¹ - estimated number of patients in Scotland consulting a GP or practice nurse at least once in the financial year 2009/10²,³ per 1,000 patients registered; by gender and age group

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¹ Based on ISD's Read Code Grouping (RCG) 'Hypertension'. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.

² Based on 60 PTI practices that submitted complete GP and practice nurse data for the year ending 31 March 2010. Rates are standardised by deprivation.

³ Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The minor changes made for the publication of 22 February 2011 have a minimal impact on estimated numbers of patients; however these make the figures given in this current publication not strictly comparable to those provided prior to 22nd February 2011. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.

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**Number of consultations**

The chart below shows the estimated numbers of consultations in Scotland for hypertension (high blood pressure) for the seven financial years 2003/04 to 2009/10, by staff discipline. Figures are standardised to the Scottish population by age, sex and deprivation to account for any differences in these characteristics between the PTI sample population and the Scottish practice population. These figures are provided in tabular format in an Excel document (22KB), which includes 95% confidence intervals for all estimates.
The chart shows that more than half of the consultations for hypertension were with practice nurses, in line with the significant contribution of this profession to the management of chronic conditions. The number of GP contacts for hypertension has been fairly stable over the years although there was a dip in 2007/08. The contribution of practices nurses has stayed level if not slightly increased, with the exception of an unexpected dip in 2007/08. This is in line with an overall drop in practice nurse contacts as recorded by PTI in 2007/08, which is discussed in more detail on the ‘Total Contacts by Staff Discipline’ page. However, the overlap in confidence intervals for these years indicates that the drop was not statistically significant.

Hypertension\textsuperscript{1} - estimated number of consultations in Scotland in the financial years 2003/04 to 2009/10\textsuperscript{2, 3} \textsuperscript{, by staff discipline}

\begin{center}
\begin{tabular}{|c|c|c|c|c|c|}
\hline
\textbf{Financial Year} & \textbf{Estimated number of consultations} & \textbf{Health Visitor} & \textbf{District Nurse} & \textbf{Practice Nurse} & \textbf{General Practitioner} \\
\hline
2003/04 & 1,200,000 & & & & \\
2004/05 & 1,200,000 & & & & \\
2005/06 & 1,200,000 & & & & \\
2006/07* & 1,200,000 & & & & \\
2007/08* & 1,200,000 & & & & \\
2008/09* & 1,200,000 & & & & \\
2009/10* & 1,200,000 & & & & \\
\hline
\end{tabular}
\end{center}

\textsuperscript{1} Health visitor and district nurse data are not available from the financial year 2006/07 onwards.
\textsuperscript{1} Based on ISD’s Read Code Grouping (RCG) ‘Hypertension’. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.
\textsuperscript{2} Based on 59, 53, 51, 49, 48, 58 and 60 PTI practices that submitted complete data for the years ending 31 March 2004 to 2010, respectively. Figures are standardised by age, gender and deprivation.
\textsuperscript{3} Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The rules for dealing with duplication in practice-employed nurse data were expanded for the publication of 22 February 2011 and applied to all new and historic data. This has resulted in slightly lower estimated numbers of consultations for practice nurses than published previously, particularly for the earlier years shown above. Therefore figures shown here are not strictly comparable to those published previously. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.

**Hypothyroidism**

**Number of patients consulting**

The graph below shows the estimated number of patients in Scotland (per 1,000 registered with a practice) who consulted either a GP or practice nurse for hypothyroidism at least once in the year ending 31 March 2010, by gender and age group. All estimates are standardised by deprivation to the Scottish population to account for any differences.
between the PTI sample population and the Scottish practice population in levels of deprivation.

The chart shows that relative to the number of patients registered, many more females compared to males consulted their GP or practice nurse for hypothyroidism, and that for the most part rates increased with age.

These figures and comparable figures for 2003/04 to 2008/09 are provided in tabular format in an Excel document (98KB), which also contains 95% confidence intervals for all estimates. The Excel table shows a total estimate of around 87,000 patients seen in the most recent year for hypothyroidism, with a 95% confidence interval between 76,000 and 97,000 patients. Fairly wide confidence intervals reflect limited precision of the estimate, and can be expected when variation between practices is large (in particular for any estimate based on relatively small numbers).

Hypothyroidism\(^1\) - estimated number of patients in Scotland consulting a GP or practice nurse at least once in the financial year 2009/10\(^2\),\(^3\) per 1,000 patients registered; by gender and age group

\[\begin{array}{cccc}
\text{Age group} & \text{Patients consulting per 1,000 registered} \\
34 years & under & 0 & 0 \\
35-44 years & 0 & 0 & 0 \\
45-54 years & 0 & 0 & 0 \\
55-64 years & 0 & 0 & 0 \\
65-74 years & 0 & 0 & 0 \\
75 years and over & 0 & 0 & 0 \\
\end{array}\]

\(^1\) Read codes are specifically selected for analysis of this condition. Please refer to the PTI team for further clarification.

\(^2\) Based on 60 PTI practices that submitted complete GP and practice nurse data for the year ending 31 March 2010. Rates are standardised by deprivation.

\(^3\) Population source: Community Health Index (CHI) record, as at 30 September 2009.

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The minor changes made for the publication of 22 February 2011 have a minimal impact on estimated numbers of patients; however these make the figures given in this current publication not strictly comparable to those provided prior to 22nd February 2011. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.

**Number of consultations**

The chart below shows the estimated numbers of consultations in Scotland for hypothyroidism for the seven financial years 2003/04 to 2009/10, by staff discipline. All estimates are standardised to the Scottish population by age, sex and deprivation to account for any differences in these characteristics between the PTI sample population and the Scottish practice population.
More than half of the consultations were with a practice nurse, reflecting their large involvement in managing chronic conditions. The estimates seemed to decrease from 2004/05 to 2007/08 but increased quite sharply from 2007/08 to 2009/10. The rather large ‘dip’ in 2007/08, in particular for practice nurses, may relate to some practices shifting to using nurses not employed by the practice but (for example) by NHS Boards. Nurses that are NHS Board employees rather than practice employees typically do not record consultation data for the PTI scheme. This affected PTI data recording especially in 2007/08 and is discussed in more detail on the ‘Total Contacts by Staff Discipline’ page.

These figures are provided in tabular format in an Excel document (22KB), which includes 95% confidence intervals for all estimates.

Hypothyroidism\(^1\) - estimated number of consultations in Scotland in the financial years 2003/04 to 2009/10\(^2\), \(^3\), by staff discipline

![Graph showing estimated number of consultations for hypothyroidism](image)

\(^1\) Read codes are specifically selected for analysis of this condition. Please refer to the PTI team for further clarification

\(^2\) Based on 59, 53, 51, 49, 48, 58 and 60 PTI practices that submitted complete data for the years ending 31 March 2004 to 2010.

\(^3\) Population source: Community Health Index (CHI) record, as at 30 September 2003 to 2009.

