

Frequently Asked Questions

Practice level prescribing data

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Introduction

Information Services Division (ISD) have produced data files similar to those released by other UK countries, with the intention of making Scottish prescribing data more accessible to the public and to reduce the number of routine reports produced by ISD, allowing analysts more time to conduct bespoke analysis. The release is initially classed as official experimental statistics (new official statistics undergoing evaluation). Following a three month review, the release may undergo evaluation for designation as national statistics. A prescribing dashboard of summary statistics accompanies the data. The first open data release in April 2016 includes four monthly files for October to December 2015 and January 2016. Further files are released on a monthly basis (there is a two-three month lag so February 2016 data will be released in May 2016).

About prescribing data at presentation-level

Where does the data come from?

The data are extracted from the [Prescribing Information System \(PIS\)](#), which is maintained by NHS National Services Scotland (NSS). The data is gathered by Practitioner Services Division (PSD) who are responsible for the processing of payments to Scottish dispensing contractors on behalf of NHS Boards. Data Capture Validation and Pricing (DCVP) is the system used by PSD for this purpose, and a monthly feed takes place between DCVP and PIS.

What does the data cover?

The data covers prescriptions that are prescribed in Scotland by GPs (General Medical Practitioners) and other prescribers (nurses, pharmacists, dentists and allied health professionals (AHPs)) and subsequently dispensed by a community pharmacist, appliance supplier or dispensing doctor anywhere within the UK and claimed for payment by a pharmacy contractor (i.e. pharmacy, dispensing doctor or appliance supplier). Also included are prescriptions written in hospitals that were dispensed in the community and claimed for payment by a pharmacy contractor. The data includes all medicines, dressings and appliances that were dispensed and reimbursed. Data also include GP stock order forms (form type GP10A).

The data does not cover prescriptions dispensed within the community where a claim for payment has not been made by a pharmacy contractor.

The data does not cover prescriptions prescribed but not submitted for dispensing.

The data does not cover private prescriptions.

For each GP practice in Scotland, and for each medicine (by presentation), dressing and appliances, the following information is provided:

- Number of paid items (number of prescription items dispensed and for which the dispenser has been reimbursed)
- Paid gross ingredient cost (reimbursement cost for the paid quantity based upon the NHS basic price as listed in the Scottish drug tariff or manufacturer's price list)
- Paid quantity (the quantity of an individual item for which the dispenser has been reimbursed)

This information is also provided at health board level and for each medicine (by presentation) for dentist, hospital and community pharmacy prescribing.

GP practices are identified by their practice code. GP practice details are currently published on the [ISD Primary Care webpage](#), this information is also available on the [Community Pharmacy website](#).

Each drug presentation is identified by a code assigned to it in the British National Formulary (BNF) which is known as the drug's BNF code. A monthly drug reference file will not be produced by ISD. NHS Business Services Authority produce a drug reference file which can be found at www.nhsbsa.nhs.uk and accessed by logging in as a guest user. This file includes BNF details which will allow users of the open data file to match BNF item codes included in the main data file to more comprehensive BNF details included in the drug reference file.

Does the data include prescriptions written by prescribers other than GPs, such as nurses?

Yes, the data covers prescriptions that are prescribed in Scotland by GPs (General Medical Practitioners), other prescribers (nurses, pharmacists, dentists and allied health professionals (AHPs)), and prescriptions written in hospitals and dispensed within the community.

Are all practices included?

All practices in Scotland are included in this data where (in the relevant month) a prescription has been dispensed and claimed for payment by a dispensing contractor.

There are occasions where it is not possible to determine the exact location from which a prescription originates. Although the precise GP location may not be determined, the health board from which the prescription form originated from can be determined. In this case the prescription form is assigned to an unallocated location code containing a cipher denoting the NHS board from which the prescription form came from. All unallocated location codes that have been assigned to a Scottish NHS Board will be released at an aggregated health board level and the term 'NK' will be assigned in place of a location code where the location code is not known.

Why are there a different number of practices in the dataset each month?

The number of GP practices can vary from month to month because:

- Practices may close and new practices may open from month to month
- Practices may merge to form one larger practice or divide to form a number of smaller practices

Is information available for individual prescribers?

Prescribing data is provided at GP practice or health board level. Individual prescriber level data is not available.

How does practice prescribing data differ from other prescribing data published by Information Services Division (ISD)?

The practice prescribing data file includes raw data at drug preparation level which has not been analysed.

