

General Details	
Dataset Title:	Pharmacies, 2004
Domain(s):	Health and Care
Time Period of Dataset(s):	April 2004
Geographic Coverage:	England
Lowest Area Output:	Point Level
Supplier:	Connecting for Health
Department:	Information Centre (IC) for health and social care, formerly Health and Social Care Information Centre (HSCIC)
National Statistics Data?	Not National Statistics - this information based on administrative data does not comply fully with the National Statistics Code of Practice
No. of Variables (excluding area names and codes):	12
Scope and Purpose	
<p>The information presented here provides details of all 9,755 pharmacies that provide NHS dispensing in England and the point location of those which could be accurately georeferenced. It shows the static point locations of pharmacies which were operating in April 2004.</p> <p>It is important to note that the data provide information about the location of pharmacies and not a count of pharmacists or staff at pharmacies operating in England. All pharmacies that are responsible for NHS dispensing and prescriptions are included (including pharmacies in large shops and supermarkets). Although GP Practices have the authority to dispense medicines, they are excluded from this dataset, as are pharmacies in hospitals, mobile services, walk-in services and any pharmacy selling over the counter products only (and not dispensing).</p> <p>The data are collected by nhs.uk from the Prescription Pricing Authority and included on the nhs.uk database of all public health service establishments in England. This was the best data source available for the location of primary care services, in April 2004. This is maintained by NHS Connecting for Health (formerly National Health Service Information Authority, NHSIA). This does not include data from Scotland, Wales or Northern Ireland, which is maintained by their own teams (England – www.nhs.uk/england, Scotland – www.show.scot.nhs.uk, Wales – www.wales.nhs.uk, NI www.healthandcareni.co.uk).</p>	

This dataset is part of a package of health point location information on the Neighbourhood Statistics website and is intended as a starting point for the development of more detailed information that will increase understanding of the provision and accessibility of health services in an area. Data suppliers are investigating whether an extension of the dataset can be made available in the future, e.g. to include details on the facilities available and additional attributes related to the service in future updates. The other health point location information available on the Neighbourhood Statistics website is:

- General Practices / Surgeries;
- Opticians (Ophthalmic Establishments); and
- Dental Surgeries.

Terms of use - it is permitted to incorporate data from the nhs.uk and this site into software or computer systems used by any person or body performing statutory functions under, or by virtue of, legislation relating to the NHS. However, it is **not permitted** to use data from this site for the purpose of promoting commercial products or services to the public or to construct mailing lists.

Details of the information held on this dataset are outlined below.

Please note: information on pharmacies can be viewed both on a map and in a tabular download file. The variables for each are not identical - the variable listing in this metadata file is specific to the information shown via the map function.

Variable Name	Data Type	Variable Description
Primary Key	Number	Unique identifier for each organisation.
Organisation Name	Text	Name assigned to the pharmacy.
Organisation Code	Text	Unique code assigned to the organisation / pharmacy.
Premises Code	Text	Code assigned to the Premises Name.
Address	Text	Address of the organisation.
Postcode	Text	Postcode of the organisation.
PCO Name	Text	Name of the Primary Care Organisation in which the organisation is located.
PCO Code	Number	Code of the Primary Care Organisation in which the organisation is located.
Super Output Area (SOA) Lower Layer Name	Text	ONS-NeSS statistical geographic boundary made up of output area 'building blocks' and equivalent to a resident population of approximately 1500.
Super Output Area (SOA) Lower Layer Code	Number	Unique code for the above.
Grid Reference	Number	Reference used to locate the establishment on the map.
Positional Quality	Text	The level of precision in mapping.

Administrative Procedures – Background Information

The data are collected by nhs.uk from the Prescription Pricing Authority and included on the nhs.uk database of all public health service establishments in England. As PPA pharmacy data are used for payment purposes, it is important that they are correct at source.

The nhs.uk Programme is responsible for the maintenance of the nhs.uk website and identifying improvements to its public information wherever possible. Errors reported by users of the website are investigated, and where appropriate, corrected as necessary. For further information about this process, please see the 'Validation and Quality Assurance' section.