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The rules for dealing with duplication in practice-employed nurse data were expanded for the publication of 22 February 2011 and applied to all new and historic data. This has resulted in slightly lower estimated numbers of consultations for practice nurses than published previously, particularly for the earlier years shown above. Therefore figures shown here are not strictly comparable to those published previously. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.

Multiple Sclerosis

**Number of patients consulting**

The graph below shows the estimated number of patients in Scotland (per 1,000 patients registered with a practice) who consulted either a GP or practice-employed nurse for multiple sclerosis at least once in the year ending 31 March 2010, by gender and age.
group. Figures are standardised by deprivation to the Scottish population to account for any differences between the PTI sample population and the Scottish practice population in levels of deprivation. These figures and comparable figures for 2003/04 to 2008/09 are provided in tabular format in an Excel document (90KB), which also contains 95% confidence intervals for all estimates.

Multiple sclerosis is a relatively uncommon condition with just an estimated 8,700 patients consulting a GP or practice nurse in Scotland in the most recent year (with a confidence interval between 4,800 and 12,600 patients; see Excel table linked to above). The estimates are based on small numbers of patients, with numbers that can vary substantially between practices, resulting in wide confidence intervals and hence limited precision of the estimates.

The chart shows that in all age groups the estimated rates of patients in Scotland consulting for Multiple Sclerosis were much higher for females compared to males. The highest number of patients was in the age group of 45 to 54 years of age. It should be noted that a significant amount of care for patients with MS is likely to be provided by health professionals other than GPs or practice nurses, and any patient exclusively cared for by these other staff would not be included in PTI figures. As multiple sclerosis is often a relapsing and remitting disorder patients may not consult their GP regularly for the condition. For all these reasons the estimated number of patients consulting their GP practice (as shown here) is likely to be much lower than the total number of patients with this condition.

Multiple Sclerosis\(^1\) - estimated number of patients in Scotland consulting a GP or practice nurse at least once in the financial year 2009/10\(^2\), per 1,000 patients registered; by gender and age group

\(^1\) Based on ISD’s Read Code Grouping (RCG) ‘Multiple Sclerosis’. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.

\(^2\) Based on 60 PTI practices that submitted complete GP and practice nurse data for the year ending 31 March 2010. Rates are standardised by deprivation.

\(^3\) Population source: Community Health Index (CHI) record, as at 30 September 2009.

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The minor changes made for the publication of 22 February 2011 have a minimal impact on estimated numbers of patients; however these make the figures given in this current publication not strictly comparable to
those provided prior to 22nd February 2011. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.

**Number of consultations**

The chart below shows the estimated numbers of consultations in Scotland for multiple sclerosis for the seven financial years 2003/04 to 2009/10, by staff discipline. Figures are standardised to the Scottish population by age, sex and deprivation to account for any differences in these characteristics between the PTI sample population and the Scottish practice population. These figures are provided in tabular format in an Excel document (22KB), which includes 95% confidence intervals for all estimates.

The chart shows that over the most recent years the estimated number of contacts with GPs for Multiple Sclerosis has increased quite markedly. District nurses appeared to have a large part in the patient care for Multiple Sclerosis patients, as can be seen for the years 2003/04 to 2005/06, when data for this discipline were available through PTI. The involvement of practice nurses, although relatively stable, was much more limited in comparison.

### Multiple sclerosis¹ - estimated number of consultations with a GP or practice-employed nurse in Scotland in the financial years 2003/04 to 2009/10², ³, by staff discipline

* Health visitor and district nurse data are not available from the financial year 2006/07 onwards.

¹ Based on ISD's Read Code Grouping (RCG) ‘Multiple sclerosis’. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.

² Based on 59, 53, 51, 49, 48, 58 and 60 PTI practices that submitted complete data for the years ending 31 March 2004 to 2010, respectively. Figures are standardised by age, gender and deprivation.

³ Population source: Community Health Index (CHI) record, as at 30 September 2003 to 2009.

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The rules for dealing with duplication in practice-employed nurse data were expanded for the publication of 22 February 2011 and applied to all new and historic data. This has resulted in slightly lower estimated numbers of consultations for practice nurses than published previously, particularly for the earlier years shown above. Therefore figures shown here are not strictly comparable to those published previously. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.
Osteoarthritis

Number of patients consulting

The graph below shows the estimated number of patients in Scotland (per 1,000 registered with a practice) who consulted either a GP or practice-employed nurse for osteoarthrosis (also commonly known as osteoarthritis) at least once in the year ending 31 March 2010, by gender and age group. Figures are standardised by deprivation to the Scottish population to account for any differences between the PTI sample population and the Scottish practice population in levels of deprivation.

The chart shows, as expected, that the rate of patients consulting for osteoarthrosis increased with age and that in all age groups rates are higher for females than for males.

These figures and comparable figures for 2003/04 to 2008/09 are also provided in tabular format in an Excel document (97KB), which also contains 95% confidence intervals for all estimates. The Excel table shows a total estimate of around 80,000 patients seen in the most recent year for osteoarthrosis, with a 95% confidence interval between 71,000 and 89,000 patients. Fairly wide confidence intervals reflect limited precision of the estimate, and can be expected when variation between practices is large (in particular for any estimate based on relatively small numbers).

Osteoarthritis¹ - estimated number of patients in Scotland consulting a GP or practice nurse at least once in the financial year 2009/10²,³ per 1,000 patients registered; by gender and age group

1 Based on ISD's Read Code Grouping (RCG) 'Osteoarthrosis'. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.
2 Based on 60 PTI practices that submitted complete GP and practice nurse data for the year ending 31 March 2010. Rates are standardised by deprivation.
3 Population source: Community Health Index (CHI) record, as at 30 September 2009.

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The minor changes made for the publication of 22 February 2011 have a minimal impact on estimated numbers of patients; however these make the figures given in this current publication not strictly comparable to those provided prior to 22nd February 2011. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.
**Number of consultations**

The chart below shows the estimated numbers of consultations in Scotland for osteoarthrosis (also commonly known as osteoarthritis) for the seven financial years 2003/04 to 2009/10, by staff discipline. Figures are standardised to the Scottish population by age, sex and deprivation to account for any differences in these characteristics between the PTI sample population and the Scottish practice population. These figures are provided in tabular format in an [Excel document](#) (22KB), which includes 95% confidence intervals for all estimates.

The chart suggests that the decrease in the estimated annual numbers of contacts for osteoarthrosis observed from 2003/04 to 2006/07 has halted and in the most recent years figures have stayed fairly stable. The vast majority of the contacts for this condition were with GPs rather than with practice nurses. Based on figures from 2003/04 to 2005/06 it appears that district nurses also have a small but not insignificant share of contacts for this condition (figures are not available for later years).

