

## Prescriptions in Wales

### What are these statistics?

The intention of this release is to provide statistics on the quantity and cost of items prescribed and dispensed in community pharmacies (high street pharmacies) in Wales. The release supports [prescribing strategy and guidance](#) in Wales and the Welsh Government's [Healthier Wales](#) strategy.

Statistics in the release include:

- the number of items prescribed by GPs in Wales and dispensed in community pharmacies in Wales or elsewhere in the UK (often referred to as GP prescriptions);
- the net ingredient cost (NIC) of items prescribed by GPs in Wales and dispensed in community pharmacies in Wales or elsewhere in the UK;
- items prescribed and their cost per prescribing unit (PU) in Wales;
- comparisons of the 25 most prescribed items;
- comparisons by therapeutic classes;
- secondary data on items prescribed by any prescribing health professionals in the UK that were subsequently dispensed in the community in Wales (often referred to as prescriptions dispensed in the community, or 'PCA' data); and
- comparisons with other UK countries based on secondary data for prescriptions dispensed in the community.

Supplementary Excel spreadsheets and an interactive Power BI dashboard provide data broken down by the British National Formulary (BNF) chapter, section, sub paragraph, chemical name and drug name. Data for items and NIC at BNF chapter level on StatsWales is available at health board and GP cluster level.

### Sources of data

The data are obtained from Prescribing Services, NHS Wales Shared Services Partnership and are based on information obtained from prescriptions sent to Prescribing Services for payment.

### Coverage

Data for both 'GP prescriptions' and 'prescriptions dispensed in the community' (defined below) are sourced from the same place. The differences between the two measures are created in the way they are extracted from the system. Each measure serves a specific purposes.

GP prescriptions counts all items which were prescribed by GPs practicing in Wales, or by other health professionals prescribing on behalf of GPs and were then dispensed by any community pharmacy in the UK (including the Isle of Man).

Prescriptions dispensed in the community includes all items which were prescribed by any NHS prescribing health professional (most commonly GPs) in the UK (including the Isle of Man) and then dispensed at a community pharmacy located in Wales.

GP prescriptions data are the primary data used in the Prescriptions in Wales statistical release because it demonstrates which medicines and appliances are being prescribed by Welsh GP practices. Therefore it is recommended that the majority of readers should use GP prescriptions data for their analysis.

Prescriptions dispensed in the community are secondary data, but should however be used when making comparisons across countries in the UK, as this data is consistent across all four countries.

While broadly the number of items prescribed by GPs is close to the number of items prescribed and dispensed in Wales it does not exactly match for a number of reasons including:

- prescriptions written by GPs in Wales but dispensed elsewhere in the UK (including the Isle of Man) are counted in GP prescriptions but not 'prescriptions dispensed in the community'. This is particularly common for specialist items such as stomas and incontinence appliances which are often dispensed by appliance contractors rather than pharmacies, many of which are not located in Wales.
- Prescriptions written by GPs in another UK country (including the Isle of Man) but dispensed in Wales are not included in GP prescriptions, but are included in 'prescriptions dispensed in the community'.
- People who have had a hospital appointment and have their prescription items dispensed in their local community pharmacy rather than the hospital one will not be included in GP prescriptions, but they would be in 'prescriptions dispensed in the community'.

Note that both 'GP prescriptions' and 'prescriptions dispensed in the community' capture prescriptions which are dispensed by dispensing doctors, appliance contractors and community (high street) pharmacies. Neither measure contains data for items prescribed and dispensed in hospitals.

Any prescription items which were prescribed but, for any reason were not dispensed are not counted in either measure.

Prescriptions from private doctors are also not included.

Both measures include prescriptions submitted by prescribing doctors for items personally administered.

## Published Statistics on prescribing services in Wales

A full annual statistical release is published through the [Welsh Government website](#). This contains all the data specified in the '[What are these statistics?](#)' section.

Note that prior to 2019, prescriptions data had been published in two separate statistical releases, [Prescriptions by GPs](#) last published on 19 September 2018 and [Prescriptions dispensed in the community](#) last published on 23 May 2018. Combining the two datasets in one release with more contextual information aims to provide users with a clear analysis of prescriptions in Wales.