The nhs.uk Programme provides the capability for NHS organisations to maintain their own data (PCOs maintain GP, optician, dental and pharmacy data relevant to their own areas). However, the supply of information to nhs.uk is not mandatory; PCOs provide information on a voluntary basis. The nhs.uk Programme is responsible for monitoring data quality but not for ensuring its accuracy. This is the responsibility of the PCO or local NHS organisation. Further information on how the information is maintained is provided in the 'Edit and Imputation Procedures' section.

Concepts and Definitions

Pharmacists - pharmacists (sometimes called Chemists) are experts in medicines and how they work. They play a key role in providing quality healthcare to patients. Working in the community, primary care and hospitals, pharmacists use their clinical expertise together with their practical knowledge to ensure the safe supply and use of medicines by patients and members of the public. They dispense prescriptions, provide a range of services related to specific health related issues and can advise on minor ailments.

A pharmacist has to be registered with the Royal Pharmaceutical Society of Great Britain and have worked for at least a year under the supervision of an experienced and qualified pharmacist, either in a hospital or community pharmacy (local chemist's shop).

Pharmacy - a premise providing dispensing services. The pharmacy may be part of a bigger shop (such as Boots or a supermarket). A pharmacy has to be contracted by a PCO to dispense NHS medicines prescribed on an official prescription form. A qualified pharmacist is present to dispense prescription only medicines and pharmacy only medicines and other staff may work in a pharmacy. This dataset provides details of pharmacies offering primary care services only.

Primary Care Organisation (PCO) - PCOs are local health organisations responsible for managing health services in local areas. They work with local authorities and councils that provide health and social care to the local population. PCOs are at the centre of the NHS and are provided with a large proportion of the overall NHS budget. PCOs ensure that health services are available for the local population. These include dentists, opticians, mental health services, NHS 'Walk In' Centres, pharmacies and patient transport.

Primary Care Trusts (PCTs) - PCTs are NHS bodies, established by the Secretary of State, with their own statutory freedoms and duties over both the deployment of resources and the shaping of local services. They have their own budget for local healthcare, and are able to employ staff and develop new integrated services for patients.

Primary Care - the frontline of the NHS is officially called Primary Care. The initial contact for many people when they develop a health problem is with a member of the Primary Care Team. Pharmacists and many other professionals work as part of this frontline team – nurses, health visitors, GPs, opticians, dentists and a range of special therapists. NHS Direct and NHS 'Walk In' Centres are also primary care services.

Connecting For Health - NHS Connecting for Health, which came into operation on [April 1 2005](#), is an agency of the [Department of Health](#). Its primary role is to [deliver](#) new, integrated IT systems and services to help modernise the NHS and ensure care is centered around the patient. (<http://www.connectingforhealth.nhs.uk>).

nhs.uk Programme - the team responsible for the maintenance of the www.nhs.uk website.

Prescription Pricing Authority (PPA) - is an NHS Special Health Authority which focuses upon payment, information and budget management of significant numbers of NHS healthcare professionals working within front line patient care and provision of prescribing information systems which provide the basic building blocks for performance management in the primary care sector.

Information Centre (IC), formerly Health and Social Care Information Centre (HSCIC) – the Information Centre works to co-ordinate and streamline the collection and sharing of data about health and adult social care. It is providing an important service to frontline healthcare staff, by reducing the time they spend on data collection – allowing them more time to concentrate on providing care to patients. To improve accessibility, the IC will be a focus for everyone who needs information, including patients, clinicians and regulators such as Monitor and the Health Commission. The IC is a Special Health Authority that became a statutory body on April 1 2005.

Data Classifications

Standard Classifications used (if any):	Not Applicable.
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Further Details about Classifications:	Not Applicable.
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Edit and Imputation Procedures

These data are provided directly from PPA (to nhs.uk), where the data are used primarily for prescription form collection and pharmacy payment.