**Osteoarthrosis**¹ - estimated number of consultations with a GP or practice-employed nurse in Scotland in the financial years 2003/04 to 2009/10²,³, by staff discipline

<table>
<thead>
<tr>
<th>Financial Year</th>
<th>Estimated number of consultations</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003/04</td>
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<td>2004/05</td>
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<td>2006/07*</td>
<td>100,000</td>
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<tr>
<td>2007/08*</td>
<td>50,000</td>
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<td>2008/09*</td>
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</tr>
<tr>
<td>2009/10*</td>
<td>0</td>
</tr>
</tbody>
</table>

¹ Health visitor and district nurse data are not available from the financial year 2006/07 onwards.
² Based on ISD's Read Code Grouping (RCG) 'Osteoarthrosis'. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.
³ Based on 59, 53, 51, 49, 48, 58 and 60 PTI practices that submitted complete data for the years ending 31 March 2004 to 2010, respectively. Figures are standardised by age, gender and deprivation.

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The rules for dealing with duplication in practice-employed nurse data were expanded for the publication of 22 February 2011 and applied to all new and historic data. This has resulted in slightly lower estimated numbers of consultations for practice nurses than published previously, particularly for the earlier years shown above. Therefore figures shown here are not strictly comparable to those published previously. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.
Stroke

Number of patients consulting

The graph below shows the estimated number of patients in Scotland (per 1,000 registered with a practice) who consulted either a GP or practice-employed nurse for stroke (including Transient Ischaemic Attacks or TIAs) at least once in the year ending 31 March 2010, by gender and age group. Figures are standardised by deprivation to the Scottish population to account for any differences between the PTI sample population and the Scottish practice population in levels of deprivation.

The chart shows that the number of patients consulting for stroke/TIA increased with age and that in most age groups more males than females (relative to numbers registered) consulted their practice for this condition. In absolute terms, in the oldest age groups (65-74 and 75+) almost as many females consulted for this condition than males, which is due to the longer life expectancy of females and hence the predominance of females within this age group.

These figures and comparable figures for 2003/04 to 2008/09 are provided in tabular format in an Excel document (96KB), which also contains 95% confidence intervals for all estimates. The Excel table shows a total estimate of over 43,000 patients seen in the most recent year for stroke, with a 95% confidence interval between 37,000 and 50,000 patients. This fairly wide confidence interval reflects the precision of such an estimate, resulting from substantial variation between practices and a relatively small number of cases in the sample.

Stroke\(^1\) - estimated number of patients in Scotland consulting a GP or practice nurse at least once in the financial year 2009/10\(^2\), \(^3\) per 1,000 patients registered; by gender and age group

---

\(^1\) Based on ISD's Read Code Grouping (RCG) 'Stroke' and 'Transient cerebral ischaemic attacks & related syndromes'. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.

\(^2\) Based on 60 PTI practices that submitted complete GP and practice nurse data for the year ending 31 March 2010. Rates are standardised by deprivation.

\(^3\) Population source: Community Health Index (CHI) record, as at 30 September 2009.

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The minor changes made for the publication of 22 February 2011 have a minimal impact on...
estimated numbers of patients; however these make the figures given in this current publication not strictly comparable to those provided prior to 22nd February 2011. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.

**Number of consultations**

The chart below shows the estimated numbers of consultations in Scotland for stroke (including Transient ischaemic attacks (TIAs)) for the seven financial years 2003/04 to 2009/10, by staff discipline. Figures are standardised to the Scottish population by age, sex and deprivation to account for any differences in these characteristics between the PTI sample population and the Scottish practice population. These figures are provided in tabular format in an Excel document (22KB), which includes 95% confidence intervals for all estimates.

The chart shows that the estimated numbers of contacts with a GP for Stroke/TIA, after a decline over the first few years, have become fairly stable, and in the most recent year has risen again. The numbers of practice nurse contacts increased over the first few years but has become more stable over the following years. In the most recent years the numbers of GP contacts were very similar to the numbers for practice nurses. These changes may be reflective in part of improved quality of coding for stroke around the time that the new GP contract was introduced in April 2004. Based on data for 2003/04 to 2005/06, it appears that district nurses also have a very significant role to play in providing care for stroke/TIA patients.

**Stroke\(^1\) - estimated number of consultations with a GP or practice-employed nurse in Scotland in the financial years 2003/04 to 2009/10\(^2\), \(^3\); by staff discipline**

\[\text{Estimated number of consultations} \]

\[\text{Financial Year} \]

* Health visitor and district nurse data are not available from the financial year 2006/07 onwards.

\(^1\) Based on ISD's Read Code Grouping (RCG) 'Stroke' and 'Transient cerebral ischaemic attacks & related syndromes'. Further information on RCGs can be found either on the PTI website or within Appendix 1 of this report.

\(^2\) Based on 59, 53, 51, 49, 48, 58 and 60 general practices that submitted complete data to the PTI scheme for the years ending 31 March 2004 to 2010, respectively. Figures are standardised by age, gender and deprivation.

\(^3\) Population source: Community Health Index (CHI) record, as at 30 September 2003 to 2009.

Note: PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and sometimes updated. The rules for dealing with duplication in practice-employed nurse data were expanded for the publication of 22 February 2011 and applied to all new and historic data. This has resulted in slightly lower estimated numbers of consultations for practice nurses than published previously, particularly for the earlier years shown above.
Therefore figures shown here are not strictly comparable to those published previously. For further information see ‘Note of Revisions’ either on the PTI website or within Appendix 1 of this report.
**Glossary**

**A**
Annual contact rate - number of contacts, per 1,000 registered patients, per year
Annual patient rate - number of patients seen at least once during the year, per year

**B**
BP - Blood pressure

**C**
CHD - Coronary Heart Disease. PTI analysis of this condition includes angina.
COPD - Chronic Obstructive Pulmonary Disease
CHI - Community Health Index - a unique individual identifier that allows counts of people registered with practices in Scotland.

**D**
DN - District nurse

**G**
GP - General medical practitioner

**H**
Healthcare assistant - staff member assisting with simple clinical duties including but not limited to taking blood samples
HV - Health visitor

**I**
ISD - Information Services Division of NHS National Services Scotland

**M**
Modifier - an indicator that was previously added to a Read code, for example to denote whether the contact was for a new occurrence of a condition or a previously existing condition. Due to the PTI dataset review in 2007, this is no longer recorded or used in analysis.