Additional tables are published on the open data [StatsWales website](#).

From April 2013, monthly prescribing data by individual GP practices is also available via the [Prescribing Services website](#).

Complimentary statistics on community pharmacies in Wales are also published on the [Welsh Government website](#).

## Impact of COVID-19

The latest published data for Wales covers the financial year beginning in April 2020 and ending in March 2021, which coincides in-full with the COVID-19 pandemic. However, the pandemic appears to have little impact on the way data has been collected due to the nature of how items are prescribed and dispensed. There may be some effect from patients interacting with GPs in different ways to before the pandemic, with more telephone and virtual consultations, but the data for the number of items prescribed by GPs and dispensed in the community in Wales, in 2020-21, is in-line with recent trends.

## Who are the key potential users of this data?

The key users of prescription statistics are:

- Ministers, members of the Senedd and the Members Research Service in the Welsh Parliament;
- policy makers of the Welsh Government;
- other government departments;
- National Health Service and Public Health Wales;
- students, academics and universities;
- General Medical Council and other professional organisations; and
- individual citizens and private companies

If you are a user and do not feel the above list adequately covers you, or if you would like to be added to our circulation list, please let us know by e-mailing [stats.healthinfo@gov.wales](mailto:stats.healthinfo@gov.wales).

## What are the potential uses of these statistics?

These statistics will be used in a variety of ways. Some examples of these are:

- advice to Ministers;
- to inform debate in the Welsh Parliament and beyond;
- to make publicly available data on prescribing services in Wales;
- monitoring service delivery; and
- policy development.

## Strengths and Limitations of the data

### Strengths:

- The outputs provide a clear statistical overview of the prescribing trends in Wales.
- Data has excellent coverage and should count the overwhelming majority of items prescribed and dispensed in the community in Wales.
- Outputs have a clear focus on Wales and have been developed to meet the internal and external user need in Wales. These releases aim to inform Welsh Government policy on the delivery of prescribing services.
- The information is processed and published regularly, in an orderly manner to enable users to see the statistics when they are current and of greatest interest.
- Efficient use has been made of administrative data sources to produce outputs.
- Statistics are published at a granular level via StatsWales, an interactive dashboard and supplementary Excel tables, allowing analysis of British National Formulary (BNF) chapter, section, sub paragraph, chemical name and drug name.

### Limitations:

- The complex and manual processes involved when NHS Shared Services Partnership extracts data from payment systems means that there may be minor inaccuracies in the data.
- Different prescribing habits by GPs make it difficult to accurately make comparisons between different areas. For example, some GPs may prescribe longer courses of prescription items than others who prefer shorter courses which may need to repeat more frequently. This means that the same total amount of an individual preparation can be prescribed through a single prescription item or through multiple prescription items. Therefore caution is advised when making inferences about total number of items prescribed.
- Data on the quantity of items prescribed is of insufficient quality to include in the statistical release.

- The same preparation can be prescribed in different volumes/masses which limits the inferences which can be made from analysing items prescribed data. For example, in 2019-20, the preparation 'Acebut HCl' was prescribed in 100mg capsules, 200mg capsules and 400mg tablets. Other preparations may also be prescribed in solid and liquid format, which makes it difficult to calculate the total amount of a single preparation prescribed.
- No data is currently available on the individuals who are prescribed each medication. This means there is no way to analyse prescription items for different individual's characteristics.
- The main data source for the release counts items prescribed by GPs in Wales and dispensed in the community. This is preferred because it measures the activity of GPs in Wales. However, in order to make comparisons on a consistent basis with the other UK countries, secondary data on prescriptions dispensed in Wales, is required. While these two dataset align quite closely, there are in-effect two numbers published for the number of prescriptions in Wales, which may confuse users.
- Different publication cycles mean that data for UK countries is not always comparable for the same time periods until long after Welsh Government publishes its statistical release.

## Definitions

### Items dispensed:

A prescription item refers to a single item prescribed by a doctor on a prescription form. If a prescription form includes three items it is counted as three prescription items. A prescription item may be for a variable quantity; for example. 14, 28 or 56 tablets. A prescription item can consist of a varying amount of tablets or measure for the same preparation, therefore the cost per item refers to the cost per average measure of that preparation. It does not refer to the cost per single tablet or per pack of tablets.