The PCO web editor can manually enter and edit pharmacy data directly via a dedicated online administration system. The nhs.uk website provides a feedback mechanism on every page for every local NHS organisation which enables site visitors to report any data discrepancies. These reports go directly to the nhs.uk Helpdesk and Data Quality Team who work with the PCO web editors to resolve data quality issues. The web editors check and validate these discrepancies prior to amending the online information.

As part of the address cleaning and geographic referencing procedures, ONS has taken considerable care to assign the most accurate locations to addresses using a range of orthographic and fuzzy matching procedures. Please see the 'Geographic Referencing' section for further details.

Validation and Quality Assurance

PPA holds the original source data and these are updated continuously as they are required for pharmacy reimbursement for NHS prescriptions. The data are placed on the nhs.uk web site at www.nhs.uk Maintenance can be carried out at any time by local organisations.

The nhs.uk team have a data quality and co-ordinating role in ensuring data quality is maintained to the highest possible standard. The nhs.uk Data Quality Team runs regular weekly and monthly reports on data quality. Any issues are then reported direct to the responsible NHS organisation to address and update the site where applicable.

Checks are done to ensure that there are the correct numbers of characters for each postcode.

Point location data for pharmacies have been downloaded from the nhs.uk website in an .xml format. This .xml extract was then passed to ONS who carried out data checks to verify the address quality of the .xml extract and identify any obvious spurious or duplicate record entries.

As part of the preparatory data cleansing and checking work associated with geographic referencing, the Office for National Statistics (ONS) Geography Department and the Access to Services Team carried out investigations to compare the overall completeness and validity of the data in this dataset. Please see the 'Data Quality' section for further information.

Geographic Referencing

Geographic referencing (performed by the ONS Geography Department) was carried out by taking a snapshot of the pharmacy address data received from nhs.uk. This snapshot was taken in April 2004. Detailed grid references were added, obtained by matching the pharmacy records with standardised address data in the geography products described below.

Extensive data checks were carried out to verify record quality and identify any obvious spurious record entries. These included searching for foreign records referencing establishments outside England. None were found and removed from this dataset. The only records removed were duplicates. Duplicates were removed after georeferencing and in each case the best quality match was retained (e.g. one matched to an address delivery point, the other only to a postcode centroid. In this case the first record was retained). In total 6,614 duplicate records were removed from the data after being validated in ONS.

The following geography products were used to reference the data on pharmacies:

Capscan Matchcode ('Batch Processor' and 'Manual Processing', version 5.2.6) – this software is an address-matching tool which attempts to link an address to an entry in the Postcode Address File (see below) and assign a grid reference from the ADDRESS-POINT file;

Postcode Address File (PAF) – this is a database of all UK addresses and postcodes. It is produced by Royal Mail and is updated quarterly;

Ordnance Survey's ADDRESS-POINT (May 2004) – this is an Ordnance Survey product providing locational information for every postal address in Great Britain. It is referenced by the PAF file when a match has been made;

NeSS Postcode Directory for Data Suppliers (May 2004) – this was used to attempt to link postcodes of records not assigned grid references by Matchcode within the NeSS Postcode Directory. The grid reference obtained from the NeSS Postcode Directory identifies the postcode centroid for the pharmacy. The postcode centroid is the geographic centre of the postcode area within which the pharmacy is located. This is a less accurate resolution than an address-matched record.

Assigning a grid reference to a record was done in a number of stages using these standard products and tools:

1. Orthographic address match - this attempted to match the given address of the pharmacy to a record in the PAF. If a match was made grid references were assigned from the ADDRESS-POINT file. Little variability was allowed between the address held on the NHS Information Authority dataset and that held in ADDRESS-POINT. This setting allows for minor spelling errors, character transpositions or missing and extra characters. Records matched at this stage were accurate to 1 metre resolution at the address delivery point.

2. Advanced fuzzy address match – if the above process failed to match the address, the match criteria were relaxed allowing greater variability in the matching procedure. This setting allows for missing words in a name or incorrect word order. Pharmacies matched at this stage were accurate to 1 metre resolution at the address delivery point.