Other publications often focus on specific topic areas and include a degree of data analysis and interpretation. Other publications are published by Information Services Division at:

[ISD Scotland | Health Topics | Publications | Prescribing and Medicines](#)

The Prescription Cost Analysis publication reports on the number of items and gross ingredient cost of NHS prescriptions dispensed in the community in Scotland.

The Minor Ailments Service publication reports on the number of registrations and treatments for the Minor Ailment Service. It contains a monthly breakdown of the number of patients registered for the service and provides information on the number of items dispensed.

The Medicines used in Mental Health publication reports the number of dispensed items, defined daily doses and cost on five types of drugs used in mental health in Scotland. Data by NHS Board and annual trends are shown. Counts of patients and counts by patient characteristics (age, gender and deprivation) are also published at NHS Scotland level.

The Prescribing of Smoking Cessation Products in Scotland publication reports the number of dispensed items, defined daily doses (DDD) and gross ingredient cost (GIC) of smoking cessation products at both Scotland and NHS Board level.

The Scottish Antimicrobial Prescribing Group (SAPG) Report on Antimicrobial Use and Resistance in Humans reports on antibiotic use and antibiotic resistance in Scotland.

The Summary Statistics dashboard produced alongside the monthly open data practice level prescribing file reports the total cost and volume of prescriptions at NHS Board level.

What data are available?

The first open data release in April 2016 included four individual monthly files for October to December 2015 and January 2016. Further files are released on a monthly basis (there is a two-three month lag so February 2016 data will be released in May 2016).

Are presentation-level prescribing data available by quarter or for a whole year?

From April 2016, presentation-level prescribing data for October 2015 onwards will only be available by month.

Accessing the Data

Where are the data? / How do I access the data?

The prescribing data are released as a comma separated values file (CSV file).

Due to the size of the file, it cannot be opened within a standard Microsoft Excel spreadsheet.

The file can be viewed in standard software such as Microsoft WordPad (save by right-clicking on the file name and selecting 'Save Target As', or equivalent on Mac OSX). It is then possible to select the required rows of data and copy and paste the information into another software application, such as a spreadsheet.

Alternatively add-ons to existing software, such as Microsoft PowerPivot add-on for Excel 2010 (available at [Microsoft Download Centre](#)) can be used. Once PowerPivot has been installed, start Excel as normal and click on the PowerPivot tab. Click on the PowerPivot window icon (top left) and in the PowerPivot window, click on the 'From Other Sources' icon. In the Table Import Wizard scroll to the bottom and select Text File then browse to the file you want to open and choose the file extension you require e.g. CSV. Once the data has been imported you can view it in a spreadsheet.

Statistics software can also be used to view the file.

Can I extract data for just one practice?

For each month, there is a single data file, containing all data. It is not possible to download data for only one practice or for any subset of practices.

How do I find my practice?

A list of general practices in Scotland is available to download from the ISD Scotland website at

[ISD Scotland | Health Topics | General Practice](#)

The download contains: NHS board name, numeric practice code, practice list size, practice name, practice address, practice postcode, practice telephone number, and whether or not the practice is a dispensing practice. Identify your practice by name and address and record the practice code which identifies your practice. This practice code can then be filtered within the prescribing data file.

Why are practice names not included in the main data file?

Names and addresses of practices are held in a separate file to reduce the size of the prescription data file. Each practice has many rows in the data file, and the use of practice codes means that it is not necessary to duplicate practice name and address information throughout the data file.

Understanding the Data

What data items are in the prescribing data file?

The csv file of prescribing data contains the following data items:

- Prescriber health board code (9 digit code)
- Prescriber practice code (five digit code or aggregated to not known, dentist, hospital, community pharmacy)
- British National Formulary (BNF) code (a 15 digit code in which the first seven digits are allocated according to categories in the BNF and the last 8 digits represent the drug product form, strength and the link to the generic equivalent product)
- BNF item description
- Class of Preparation Code
- Number of paid items
- Paid Quantity
- Paid Gross Ingredient Cost (£)
- Paid date (YYYYMM)

Further details are provided in the glossary which is available here:

[Glossary of Terms - GP Practice Prescribing at Presentation-level](#)

What is Class of Preparation?

The class of preparation variable indicates whether a drug was prescribed as generic ("G") or proprietary brand ("P"). The field does not indicate whether appliances/dressings were prescribed as generic or proprietary - these are marked as 'X' in the dataset.