### Net Ingredient Cost (NIC):

Net ingredient cost refers to the cost of the drug before discounts and does not include any dispensing costs or fees. It does not include any adjustment where the patient has purchased a pre-payment certificate.

Net ingredient costs for all years are not adjusted for inflation. Standard adjustments for inflation are not considered appropriate as drug prices are subject to controls under the Pharmaceutical Price Regulation Scheme and to other central controls.

### Pharmaceutical Price Regulation Scheme:

The [Pharmaceutical Price Regulation Scheme](#) is a voluntary agreement between the Department of Health and the Association of the British Pharmaceutical Industry. The scheme places some control on the costs of medicines to the NHS and applies to branded licensed medicines.

### Category M:

The [category M scheme](#) is an arrangement where the net ingredient cost for selected generic formulations is controlled, with the aim of reducing costs overall. Medicines subject to these

arrangements are classified as category M in Part VIII of the Drug Tariff. The majority of these formulations have fallen in price, although some formulations have increased in price. These price adjustments have contributed to shifts in the relative positions of drug and affect overall cost per item.

### **Falling costs:**

Several factors have contributed to the fall in costs, notably changes to the price of many medicines under the category M scheme. Adjustments to prices under this scheme have seen dramatic changes to costs across therapeutic areas over recent years.

Other factors which have lowered costs include:

- decreased use of some medicines, in particular some of the more costly formulations;
- generic versions of some medicines becoming available; and
- the fall in the price of some medicines outside of the category M scheme.

### **Free prescriptions:**

Prescription charges were frozen on 1 April 2001 and gradually reduced each year until free prescriptions were introduced in Wales on 1 April 2007. Before 2007 prescriptions were free for those people under 16, 16-18 year olds in full-time education, over 60, pregnant women and those who had had a baby within the previous 12 months, those who were on certain benefits, or on a low income, or who had certain medical conditions. These exemptions accounted for around 90% of the population, leaving only around 10% to pay for their prescriptions.

### **Generic Prescribing:**

A generic prescription item uses the British Approved Name (BAN), International Non-proprietary Name (INN) or the scientific name of the active ingredient rather than the proprietary (brand) name. In general, generic items are cheaper than non-generic equivalents.

### **Standard quantity unit (SQU)**

This data is included on supplementary spreadsheets for individual preparations. It indicates the form of the drug and the units in which quantity is measured:

Code 1 - a unit (e.g. one tablet, capsule, pack, aerosol etc.)

Code 3 - millilitres

Code 6 - grams

Code 0 - individually formulated (unit varies)

### **Population registered with a GP:**

This is the number of people registered with a GP in Wales. In 2009 this was at 1 October, otherwise this is at 30 September. The data is sourced from NHS Shared Services Partnership and is available on [StatsWales](#).

### **Prescribing units (PUs):**

PU's are calculated by giving a greater weight (by a factor of three) to the population aged 65 or over (used as the denominator). They have been adopted here to take account of the greater need of elderly patients for medication and so to make more meaningful comparisons between health boards.

As an example for 2014-15:

Total prescription items: 78,512,726

Total population age 0-64, 2014 population registered with a GP: 2,555,500

Total population aged 65 or over: 617,494

PU's: 4,407,982  $(2,555,500 + (3 * 617,494))$

Items per PU: 17.81

### **The British National Formulary (BNF):**

The British National Formulary (BNF) is a joint publication of the British Medical Association and the Royal Pharmaceutical Society. It is published biannually under the authority of a Joint Formulary Committee which comprises representatives of the two professional bodies and of the UK Health Departments.

### **Therapeutic classification:**

Prescriptions data are based on the therapeutic grouping used in the British National Formulary (BNF).

NHS Prescription Services have created pseudo-BNF chapters, for items that cannot be found in BNF chapters 1 to 15. The majority of these items are dressings and appliances, which NHS Prescription Services have classified into four pseudo-BNF chapters (20 to 23). However some gel and colloid dressings that are classified as drugs are included in a pseudo section within BNF 13 (13.13). NHS Prescription Services have produced a booklet on [BNF classifications](#) and the pseudo classifications used.