If a match was not achieved using PAF, postcode matching was applied to attempt to assign a grid reference to a pharmacy. Postcode matching (stages 3 & 4) is less accurate since a grid reference relates to the postcode centroid (as described above).

3. Orthographic match to a postcode level – a grid reference was assigned by further matching the original or a Matchcode enhanced/corrected postcode to the NeSS Postcode Directory (May 2004). A successfully assigned grid reference located the pharmacy to a 1 metre resolution of the postcode centroid.

4. Fuzzy match to a postcode level – a further stage allowed for some minor variations in matching postcodes. A grid reference was then assigned by matching the original or enhanced postcodes to the NeSS Postcode Directory (May 2004). Again a successfully assigned grid reference located the pharmacy to a 1 metre resolution of the postcode centroid.

5. If a record has failed to be assigned a grid reference by any of the methods given above, Matchcode ‘Manual Processing’ was used to attempt to assign a grid reference at the pharmacy’s address delivery point. This method was also used on a number of records that were considered to have been poorly matched by Matchcode ‘Batch’, after quality assuring measures had been taken.

Details of the number and percentage of records matched at each stage of this process are presented in a separate table in Annex A.

***Please Note:** The term “Address Delivery Point” or “Delivery Point” refers to the front door/letter box of a building containing one or more organisations. This is given to a resolution of 1 metre.

Data Quality

Relevance:	<p>These data are a direct result of the implementation of the PAT18 Report on “Better Information” for neighbourhood renewal and sustainable communities. The information is designed to support work on the availability of key health services. In particular the data should assist policy developments, decision making and accessibility planning in order to promote social inclusion, improve service provision and tackle the underlying accessibility problems often faced by disadvantaged groups.</p> <p>These data will also be useful in the development of accessibility indicators produced by the Department for Transport and Local Transport Authorities to investigate the links between transport and access to key public services that affect quality of life and equality of opportunity.</p>
Accuracy:	<p>When the data were downloaded in April 2004, the information on pharmacies was the most up-to-date, accurate, and came from the best source available at the time. It should however be noted that the data only provide coverage of those pharmacies open in April 2004. There may have been subsequent changes in some areas as a result of the opening of new pharmacies or the closure of those in existence in April 2004.</p> <p>Data Source PPA updates data on a continuous basis as part of its core information.</p> <p>Geographic Referencing In order to assess the overall quality of the data provided by the NHSIA, some specific investigations were undertaken. ONS took a small sample (6 PCOs) and compared the information on the number of GPs (taken to be representative of all health services) from the nhs.uk source data with information on the PCOs’ websites and followed up with telephone enquires to the PCOs. These investigations indicated that the nhs.uk source data were more reliable and up-to-date than the data on the PCO websites.</p>

	<p>ONS also carried out spot checks on the accuracy of the geographic referencing of pharmacies in known locations and reported a high level of accuracy. Small errors tended to occur when the georeferencing had been accomplished using less accurate matching to the postcode centroid. (In rural areas the georeferencing of the post code centroid was less likely to lie on the digital position of the pharmacy building because of the characteristics of the underlying area and lower densities of surrounding buildings).</p> <p>During the address cleaning and georeferencing process ONS found the following variations by area:</p> <p>The worst address match rate in this dataset is 69% for the Newbury and Community PCT. There are a further 7 PCTs with match rates below 75% (Bexhill and Rother, Central Suffolk, Maldon and South Chelmsford, South Leeds, South Wiltshire, West Cornwall, and West Norfolk). East England as a whole shows poor address matching rates. PCTs with high match rates (above 95%) are distributed sporadically across the country with concentrations in the South West and around London.</p> <p>The worst non-match rate is 15% for the Newbury and Community PCT, and there are a further 2 PCTs with rates between 10% and 15% (Bracknell Forest and Kingston). There are 10 PCOs with more than 2 surgeries unmatched – these can be found in Annex B.</p>
Timeliness and Punctuality:	<p>The nhs.uk website is considered the most comprehensive and up-to-date database available with respect to health services. These organisations are required to maintain information pertaining to their services and updates can occur on an hourly basis.</p> <p>However, it should be noted that these data were accurate at April 2004, and therefore may not represent the location of pharmacies now (please see ‘Comparability’ section for further information).</p>
Comparability:	<p>As the source data were extracted from nhs.uk in April 2004, it should be noted that any information currently available on the website may not be directly comparable with this dataset. For example, pharmacies may have moved to new premises, new pharmacies may have opened and existing premises closed.</p>
Disclosure Control	
<p>The data are fully compliant with the Data Protection Act 1998.</p> <p>The National Statistics Code of Practice places a responsibility on both the data supplier and ONS to ensure that no confidential information is disclosed.</p> <p>The nhs.uk pharmacies address information is in the public domain and therefore disclosure of information is not a risk for this dataset.</p> <p>The Office for National Statistics carried out a number of checks to safeguard confidentiality. In accordance with standard procedures, this dataset has been reviewed and approved for release.</p>	