**N**
nGMS - new General Medical Services (GMS) contract, introduced in 2004.

**P**
Phlebotomist - staff member whose primary duty is taking blood samples
PN - Practice nurse; for PTI purposes defined as practice-employed nurses and their clinical assistants (for example, phlebotomists and health care assistants)
PTI - Practice Team Information

**Q**
QOF - Quality and Outcomes Framework

**R**
RCG - Read code grouping
S
SMG - Standard Morbidity Grouping. Superseded by RCGs - Read code Groupings
S&S - Symptoms and signs
SIMD - Scottish Index of Multiple Deprivation
Standardisation- a method of adjusting figures to take account of differences in age, gender or other factors when two different populations are being compared

T
TIA - Transient ischaemic attack. PTI analysis of Stroke includes TIAs
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<th>Name</th>
<th>Time period</th>
<th>File &amp; size</th>
</tr>
</thead>
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<tr>
<td>1</td>
<td>Overall patient contacts in Scotland, by staff discipline.</td>
<td>2003/04 to 2009/10</td>
<td>Excel [33kb]</td>
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<tr>
<td>2</td>
<td>Overall patient contacts by practice, by staff discipline.</td>
<td>2003/04 to 2009/10</td>
<td>Excel [134kb]</td>
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<td>Overall contact rates by gender and age group.</td>
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<td>Overall contact rates by gender and age group.</td>
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<td>Percentage of practice patients seen, by staff discipline.</td>
<td>2003/04 to 2009/10</td>
<td>Excel [37kb]</td>
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<td>Top 10 conditions most seen by GPs and practice nurses.</td>
<td>2003/04 to 2009/10</td>
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<td>8</td>
<td>Top 10 activities carried out most by practice nurses.</td>
<td>2003/04 to 2009/10</td>
<td>Excel [277kb]</td>
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</table>

PTI in relation to Quality & Outcomes Framework (QOF) data

<table>
<thead>
<tr>
<th>Table No.</th>
<th>Name</th>
<th>Time period</th>
<th>File &amp; size</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Patient consultations for QOF conditions as proportion of overall contacts.</td>
<td>2009/10</td>
<td>Excel [27kb]</td>
</tr>
</tbody>
</table>

Statistics on patient consultations in general practice for specific health conditions

<table>
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<th>Table No.</th>
<th>Name</th>
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<td>Angina - Estimated numbers of consultations and patients consulting, by gender and age group.</td>
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<td>Asthma - Estimated numbers of consultations, by staff type.</td>
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<td>Depression - Estimated numbers of consultations and patients consulting, by gender and age group.</td>
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<td>Depression - Estimated numbers of consultations, by staff type.</td>
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<td>Eating Disorders - Estimated numbers of consultations, by staff type.</td>
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<td>Epilepsy - Estimated numbers of consultations and patients consulting, by gender and age group.</td>
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<td>Epilepsy - Estimated numbers of consultations, by staff type.</td>
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<td>Hypothyroidism - Estimated numbers of consultations and patients consulting, by gender and age group.</td>
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<td>Multiple Sclerosis - Estimated numbers of consultations, by staff type.</td>
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<td>Osteoarthritis - Estimated numbers of consultations and patients consulting, by gender and age group.</td>
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<td>Osteoarthritis - Estimated numbers of consultations, by staff type.</td>
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<td>40</td>
<td>Stroke - Estimated numbers of consultations and patients consulting, by gender and age group.</td>
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Contact
Dr Annemarie van Heelsum
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Further Information
Further information can be found on the ISD website
Appendix

A1 – Background Information

What is PTI?

Practice Team Information (PTI) collects information from a sample of Scottish general practices about face-to-face consultations (in a surgery or the patient's home) between patients and a member of the practice team. The practice team is currently defined for PTI purposes as:

- all GPs including locums and registrars (GPs in training), and
- practice-employed nurses and their clinical assistants (for example, phlebotomists and health care assistants) - referred to here as practice nurses for short. Some of the nurses employed by NHS Boards to work in specific practices may also record data for PTI.

PTI evolved from Continuous Morbidity Recording (CMR), a scheme that collected information on GP contacts only. CMR was first piloted in 1990 in a small number of practices in Scotland. By 1998 a large sample of practices, all using the GPASS (General Practice Administration System for Scotland) clinical IT system, were participating and the CMR dataset became recognised as a 'national' dataset. Recognising that members of the practice team other than GPs make a significant contribution to patient care, in 2001 ISD began a number of pilot projects in CMR practices to expand data recording to include patient contacts with practice nurses, district nurses and health visitors. This culminated in April 2003 in the original GP-based CMR being formally superseded by PTI.

Since 2003 the organisation of the health service, particularly in primary care, has been in constant change. As a result, district nurses and health visitors (collectively referred to as community nurses) found it increasingly difficult to record their patient contacts for PTI, in particular because they increasingly work across a geographical area and, unlike practices nurses, are not attached to just one or two practices. A number of practices stopped recording district nursing and/or health visitor data during 2006/07 and others considered leaving PTI due to the disproportionate amount of resource required to sustain this part of the data collection. To safeguard the survival of PTI, the decision was taken in 2007 to stop recording community nursing data and focus on GP and practice nurse data only. This means that there are now three years of data available on the wider practice team (2003/04 to 2005/06 inclusive) and seven years of data on the more narrowly defined practice team (GPs and practice nurses only) (2003/04 to the latest year, 2009/10).

Another major change over recent years has been a shift away from the use of GPASS (NHS Scotland's national clinical IT system for general practices) towards other, commercial clinical IT systems. Numerous practices across Scotland, including some of those participating in PTI, have moved to using InPS-Vision or EMIS systems and all practices are expected to have moved by March 2012. Data from non-GPASS practices were used for the first time for the publication of PTI figures on 31st March 2009, when data from nine practices using Vision were included. Of the 60 PTI practices that had complete GP and practice nurse data and hence were used to calculate national estimates for the financial year 2009/10, 4 moved to EMIS within that year so that at 31 March 2010 11 practices were using InPS-Vision and 7 were using EMIS. At time of publication of these web pages (22 February 2011) 62 practices contributed to PTI, of which 22 were using EMIS, 17 were using Vision with the remainder still on GPASS.
The 60 practices contained in the 2009/10 PTI sample for the financial year April 2009 to March 2010 cover about 6 per cent of the Scottish population. The total population in the practice sample is a reasonable reflection of the Scottish population with regards to age, gender and deprivation, and small imbalances due to these factors are addressed during data analysis through a process of direct standardisation (for more details see ‘Statistical notes’ either on the PTI website or within Appendix 1 of this report).

PTI data can be used to estimate numbers of patients consulting and the number of consultations in Scotland, shown for individual years or as trends over time, overall or broken down by gender, age or deprivation, for any condition presenting to general practices in Scotland (subject to the limitations of clinical coding and/or of small numbers for some conditions). The data can also be used to determine the most commonly seen conditions/diseases.

PTI data are frequently sought to get an indication of population prevalence of a particular condition. However, PTI can only provide estimates of ‘prevalence’ of patients consulting practice staff at least once during the year rather than actual population prevalence (this is discussed in more detail in the section on ‘Uses and limitations of the data’, found either on the PTI website or within Appendix 1 of this report). If a wider range of staff disciplines is included, the estimated number of patients consulting is likely to be closer to the number of patients suffering from a condition (at least if some patients are seen exclusively by the additional disciplines). More information on this issue can be found on the page ‘Impact of inclusion of more staff disciplines on patient counts’ either within this report or on the PTI website.

How is the information collected?