Examples of the conditions covered by each group (unless group is self-explanatory) are given below:

**Gastro-intestinal system:** including preparations for the management of indigestion, diarrhoea, constipation, haemorrhoids, ulcerative colitis and Crohn's disease.

**Cardiovascular system:** including preparations for the management of arrhythmia (irregular heart rhythm), hypertension (high blood pressure), heart failure and high cholesterol

**Respiratory system:** including preparations for the management of asthma, chronic obstructive pulmonary disease (COPD), cystic fibrosis, allergies, cough and congestion

**Central nervous system:** including preparations for the management of anxiety, sleeplessness, depression, pain, epilepsy, substance misuse, Parkinson's disease and Alzheimer's disease

**Infections:** including preparations for the treatment of infection

**Endocrine system:** including preparations for the management of diabetes, an under or over active thyroid gland and other hormonal conditions

**Obstetrics (formerly obstetrics, gynaecology and urinary tract disorders):** including contraceptives and preparations used in obstetrics

**Malignant disease and immunosuppression:** including preparations for the treatment and management of cancer and conditions affecting the immune system

**Nutrition and blood:** vitamins, minerals and prescribed foods

**Musculoskeletal and joint disorders:** including preparations for the management of rheumatoid arthritis and gout, myasthenia gravis, spasticity and topical treatments for pain

**Eye:** including preparations for the treatment and management of eye infections and glaucoma

**Ear, nose and oropharynx:** including preparations for the treatment and management of conditions affecting the ear, nose and throat

**Skin:** including preparations for the treatment and management of eczema, psoriasis, acne, warts and verrucae

**Immunological products and vaccines:** including preparations for the treatment of anaemia, vitamin preparations and supplements

**Anaesthesia**

**Preparations used in diagnosis**

**Other drugs and preparations**

**Dressings**

**Appliances**

**Incontinence supplies**

**Stoma appliances**

A full list of the therapeutic classes (BNF chapters) and their sub groups are shown in the following table.

### **Therapeutic Class:**

#### **Gastro-intestinal System**

- Antacids
- Antispasmodic and other drugs altering gut motility
- Ulcer healing drugs
- Antidiarrhoeal drugs
- Treatment of chronic diarrhoeas
- Laxatives
- Preparations for haemorrhoids
- Stoma care
- Drugs affecting intestinal secretions

#### **Cardiovascular System**

- Positive inotropic drugs
- Diuretics
- Anti-arrhythmic drugs
- Beta-adrenoceptor blocking drugs
- Antihypertensive therapy
- Nitrates and other vasodilators, and calcium channel blockers
- Sympathomimetics
- Anticoagulants and protamine

- Antiplatelet drugs

#### **Malignant Disease and Immunosuppression**

- Cytotoxic drugs
- Drugs affecting the immune response
- Sex hormones and hormone antagonists in malignant disease

#### **Nutrition and Blood**

- Anaemias and other blood disorders
- Fluids and electrolytes
- Oral nutrition
- Minerals
- Vitamins
- Bitters and tonics
- Metabolic disorders
- Foods
- Compound vitamin / mineral formulations
- Health supplements
- Other health supplements

#### **Musculoskeletal and Joint Disorders**

- Drugs used in rheumatic diseases and gout
- Drugs used in neuromuscular disorders
- Drugs used for relief of soft tissue inflammation