Sources for Further Information or Advice
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nhs.uk Programme: <http://www.nhs.uk>

Local Health Services Information in England <http://www.nhs.uk/england>

Specific queries on the dataset

Graham Fisher

NHS.UK

NHS Connecting for Health

40 Aire Street

Leeds

LS1 4HT

Tel: 0845 6504865

Email: graham.fisher@cfh.nhs.uk

NeSS Team in Information Centre

Information Centre (IC) - <http://www.ic.nhs.uk>

Telephone: 0845 300 6016,

Email: enquiries@ic.nhs.uk.

General Enquiries

Email: nesstemp.ic.nhs.uk

Telephone: 020 7972 6570

General NeSS contacts and Georeferencing

ONS Geography Customer Services:

Email: ons.geography@ons.gov.uk

Contact Neighbourhood Statistics:

Email: info@statistics.gov.uk.

Access to Services Domain

Maria Bonery

Office for National Statistics

B411

Drummond Gate

Pimlico

London

SW1V 2QQ

Tel: 0207 5336 349

Email: Maria.Bonery@ons.gov.uk

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Annex A

Address information from the nhs.uk website has been matched with the set of geography products described previously (e.g. Matchcode). The following table gives the proportion of matches obtained when georeferencing the pharmacies using the different geography products and tools.

Positional Quality of Grid Referencing	Stage of Matching	Number Matched	Percentage of those Matched
1m to an address point	1 & 2	7,784	88.96%
1m to a postcode centroid	3 & 4	809	9.24%
1m to an address point (manual processing)	5	102	1.17%
Unmatched	6	55	0.63%
Total		8,750	100.00%

Detailed information on the stages of matching can be found in the ‘Geographic Referencing’ section. In brief, stages 1, 2 and 5 result in matches accurate to an address point so the location can be displayed on a digital map of the actual pharmacy building. Stages 3 and 4 result in matches accurate to the centroid of the postcode in which the pharmacy lies so the point will appear nearby, if not on the pharmacy building displayed on the digital map.

Annex B

The 10 PCOs with more than 2 pharmacies unmatched (i.e. could not be assigned an accurate grid reference). The table shows the number of pharmacies and percentage of the total for that PCO.

			Unmatched	
PCO CODE	PCO NAME	Total in PCO	Number	Percent of Total
5MN	SOUTH WESTERN STAFFORDSHIRE PCT	33	3	9.09
5A5	KINGSTON PCT	29	3	10.34
5D2	WEST LINCOLNSHIRE PCT	35	3	8.57
5G2	BRACKNELL FOREST PCT	20	3	15.00
5HP	BLACKPOOL PCT	41	3	7.32
5MT	SOUTH WORCESTERSHIRE PCT	41	3	7.32
5C4	TOWER HAMLETS PCT	44	3	6.82
5CM	DARTFORD, GRAVESHAM AND SWANLEY PCT	42	3	7.14
5K7	CAMDEN PCT	63	4	6.35
5C9	HARINGEY TEACHING PCT	57	4	7.02