PTI data submissions are received from each general practice's clinical IT system on a monthly basis, which for most practices is a fully automatic process. Data are extracted on every recorded contact between a clinical member of the practice team and the patient. Although the practice can decide if the data are entered directly into the clinical system by the clinician or recorded onto a custom capture sheet for data entry by practice administrative staff, direct entry by the clinician is increasingly becoming the norm. PTI records all face-to-face contacts between patients (including temporary residents) and GPs (including locums and GPs in training) or practice-employed clinical staff (referred to for short as practice nurses but, also including, for example, phlebotomists and health care assistants). From April 2003 to March 2006 contacts with community nurses were also recorded. Some of the nurses employed by NHS Boards to work in specific practices may have continued to record data for PTI, but this is not always the case. The data include all house calls and out-of-hours contacts relating to the practice's own patients. However, entering data on telephone consultations is not mandatory for PTI and PTI does not currently report on these.

Clinicians are asked to record the reason for the consultation, recording one or more signs, symptoms or diagnoses as applicable to each patient contact as specifically as possible. These are recorded in the practice computer system using the 'Read' clinical coding system. There is no physical limit to the number of Read codes that can be entered in respect of a single contact with a patient, but generally no more than ten codes are recorded for one consultation. More commonly, just one or two codes are recorded. Nursing staff are asked to record the main activity carried out during the consultation, along
with the reason (diagnosis, symptom/sign) for this activity (if appropriate). PTI can provide a list of common nursing activities to assist correct data recording. GPs are generally not expected to record activities unless there is no specific morbidity (disease) associated with the activity (which is usually the case for, for example, giving vaccinations, carrying out driving license health checks, etc.).

Currently, the number of PTI practices still using the GPASS (General Practice Administration System for Scotland) clinical IT system is decreasing rapidly, as GPASS is being phased out and all practices are expected to migrate to another system by March 2012. A large number of participating practices have already moved to other systems such as InPS-Vision and EMIS. Data can be extracted from all three systems for PTI purposes, but the procedures around data extraction and processing, quality assurance and subsequent analysis are still subject to further development. Information from clinical systems other than GPASS was first included in a PTI publication as part of the release on 31st March 2009. The first large number of system moves was seen in the financial year 2007/08, when 9 of the practices moved to InPS-Vision, although the first PTI practice to move to Vision did so as far back as 2005. Since then many more practices have moved and at the time of publication of these pages (22 February 2011) 22 practices were using EMIS, 17 were using InPS-Vision with the remainder still using GPASS.

PTI data are extracted from practices on a monthly basis and the team at ISD monitors the data continuously, aiming to provide timely feedback to practices regarding any obvious or potential data recording issues. This can include large drops in the number of records submitted, unusual combinations of codes, or cases where an activity (such as blood pressure measurement) is recorded but an associated reason for the activity (such as hypertension) is not. Practices receive an annual report summarising the data recorded within their practice in comparison to national estimates. The data monitoring process has been adapted to include data submitted by practices using other systems than GPASS, and this process continues to develop as the team’s knowledge of these systems further increases. Findings from the data monitoring feed into the analysis methodology and therefore there will be further fine-tuning of the analysis methods as and when required.

As part of the Quality Assurance (QA) process the PTI team used to carry out dedicated QA practice visits. Historically these focused on assessing the accuracy of clinical codes recorded in the electronic consultation record, as compared with narrative recorded in the patient record on signs, symptoms or diagnoses. The overall completeness of PTI data submissions was also examined, based on a comparison of contacts recorded in PTI data versus the number of filled patient appointments in the practice in the same period. This work was extremely labour-intensive, which meant that the PTI team could not make QA visits to all PTI practices on a regular basis. Additionally, the method of assessing coding accuracy became increasingly redundant as practices moved away from paper records towards paperless, or "paper-light" record keeping. The QA procedures were therefore updated and practices were scheduled to be visited on an approximately yearly basis. The first cycle of ‘new style’ QA visits was completed mid-2010. The focus is now more on assessing completeness of PTI data submissions and away from attempting to quantify coding accuracy. As a result there is more time for ISD’s PTI team to meet face to face with practice clinicians, managers and other staff to highlight and discuss issues around recording data for PTI and to promote complete and accurate coding. Although our evaluation of the new type QA visit was generally positive, the amount of time spent in relation to the benefits was still undesirably large. In June 2010 a further review of quality assurance in conjunction with monthly monitoring methods was started. It is anticipated that the shape of this area of work will change yet more radically. For more information on quality assurance work, please contact the PTI team.
Uses and limitations of the data

Uses

PTI provides routine, central recording of activity (such as carrying out clinical checks or measurements) and morbidity (diagnoses, symptoms and signs) in general practices in Scotland. PTI data are used by the Scottish Government, NHS Boards and others within the NHS, charities, researchers and many others to inform policies and develop a better understanding of health and primary health care in Scotland. Some of the uses of PTI information are as follows:

- PTI data can be used to estimate numbers of patients consulting and the number of consultations in Scotland, shown for individual years or as trends over time, overall or broken down by gender, age or deprivation, for any condition presenting to general practice in Scotland, subject only to the limitation of small numbers for some conditions and/or the availability of specific clinical codes to describe the condition. The data can also be used to determine the most commonly seen problems in general practice.

- PTI is a valuable source of information on the demographics of patients with conditions included in the Quality & Outcomes Framework (QOF) clinical domains. The QOF results provide overall counts of patients in particular disease groupings but cannot be broken down by demographic or other factors.

- The inclusion of nursing information over and above GP recording gives a much more complete picture of patient care. In particular, the ongoing management of many chronic conditions is often covered by nurses rather than GPs. Including nursing contacts in calculations of numbers of patients consulting for any given condition results in figures that are closer to the population prevalence compared to analysis based on GP contacts only and gives a more complete picture of patient care.

- PTI records include a clinician identifier, allowing for analysis by staff discipline. Any shift in workload from one discipline to another can therefore be identified. Differences in the age, gender or deprivation profile of patients seen by each discipline can also be described.

- PTI offers information on the number of patients consulting, but also on the number of consultations per patient, with any clinician within the practice team. This allows for a comparison between numbers of consultations for different conditions (by discipline), showing differences in workload for the same number of patients depending on the condition.

- Because the date of each consultation is recorded, PTI offers an insight into changes of workload in the practice over the year.

Limitations

...
• **Patients consulting vs. prevalence.** PTI estimates for a given condition are based on patients consulting a member of the practice team for that condition at some point during the specified year. PTI measures active problems; a lifelong or previous condition will not be recorded unless the patient had a contact with the practice that was directly related to that condition. If, for example, someone with diabetes consults because of a cold and not because of diabetes, their diabetes will not be coded as a reason for consultation and the patient will not be included in the total number of patients consulting for diabetes during that year. PTI estimates of the rate of patients consulting should therefore not be taken as being the same as the total population prevalence of the condition. For conditions requiring regular intervention by primary care clinicians it may be close, but for stable and well-managed conditions requiring little or irregular intervention, or for conditions managed mainly outwith primary care, PTI figures are likely to be (substantially) lower than the true Scottish prevalence.

• **Small area estimates.** The number of practices participating in PTI is relatively small, and the regional coverage is insufficient for the sample to be regarded as representative for any area smaller than the whole of Scotland. As a result, we do not publish estimates for regions within Scotland, for example for individual NHS Board areas. However, there are other web sites that provide health information for smaller geographies. For example ScotPHO (the Scottish Public Health Observatory) provides public health intelligence at CHP (Community Health Partnership) level - see their website at http://www.scotpho.org.uk/home/Comparativehealth/Profiles/chp_profiles.asp.