**Eye**



- Antifibrinolytic drugs and haemostatics
- Lipid-lowering drugs
- Local sclerosants
- Respiratory System**
- Bronchodilators
- Corticosteroids
- Cromoglycate and related therapy
- Allergic disorders
- Oxygen
- Mucolytics
- Aromatic inhalations
- Cough preparations
- Systemic nasal decongestants
- Central Nervous System**
- Hypnotics and anxiolytics
- drugs used in psychoses and related disorders
- Antidepressant drugs
- Central nervous system stimulants
- Appetite suppressants
- Drugs used in nausea and vertigo
- Analgesics
- Antiepiletics
- Drugs used in parkinsonism and related disorders
- Drugs used in substance dependence
- Drugs used in Alzheimer's disease
- Infections**
- Antibacterial drugs
- Antifungal drugs
- Antiviral drugs
- Antiprotozoal drugs
- Anthelmintics
- Endocrine System**
- Drugs used in diabetes
- Thyroid and antithyroid drugs
- Corticosteroids
- Sex hormones
- Hypothalamic and pituitary hormones and antioestrogens
- Other endocrine drugs
- Obstetrics**
- Drugs used in obstetrics
- Treatment of vaginal and vulval conditions
- Contraceptives
- Drugs used for genito-urinary disorders

- Anti-infective eye preparations
- Corticosteroids and other anti-inflammatory preparations
- Mydriatics and cycloplegics
- Treatment of glaucoma
- Local anaesthetics
- Miscellaneous ophthalmic preparations
- Contact lenses
- Ear, Nose and Oropharynx**
- Drugs acting on the ear
- Drugs acting on the nose
- Drugs acting on the oropharynx
- Skin**
- Vehicles and emulsifying agents
- Emollient and barrier preparations
- Local anaesthetics and antipruritics
- Topical corticosteroids
- Preparations for eczema and psoriasis
- Preparations for acne
- Preparations for warts and calluses
- Sunscreens and camouflagers
- Shampoos and some other scalp preparations
- Anti-infective skin preparations
- Disinfectants and cleansers
- Antiperspirants
- Wound management products
- Topical circulatory preparations
- Miscellaneous topical preparations
- Immunological Products and Vaccines**
- Vaccines and antisera
- Immunoglobulins
- Anaesthesia**
- General anaesthesia
- Local anaesthesia
- Preparations used in Diagnosis**
- X-ray contrast media
- Other Drugs and Preparations**
- Dressings**
- Appliances**
- Incontinence Supplies**
- Stoma Appliances**

## Data processing cycle

**Data collection** – The data are collected by Prescribing Services, NHS Wales Shared Services Partnership through information recorded on payment systems. Welsh Government send a request for data to be supplied in July/August for inclusion in the statistical release, usually planned for September. Data for other UK countries is acquired directly from their websites.

**Validation and verification** – Data is submitted on Excel spreadsheets via Afon, the Welsh Government secure data transfer system. Prescribing Services, NHS Wales Shared Services Partnership have stated that due to the complex and manual processes involved there may be minor inaccuracies in capturing prescription information which are then reflected in the data. Internal quality assurance processes exist and currently the prescription processing activity is internally audited for 2010-11 at 99.2 per cent accuracy (i.e. at least 99.2 per cent of prescriptions are processed accurately).

**Publication** - The data is analysed by Welsh Government statisticians and any queries are raised with data suppliers. Once validated, data is published using a standardised html template, in-line with

[statement on confidentiality and data access](#) which is informed by the [trustworthiness](#) pillar contained in the Code of Practice for Statistics, in September each year.

In addition to the main html release which includes charts, commentary and key points, statistics are also published in open data format tables which are published on StatsWales, supplementary data in Excel spreadsheets and in a Power BI dashboard.

**Disclosure and confidentiality** – The data which Welsh Government receives for this statistical release does not contain any information about the person who the prescription is written for, nor does it contain information about the medical practitioner who wrote the prescription. Therefore any disclosure or confidentiality issues are unlikely.

### **Symbols and rounding conventions**

Where figures have been rounded there may be an apparent discrepancy between the sum of the constituent items and the total. The following symbols are used in the tables:

- .. The data item is not available
- . The data item is not applicable
- The data item is not exactly zero, but estimated as zero or less than half the final digit shown
- \* The data item is disclosive or not sufficiently robust for publication

### **Quality**

Statistics published by Welsh Government adhere to the [Statistical Quality Management Strategy](#) which supplements the Quality pillar of the [Code of Practice for Statistics](#) and the [European Statistical System](#) principles of quality for statistical outputs. This statistical release aims to meet these quality principles in the following ways:

#### **Principle 11: Relevance**

The statistics produced support prescribing policy in Wales and the Welsh Government's [Healthier Wales](#) strategy.