In some cases, the same BNF Item description can be both 'G' or 'P' depending on circumstances so it is possible to have multiple rows of data for the same BNF item. In the open data file based on January 2017 data, 5.37% of the lines contained both a 'G' and 'P' against an individual BNF Item.

This is a consequence of the difference between prescribing and reimbursement, on which the data is based. For example, Crestor® (rosuvastatin) is currently under patent with expiry in the summer of 2017. This can be prescribed as either Crestor® or rosuvastatin but Crestor® is the only product that can be reimbursed so Crestor® 5mg tablets will be 'P' if the prescription was written as Crestor® but 'G' if the prescription was written as rosuvastatin.

If you do not wish to include the 'Class of Preparation' variable you will need to remove the column by aggregating up to calculate the new totals, leaving one line per BNF Item Code.

Note that this field is included in the dataset from February 2017 onwards.

What is Generic Prescribing?

When a drug first becomes available this is usually as a proprietary trade-marked product and the manufacturer has exclusive rights to manufacture and market that medicine. However, it can be prescribed by branded name (proprietary or branded prescribing) or by the name of the actual drug substance (generic prescribing): When the patent expires on a branded drug, the manufacturer loses their exclusive rights and other manufacturers can produce it, either as an unbranded (generic) product or under an alternative brand name (so called 'branded generics'). These products are clinically equivalent to but generally less expensive than the original branded product.

When a prescription is written for a branded product then that is what must be supplied and will be reimbursed but when a prescription is written generically then any product containing the drug and in the appropriate dose form and strength can be supplied and reimbursement will be for that. Prescribers are therefore encouraged to prescribe drugs by generic name even when they are in patent so that savings can be realised as versions become available.

For certain drugs, very small differences in bio-availability can be important, e.g. anticonvulsants, lithium, immunosuppressants and theophylline. For these drugs the patient should always receive the version produced by a particular company, therefore the drug should be prescribed by brand (proprietary) name.

What is an Item?

An item is an individual product dispensed and claimed for payment by a pharmacy contractor e.g. 100 aspirin tablets of 300mg – would be counted as one item on a prescription form.

What is Gross Ingredient Cost?

Gross Ingredient Cost is the reimbursement cost for the paid quantity based upon the NHS basic price as listed in the Scottish drug tariff or manufacturer's price list. This is the price before any discounts are applied and excludes VAT, where that would be payable. The figures are in £s and pence.

What is Quantity?

Paid quantity is the quantity of an individual item for which the dispenser has been reimbursed, eg 100 tablets.

A data quality issue with the Quantity measure should be considered when using this field, particularly where the cost per quantity appears inconsistent with expectations. As a percentage of all dispensed prescription items, approximately 0.003% of items were identified as being affected from a sample quarter. Please see below for more information.

What is the data quality issue with Quantity and its significance?

The issue affects Scottish prescription that were dispensed and processed in England and arises because of difference between Scotland and England in how quantity is measured.

The issue appears to be the result of items classified by the NHS Business Services Authority (BSA) as either special or whole packs. As these are paid by the pack, rather than by the unit, the quantities returned are for number of packs. The types of items covered by the term whole pack includes items packed in a canister, collapsible tube, drop-bottle, pressurised aerosol, roll-on bottle, sachet, shaker, spray, squeeze pack, container with an integral means of applications, or any other container from which it is not practicable to dispense the exact quantity. These whole pack lines do not always mirror Scottish whole packs as equivalent English whole packs are classified as ordinary packs or calendar packs in the EVADIS database e.g. 1 x30g ointment could have a quantity of "1" or "30" depending on whether it was processed in Scotland or another part of the UK.

In order to assess the possible significance of any inconsistencies, the cost per unit was calculated for BNF Item Codes for Scottish and English dispensed lines. The percentage difference was then calculated. An assumption was then made that the smallest pack size that would be affected would be a pack of 2. Therefore any Scottish cost per unit that was either a least 50% lower or more than 100% higher than the English cost per unit could be assumed to have been possibly affected by the issue. The sample time period used was October to December 2015.

The Chapters most affected in terms of GIC are Chapter 9 and Chapter 21 with minimal impact on Chapters 11, 13 and 15. The most common affected items in Chapter 21 were catheters whilst Chapter 9 discrepancies were mostly as a result of PKU products.

As a percentage of all dispensed prescription items, approximately 0.003% of items were identified as being affected from a sample quarter. As a percentage of all dispensed prescriptions, both English and Scottish, only Chapter 21 English dispensing might be considered significant, accounting for 12.5% of total GIC from October to December 2015. This equated to 0.9% of items.