• **Rare conditions.** As PTI is based on a small sample of practices, it provides less precise estimates of number of consultations or patients for rare conditions. This is clearly shown by the size of the 95% confidence intervals shown for all estimates. For common conditions such as asthma, the size of the confidence intervals are much smaller than for less common conditions such as multiple sclerosis. This should be considered when interpreting any figures shown on this website.

• **Impact of local factors.** The fact that PTI is based on a small sample of practices in Scotland means that the data collected may be subject to significant fluctuations as a result of factors that have an impact locally, such as changes in GP or nursing staff, prolonged staff absences (e.g. long term sick leave) or changes to the way that PTI practices manage their services. Although this effect is to some extent moderated by weighting contributions of individual practices to the overall estimates by their patient list size, there is still scope for these local factors to have a substantial impact on the overall estimates.

• **Defining practice nurses.** Figures shown on the PTI website largely relate to consultations with GPs and practice nurses. For PTI purposes 'GPs' are defined as all GPs including locums and registrars (GPs in training), and 'practice nurses' as all practice-employed clinical staff other than GPs, including phlebotomists and health care assistants. The definition of practice nurse is not always exact, in that some nursing staff may be excluded although other staff with very similar workload but funded differently may be included. For example, a nurse working in the practice's treatment room may be funded by the NHS Board, and potentially work in other practices as well, and therefore generally not record for PTI.
• **Age at consultation vs. age at fixed date.** Patient and contact rates are derived using population estimates based on the number of people registered with a general medical practice at the mid-point of the financial year (30th September). Any person not registered with a practice at the time of the population extract would not be included in the population totals, e.g. a baby born after September or a person joining the practice after this date. Conversely, any person not yet removed from the practice list is included, e.g. a person who has moved away without notifying the practice. The latter category is likely to be larger than the former because there is an incentive to be registered with a medical practitioner (to obtain access to medical care). As a result the population size is likely to be slightly overestimated, resulting in a slight underestimation of patient and contact rates.

• **Factors used in standardisation.** As with any health data set, standardisation within PTI can take account only of measured factors that influence health status or demand for health services. Although standardisation can take account of differences in the distribution of age, gender and deprivation between the PTI sample and Scotland, there may be other factors that influence the number of patients and contacts recorded. Examples include local patterns of service provision, social factors such as awareness of conditions or factors affecting access. However, for most conditions the combined effect of age, gender and deprivation is thought to be an important influence on consultation rates.

• **Changing methodology.** PTI data processing and analysis methods are under continuous review in order to deal with emerging knowledge of changes in recording practice. Although the changes made to the methods for the figures published on 22 February 2011 had a relatively minor impact on high-level figures, such changes mean that figures shown on this website currently are not strictly comparable to these provided prior to 22 February 2011.

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**Statistical notes**

**Standardisation**

The occurrence of many health conditions varies by factors such as age, gender and/or the relative level of deprivation of populations. The PTI sample population is broadly representative of Scotland in each of these factors. Nonetheless, to adjust for small differences in age, gender and deprivation (as measured by the quintiles of the Scottish Index of Multiple Deprivation (SIMD) 2009 - version 2) between patients registered with general practices in the PTI sample and the total number of registered patients for Scottish practices as a whole, a method of weighted extrapolation equivalent to direct standardisation is applied to produce all the estimates published here. Normally standardisation would use an arbitrary 'standard' population to calculate rates whereas for PTI the 'standard' population is the Scottish population of all patients registered with a Scottish general practice in the particular year for which figures are published. This 'Scottish population' changes slightly in age and gender composition from year to year. Rates are calculated within each age-gender-deprivation category of the PTI sample and these rates are then applied to the number of people within the corresponding category of the Scottish reference population. The resulting estimated numbers are then aggregated to the desired level. For example, to show figures by gender, the subcategory estimates would be summed over all age and deprivation categories within each gender. To then
show rates, the estimated (gender-specific) numbers are divided by the total number of people in Scotland within each gender.

The aim of the standardisation is to make the estimates reflect more closely the Scottish population make-up, rather than the sample population make-up, and does not aim to remove the effect of age, gender and deprivation from comparisons between years. For example, there is (naturally) a large difference between males and females in population size over 75, so even if the actual estimated number of patients with a condition in both gender categories is the same, the rates per 1,000 registered patients will likely be very different. Therefore, if comparing the all-ages rates for a condition particularly affecting the elderly, the differences between men and women are likely partly due to differences in the relative numbers of people in higher age groups in the population.

The latest version of the SIMD classification currently available is the 2009-based classification that was revised in July 2010. This version is used in the standardisation for all estimates published at this website, including historic estimates back to 2003/04.

Confidence intervals

PTI uses a sample of the Scottish population to produce estimates of total figures for Scotland. As a result, most of the figures shown on the PTI web pages are estimates of unknown values. They should not be confused with the (unobserved) 'true' value itself. Some estimates are more reliable than others due to factors such as sample size, completeness of data and consistency in data recording methods. A common way to indicate the precision of an estimate is to use confidence intervals. A confidence interval gives a range of values in which an estimate lies, along with the probability that the exact value will lie within that range. In general, the higher the probability and smaller the interval, the more accurate the estimate will be. In this publication most estimates are shown with a 95% confidence interval, i.e. there is a 95% chance that the 'true' value will be in between the lower and upper limits shown in brackets after the estimate.

To be able to calculate a confidence interval, it is essential to have a measure of the variation (the variance in statistical terminology) between the measurements that feed into the calculation of the estimate. In case of the PTI estimates, these measurements are taken from the individual practices, so if we, for example, calculate the rate of patients seen for diabetes in age group A, gender B and deprivation category C, we have 60 (the number of practices in 2009/10) measurements to calculate the overall value if all these practices have registered patients in that particular age/gender/deprivation category. If this is not the case, rather than assuming the missing measurement equals zero, we assume the rate would equal the estimate based on the other measurements. We can then calculate the variance of these measurements assuming the practice observations are normally distributed.

Because practices vary considerably in size, measurements from each practice are weighted by the size of their population. Therefore the contribution of each practice is determined by the relative size of its population. If estimates are shown at an aggregated level, for example over all age or deprivation categories, standardisation is carried out within practices. This means that a contribution to the overall value is calculated from that individual practice standardised by (in this case) age and deprivation, which is then weighted by the practice's size. The variance is calculated over the standardised practice contributions, weighted by practice size. This process is explained in more detail in the document "Updating PTI estimates" which is available from the PTI team on request. This
document also shows the differences between this new calculation method and the old method with regard to overall number of patients seen for a number of common and less common conditions.