The statistics presented can inform public debate and scrutiny.

Background information about statistics and sources is published for users and encourage users of the statistics to contact us to let us know how they use the data.

We consult with key users prior to making changes, and where possible publicise changes on the internet, at committees and other networks to consult with users more widely. We aim to respond quickly to policy changes to ensure our statistics remain relevant.

#### **Principle 12: Accuracy and reliability**

The data published in this statistical release can be considered an accurate and reliable reflection of true prescribing activity in Wales. Internal audits from Prescribing Services in NHS Shared Services Partnership have shown the data extracted is at least 99% accurate.

The data is sourced from an administrative payment system and is not subject to any survey errors.

In the unlikely event of incorrect data being published, revisions would be made and users informed in conjunction with the Welsh Government's [Revisions, Errors and Postponements](#) arrangements.

### **Principle 13: Timeless and punctuality**

Statistics are published as soon as possible after the relevant time period. Data is supplied in July/August and the annual release is published in September.

All outputs adhere to the Code of Practice for Statistics by pre-announcing the date of publication through the upcoming calendar. Furthermore, publication dates are announced well in advance and any delays are communicated via notices on our website. Any revisions or postponements to outputs follow the [Revisions, Errors and Postponements policy](#).

### **Principle 14: Coherence and comparability**

Prescriptions data are all collected from the same source every year and adhere to the national standard. Data from year-to-year is coherent as well as across all health organisations in Wales.

Comparisons with other UK countries can only be made, on a consistent basis, by using the supplementary data for prescriptions dispensed in the community.

#### **Data for other UK countries:**

Data for other UK countries can be accessed via the following webpages:

##### **England:**

[Prescription Cost Analysis, England](#)

##### **Scotland:**

[Dispenser Payments and Prescription Cost Analysis, Scotland](#)

##### **Northern Ireland:**

[Prescription Cost Analysis, Northern Ireland](#)

Note that varying prescribing practice may affect the interpretation of UK country comparisons. An example of this relates to the prescribing interval and how it appears to be shorter in Wales than other UK countries resulting in lower dose units prescribed per prescription item in Wales and correspondingly higher items per head statistics for Wales. This has been identified by research conducted by the [All Wales Medicines Strategy Group](#).

### **Principle 15: Accessibility**

The statistics are published in an accessible, orderly, pre-announced manner on the Welsh Government website at 9:30am on the day of publication. An RSS feed alerts registered users to this publication. Simultaneously the releases are also published on the National Statistics Publication Hub.

Statistical releases are publicised on [Twitter](#) and all releases are available to download for free.

Alt text is provided for all charts and tables so that they can be read with a screen-reader.

Data is published [StatsWales](#) (a free-to-use open data platform that allows visitors to view, create and download tables) and also in annex tables in an Excel spreadsheet.

Plain English is used in our outputs as much as possible and all outputs adhere to the Welsh Government's [accessibility policy](#).

All Welsh Government webpages and html releases are published in English and Welsh.

## National Statistics

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

National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.

All official statistics should comply with all aspects of the Code of Practice for Statistics. They are awarded National Statistics status following an assessment by the UK Statistics Authority's regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

The continued designation of these statistics as National Statistics was confirmed in June 2012 following a compliance check by the Office for Statistics Regulation. These statistics last underwent a full Regulation [Statistics on Health and Personal Social Services in Wales](#) against the Code of Practice in 2012.

Since the latest review by the Office for Statistics Regulation, we have continued to comply with the Code of Practice for Statistics, and have made improvements including: producing an interactive dashboard; redesigning the statistical release into html format; consolidating two statistical releases into one for ease of user-understanding and produced an enhanced quality report.

## Dissemination

Given the strengths and limitations listed above, prescriptions in Wales data are of sufficient quality to justify publication. [An extensive statistical release](#) is published with high level summaries and charts, with interactive data tables are published on [StatsWales](#).

## Evaluation

We always welcome feedback on any of our statistics. If you would like to make any comments, please e-mail us at [stats.healthinfo@gov.wales](mailto:stats.healthinfo@gov.wales)

Produced by Knowledge and Analytical Services, Welsh Government

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