Further investigations were carried out and possible solutions explored. At this point, in order to reflect customer demand for a quantity measure, it has been assessed that the effect of inconsistencies is likely to be small and over time, variable in nature. Customers are advised that the number of items and GIC is in line with expectations. Whilst we will explore possible solutions, this is technically challenging and we cannot provide any indication at this stage as to when a solution may be delivered. Customers are asked to consider the above information if the cost per quantity appears inconsistent with expectations.

Using the Data

Can I link the practice code to any other practice information?

The prescribing data file includes GP practice location codes which can then be linked to details corresponding to individual codes published by the Primary Care team. The GP practice population file provided by the Primary Care team is published quarterly and includes NHS board name, practice code, practice list size, practice name, practice address, phone number, and whether or not dispensing practice. The file excludes Out of Hours services and practices which do not have any GPs or patients registered to them. GP practice details are currently published on the [ISD Primary Care webpage](#).

Are details for a particular type of dressing or appliance included?

Individual types of dressings and appliances are included.

Are details for a particular brand of drug included?

Yes, details for particular brands of drug are available in line with NHSScotland pricing processes (see Community Pharmacy Scotland's [endorsement guide](#)).

Can I have the data for a class of drugs, for example I want to know about antibacterial drugs?

In this example, information on antibacterial drugs can be obtained by linking the prescribing data file to a drug reference file produced by NHS Business Services Authority which can be found at www.nhsbsa.nhs.uk and accessed by logging in as a guest user. This file includes BNF details which will allow users of the prescribing data file to match BNF item codes included in the main data file to more comprehensive BNF details included in the drug reference file. In this example, linking the BNF presentation code and BNF section details to the prescribing data file will enable prescribing of antibacterial drugs to be identified.

How do I find out if a GP practice is a good prescriber? How do I compare my GP practice with other local GP practices?

This information should not be used to make judgements on the quality of prescribing, as a broad range of factors influence the clinical need for a medicine and decisions about which medicine is the most appropriate choice for an individual patient.

Comparisons between GP practices requires further information about prescribing, list sizes, age and sex of patients on the list, knowledge of medicines, and why they are prescribed.

I am prescribed a drug for a rare condition; can I be identified in this dataset?

The data contains no information about either the individuals being treated or about the number of patients being treated. However, at the level of granularity that the data will be released, approximately 75% of data rows will relate to four or fewer prescriptions and 40% to a single prescription. A single prescription for a preparation must clearly relate to a single individual. Casual disclosure is deemed extremely unlikely. The overall volume of prescribing

and distribution among GP practices means that it is not believed that it would be possible to specifically identify small groups of individuals or attribute a prescription event to a specific individual. A [Privacy Risk Assessment](#) document provides full details of the principles and processes applied by ISD in assessing the potential risk of disclosure and the ability to identify individual patients.

How do I find out how many people with a particular condition, such as depression, have been given prescriptions?

For this example, Information Services Division publishes an annual report [Medicines used in Mental Health](#) which includes patient-based analysis. However, it should be noted that a drug may treat a number of indications and it is not always possible to equate definitively the number of patients receiving a particular medicine(s) with a specified condition.

You also have the right to request information via the Freedom of Information Act (FOIA). Further information, including details of how to make a [Freedom of Information](#) request, is available via the NHS National Services Scotland website.

Can I have the information broken down by age and sex of patients receiving prescriptions?

You have the right to request information via the Freedom of Information Act (FOIA). Further information, including details of how to make a [Freedom of Information](#) request, are available via the NHS National Services Scotland website.

Can I work out a prescribing rate – what percentage of patients receive prescriptions?

The number of patients registered with a practice is available on the [ISD Primary Care webpage](#). However it is important to note that practice level prescribing data does not reveal how many individual patients actually received a prescription; some registered patients may have received no prescriptions at all.

How do I find out which pharmacies dispensed these prescriptions?

Information on dispensers, such as pharmacies, is not available from this dataset.

Can I find out about private prescriptions given to patients by GPs?

Private prescriptions are not included in this dataset.

Can I work out a generic prescribing rate – what percentage of drugs are prescribed generically?

A generic prescribing rate can be calculated by summing the number of items with class of preparation 'G', and dividing this by the total number of items with class of preparation 'G' and 'P'. Note that this rate is for drugs only, appliances and dressings are not included.

Contact

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Further Information

Further information can be found on the [ISD website](#)