**Grouping of codes for conditions (RCGs)**

**Read codes**

Read codes (version 2, Scottish) are the recommended national standard coding system system in Scottish general practices for recording clinical information (signs, symptoms, diagnoses or activities). More information on Read codes can be found on the [Connecting for Health](http://connectingforhealth.nhs.uk) website. Clinicians participating in PTI are asked to code the clinical information as specifically as possible. The number of codes that can be entered per consultation is in theory almost unlimited, but typically only one or two codes will be entered. Nurses are asked to code an activity and an underlying morbidity (the disease or condition that lead to the activity being carried out), whereas GPs are not typically expected to enter an activity. Clinicians only record conditions that are being actively managed within an episode of care. Conditions that a patient has, but which are not a reason for the contact, are not recorded as part of that particular contact. For example, a patient with diabetes who consults because of backache and a cold will have codes recorded for these conditions but not for diabetes.

**Read code Groupings (RCGs)**

PTI data containing the full range of Read codes can be analysed by combining Read codes for a particular condition into one umbrella grouping. These groupings have the benefit of permitting practitioners to record morbidity using the full richness of Read codes (there are over 80,000 individual codes available), while at the same time facilitating analysis using common, or standard, groupings of morbidity codes.

As part of a larger review of the PTI dataset completed in March 2007, ISD carried out a complete review of the grouping of Read codes as used for analysis (previously called Standard Morbidity Groupings or SMGs). The groupings are broadly based on the chapters of the World Health Organisation International Classification of Diseases (10th revision, ICD-10; ICD-10 is another commonly used coding system, used for example in coding hospital, mortality and cancer registration data in Scotland and elsewhere in the UK & Europe). The groupings now used are referred to as Read code Groupings (RCGs) and were revised to specifically address the following issues:

- Refinement of morbidity groupings to remove non-specific symptoms that do not necessarily define the condition.
- Division of the previous single 'symptoms and signs' category into smaller, more meaningful categories such as respiratory symptoms or psychological symptoms.
- Grouping of activities not previously available.
- Generally, use of categories which directly relate to ICD-10 chapters or parts of chapters.

Although it is now possible to produce PTI analyses based exclusively on Read codes that map to ICD-10 chapters, this would ignore a large quantity of codes covering a host of
symptoms, signs, activities and relatively vague (preliminary) diagnoses. Practices continue
to record activity codes (such as asthma review) that are likely to indicate a diagnosis (such
as asthma) without specifying the condition. While this might not strictly be the correct way
to record a clinical diagnosis, excluding such activity codes will result in a misleading
exclusion of these consultations, so routine analysis of PTI data includes these codes in the
definition of the condition. The full list of Read code groupings is provided here in Excel
format (45KB).

These revisions to Read code groupings have resulted in some changes to previously
published figures (released prior to 27th March 2007). Detailed commentary on the impact
of these changes is available under the heading ‘Note of Revisions - March 2007’ within the
‘Note of Revisions’ page on the PTI website. The Read code groupings have undergone
limited subsequent revision for estimates published in subsequent years and new Read
codes have been added.

Note of Revisions February 2011

PTI aims to continually improve the interpretation of the data and therefore analysis
methods are reviewed and sometimes updated. For the publication of 22 February 2011
two changes were made. Both had a relatively minor impact on high-level estimates but
could have a more major impact on estimates based on smaller numbers of patients.

- The rules for dealing with duplication in practice-employed nurse data were
expanded and applied to all new and historic data. This has resulted in slightly lower
numbers of consultations for practice nurses than published previously, particularly
for the earlier years (2003/04 to 2006/07). This is reflected in the overall numbers of
consultations for practice nurses but is particularly apparent for condition-specific
estimates of numbers of consultations for these conditions with a substantial
practice-nurse input, such as Coronary Heart Disease, Diabetes and
Hypothyroidism. For these conditions as much as a 9% drop in estimated numbers
of consultations was observed in a single year. The estimates for numbers of
patients, or any estimates of numbers of consultations from other staff disciplines
have not been affected by this methodological change.

- All estimates are standardised to the Scottish population by deprivation category, to
account for differences between the PTI sample population and the Scottish practice
population in levels of deprivation. The deprivation measure used is the SIMD score,
and the version used for the publication in February 2011 was updated to 2009-
version 2. Figures published previously (in March 2010) were standardised using the
SIMD 2006 version. This change will have affected all estimates, but had the most
appreciable impact on a few conditions in earlier years (mainly 2003/04 to 2006/07),
in particular Asthma (for which estimated numbers of consultations dropped in all
years from 2004/05 to 2007/08), Back pain (for which estimated number of GP
consultations rose in 2004/05 and 2005/06), and Dementia (where GP consultations
rose in the years 2003/04 to 2007/08). Additionally, less common conditions for
which estimates were based on relatively small numbers of records (e.g. Eating
disorders, Epilepsy and Multiple Sclerosis) were also affected, but in a more variable
way.

All estimates shown on ISD's PTI web pages are calculated using the new methods
including historic information. To prevent confusion, estimates published in March 2010 for
2003/04-2008/09 no longer appear on this website and on 22 February 2011 were replaced by the revised data. However, the PTI team can provide copies of the old data on request and discuss any changes in further detail. Also, if you have been provided with PTI analysis prior to 22 February 2011 and you wish to have these estimates updated using our new methods, please contact the PTI team.

In the previous year (30 March 2010) an updated set of rules was applied to determine what records described a face-to-face contact and what records should be considered as administration. This resulted in a net rise in the number of records being included in the analysis, and hence a slight increase of the estimated number of face-to-face consultations. For more details see ‘Note of Revisions March 2010’ section within the ‘Note of Revisions’ page on the PTI website.

The March 2009 update saw more major changes with regard to analysis methods and inclusion of new data (details can be found in the ‘Note of Revisions - March 2009’ section within the ‘Note of Revisions’ page on the PTI website). Similarly, in March 2008 PTI stopped reporting district nurse and health visitor information (see ‘Note of Revisions - March 2008’ section within the ‘Note of Revisions’ page on the PTI website).

In March 2007 changes were made to the methodology regarding data filtering rules to deal with changes in recording practice (see ‘Note of Revisions - March 2007’ section within the ‘Note of Revisions’ page on the PTI website). PTI analyses continued to provide estimated numbers of contacts and patients but from March 2007 onwards have not included incidence estimates. It is likely that because of other changes in primary care data recording, improvements in monitoring and quality assurance processes and technical advances the PTI analytical and data processing procedures will be subject to further change in the future.
### A2 – Publication Metadata (including revisions details)

<table>
<thead>
<tr>
<th>Metadata Indicator</th>
<th>Description</th>
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<tbody>
<tr>
<td>Publication title</td>
<td>Practice Team Information (PTI) Annual Update (2009/10)</td>
</tr>
<tr>
<td>Description</td>
<td>Estimated numbers of patients and consultations with GPs or practice-employed nurses in Scottish General Practices and common reasons for consulting (diagnoses, symptoms, etc) derived from the sample of practices participating in PTI. New figures for 2009/10 and updated figures for the previous six financial years.</td>
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<tr>
<td>Theme</td>
<td>Health and Social Care</td>
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<td>Topic</td>
<td>General Practice</td>
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<tr>
<td>Format</td>
<td>Excel workbooks</td>
</tr>
<tr>
<td>Data source(s)</td>
<td>Practice Team Information (PTI) data set Community Health Index (CHI); Scottish Index of Multiple Deprivation (SIMD) 2009 version 2</td>
</tr>
<tr>
<td>Date that data is acquired</td>
<td>Practice data are submitted monthly and built up incrementally into an annual analysis file. The last backlog data was received in October 2010.</td>
</tr>
<tr>
<td>Release date</td>
<td>22 February 2011</td>
</tr>
<tr>
<td>Frequency</td>
<td>Annual</td>
</tr>
<tr>
<td>Timeframe of data and timeliness</td>
<td>Information on years from 1 April 2003 to 31 March 2010. Publication 11 months after the last data was collected has been normal in the last 5 years although time lag was slightly smaller this year (10 months). The time lag is anticipated to decrease over coming years.</td>
</tr>
<tr>
<td>Continuity of data</td>
<td>Reports on each year ending 31st March from 2003/04 onwards.</td>
</tr>
<tr>
<td>Revisions statement</td>
<td>These data are not subject to planned major revisions. However, PTI aims to continually improve the interpretation of the data and therefore analysis methods are regularly reviewed and may be updated in the future.</td>
</tr>
<tr>
<td>Revisions relevant to this publication</td>
<td>For the publication of 22 February 2011 the deprivation was defined by quintiles of the 2009 (updated) version of the Scottish Index of Multiple Deprivation (SIMD) whereas in previous publications the 2006-SIMD score was used. Also, the rules for dealing with duplication in practice-employed nurse data were expanded. Both updates were applied to all new and historic data. The updated duplication rules have resulted in slightly lower numbers of consultations for practice</td>
</tr>
</tbody>
</table>
nurses than published previously, particularly for the earlier years (2003/04 to 2006/07). The estimates for numbers of patients, or any estimates of numbers of consultations from other staff disciplines have not been affected. The SIMD update also impacted mainly on estimates for earlier years, in particular estimates pertaining to relatively small groups (e.g. rare conditions or small age groups). More information can be found in the Note of Revisions (Appendix 1 in this report), which is also available on the website at http://www.isdscotland.org/Health-Topics/General-Practice/PTI-Statistics/Note-Of-Revisions.asp.

<table>
<thead>
<tr>
<th>Concepts and definitions</th>
<th>See Glossary and footnotes of Excel workbooks for further information.</th>
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</thead>
<tbody>
<tr>
<td>Relevance and key uses of the statistics</td>
<td>Making information publicly available for planning, provision of services, research.</td>
</tr>
<tr>
<td>Accuracy</td>
<td>PTI has no means to test if the clinical codes recorded by the clinicians during the consultations accurately reflect the proceedings of that consultation. However, the fact that clinicians are doing their own coding is thought to result in more accurate coding. PTI does monitor data submitted each month and assesses the ‘internal’ validity of the data by applying simple consistency rules (for example: does every consultation have at least one code that describes a clinical state or ‘morbidity’ of the patient, which was the reason for the consultation). Practices with large numbers of inconsistencies are followed up and may receive training. Data from practices with very large numbers of inconsistencies would be omitted from the data set.</td>
</tr>
<tr>
<td>Completeness</td>
<td>The records submitted to ISD contain ALL clinical codes recorded by participating practices regarding face-to-face consultations. PTI monitors the consistency of numbers of consultations for each clinician submitted on a month-by-month basis, and has a quarterly process of checking the consistency against the number of consultations present in the practice’s appointment book. Both under- and over-recording occurs. Most clinicians score within 5% of the expected number,</td>
</tr>
</tbody>
</table>
and poorer practice scores are usually due to new staff or particular types of consultations being poorly recorded (e.g. out-of-hours). In these cases training is offered.

### Comparability

Comparisons are often made between PTI and QOF. Both are based on extractions from routinely used clinical admin systems in Scottish general practices. However, PTI collects coded information from all consultations in the practices, whereas QOF focuses on the QOF clinical domains only. PTI has limited membership including around 6% of practices in Scotland, all of which are relatively diligent in their clinical coding, whereas QOF collects data from nearly all practices regardless of their coding diligence. Also QOF is first and foremost a payment system and coding guidelines can therefore differ from strictly clinical guidelines. More details on how PTI compares with QOF can be found in the section in this report called ‘Comparison of QOF and PTI rates for the QOF clinical domains’.

The Primary Care Clinical Informatics Unit (PCCIU) in Aberdeen also extracts information from Scottish GP practices, but only from these on GPASS systems. They do not provide any quality control regarding coding but do send fairly detailed reports on the extracted information back to practices.

There are other routine GP extraction systems in the UK but these are primarily English and unlike PTI they are system-specific. For example, GPRD and THIN extract information from InPS-Vision systems for research use, and Qresearch uses EMIS data for medical research. Typically the information fed back to practices is limited and there is a variable degree of quality control.

### Accessibility

It is the policy of ISD Scotland to make its web sites and products accessible according to published guidelines.

### Coherence and clarity

Tables and charts are accessible via the ISD website at: [http://www.isdscotland.org/Health-Topics/General-Practice/PTI-Statistics](http://www.isdscotland.org/Health-Topics/General-Practice/PTI-Statistics)

### Value type and unit of measure

Estimated numbers and rates per 1,000
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<td>Official Statistics designation</td>
<td>National Statistics</td>
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<tr>
<td>UK Statistics Authority Assessment</td>
<td>Awaiting assessment by UK Statistics Authority</td>
</tr>
<tr>
<td>Last published</td>
<td>30 March 2010</td>
</tr>
<tr>
<td>Next published</td>
<td>28 February 2012</td>
</tr>
<tr>
<td>Date of first publication</td>
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<tr>
<td>Date form completed</td>
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A3 – Early Access details (including Pre-Release Access)

Pre-Release Access
Under terms of the "Pre-Release Access to Official Statistics (Scotland) Order 2008", ISD are obliged to publish information on those receiving Pre-Release Access ("Pre-Release Access" refers to statistics in their final form prior to publication). The standard maximum Pre-Release Access is five working days. Shown below are details of those receiving standard Pre-Release Access and, separately, those receiving extended Pre-Release Access.

- Standard Pre-Release Access:
  - Scottish Government Health Department
  - NHS Board Chief Executives
  - NHS Board Communication leads

Extended Pre-Release Access
Extended Pre-Release Access of 8 working days is given to a small number of named individuals in the Scottish Government Health Department (Analytical Services Division). This Pre-Release Access is for the sole purpose of enabling that department to gain an understanding of the statistics prior to briefing others in Scottish Government (during the period of standard Pre-Release Access).

- Scottish Government Health Department (Analytical Services Division)

These statistics will also have been made available to those who needed access to ‘management information’, ie as part of the delivery of health and care:

These statistics will also have been made available to those who needed access to help quality assure the publication: