Office of Health Economics

Research

OHE Guide to UK Health and Health Care Statistics

Second Edition

Emma Hawe
Lesley Cockcroft

OHE Guide to UK Health and Health Care Statistics

Second Edition

Emma Hawe and Lesley Cockcroft

2013

Office of Health Economics Research

Office of Health Economics
Southside, 7th Floor
105 Victoria Street
London SW1E 6QT
United Kingdom
www.ohe.org

Printed in the United Kingdom
ISBN-13 978-1-899040-39-1

About the Office of Health Economics

Founded in 1962, OHE's terms of reference are to:

- Commission and undertake research on the economics of health and health care
- Collect and analyse health and health care data for the UK and other countries, and
- Disseminate the results of this work and stimulate discussion of them and their policy implications.

OHE's work is supported by research grants and consultancy revenues from a wide range of UK and international sources.

Office of Health Economics Research

Acknowledgements

OHE is particularly grateful to the Department of Health, the Information Services Division Scotland, the Welsh Assembly Government, the Health and Social Care Business Services Organisation in Northern Ireland, the Government Actuary's Department, HM Treasury, the Office for National Statistics, the Organisation for Economic Co-operation and Development (OECD), The Health and Social Care Information Centre (HSCIC), and the World Health Organisation for providing information.

Disclaimers

OHE uses its best endeavours to ensure that the *OHE Guide to UK Health and Health Care Statistics* contains fair and accurate representation or interpretation of the original material from which the *OHE Guide* is drawn, but OHE shall not, for any reason whatsoever, be responsible for any damage, loss, cost, claim or expense incurred by a user as a result of its use or interpretation of, or reliance upon, any material contained in the *OHE Guide to UK Health and Health Care Statistics*.

Any views expressed in this publication are those of the authors and do not necessarily represent those of OHE.

Office of Health Economics
Research

Contents

Office of Health Economics Research

Office of Health Economics Research

Office of Health Economics Research

List of tables and figures

Section 1 Population

Population

Mortality

Morbidity

Lifestyle factors

Section 2 Health care expenditure

Total health care expenditure in the UK

NHS expenditure

General Pharmaceutical Services

General Dental Services

General Ophthalmic Services

Introduction

Health statistics, broadly defined, concern the health of the population and the health care services provided for them. They cover a wide range of topics ranging from statistical information about births, deaths and morbidity to health care provision in primary care and hospital treatment and the costs of providing these services. With such a diversity of information collected and disseminated by different agencies and government departments, it is not surprising to find a maze of official statistical information available in a variety of formats from different sources. Coupled with other statistical publications from the voluntary and private sectors, users of health statistics can face a daunting task to find the information they are seeking.

The main purpose of this *OHE Guide* is to provide up to date statistics together with a detailed description of the meaning and major sources of health and health care statistics in the UK and to some extent the other OECD countries. The publication is not a 'critique' of health statistics. It serves as a guide to health information gathering, access to health care data sources and reports and the interpretation and presentation of some standard statistical measures/indicators, as well as the methodology involved in deriving them. The *OHE Guide* helps to answer the questions:

- What sorts of statistics do government and non-government bodies produce?
- What do they cover?
- How/where do I find them?
- How do I use them or where do I get help and advice?

The *OHE Guide* consists of four sections, as follows, plus a glossary and references:

- Population provides a description of demographic issues covering the population Census; population estimates and projections; mortality statistics and summary measures, including life expectancy and standardisation techniques; and the collection and use of morbidity statistics and lifestyle statistics
- Health care expenditure: describes total expenditure in the UK on health care, public and private; the structure and financing of the UK's National Health Service (NHS); and the costs of various (groups of) activities
- Hospital activity and workforce provides a detailed account of NHS data collection concentrating mainly on hospital activities, waiting times and workforce
- 'Family Health Services': gives details of the NHS Family Health Services, i.e. primary care services provided outside hospitals, covering general medical, pharmaceutical, dental and ophthalmic services.

The tables and figures can be used on their own as up to date statistics or along with the text as a key reference guide. Each section of the publication includes: key facts and figures shown at the start of the section; and issues and points of interest, which are highlighted in boxes.

Other boxes highlight selected methods. Key sources of information are summarised at the end of each section in a shaded box.

However, the *OHE Guide* is not a textbook of statistical methods such as significance testing or the construction of confidence intervals. Nor does it describe graphical presentation of statistics. Readers seeking this kind of information should consult a standard textbook on statistics.

It is difficult to provide a comprehensive view of health statistics in the UK. Frequent organisational changes in the NHS, coupled with the devolution of powers to the four countries of the UK, make it a challenge to keep track of revisions to official health statistics. As printed versions of official and unofficial reports are increasingly being phased out to be available only on the internet as downloadable documents, it is also important to keep track of the changes in web site addresses. In the last few years there have been several changes to internet address, this has included changes to the Department of Health and HM Treasury whereby these website are now found under www.Gov.uk. Similarly there have been changes to some organisation web links, for example, the Information Centre to the Health and Social Care Information Centre which has resulted in a change from web addresses www.ic.gov.uk to www.hscic.gov.uk/. Even apparently minor changes such as this can be problematic and result in broken links. We have endeavoured to include in the *OHE Guide* the most up to date web page addresses available at the time of publication.

Notes on tables and charts

1. Statistical data relate mainly to the UK. Where figures are for Great Britain (which includes England, Scotland and Wales but not Northern Ireland) or for individual countries of the UK only, this is indicated in the relevant table or chart.
2. Rounding of numbers may lead to minor inconsistencies between the sum of constituent parts and the total in some tables.
3. Throughout the *OHE Guide* 'billion' means one thousand million.
4. Symbols and abbreviations used:

   \- not available or not classified at that time

   0 nil unless otherwise stated

   e OHE estimate(s), unless otherwise stated

   AGR Annual average growth rate (per cent)

   ICD International Classification of Diseases

If you have comments

The Office of Health Economics welcomes comment on the *OHE Guide to Health and Health Care Statistics*. Please write to Lesley Cockcroft at:

Office of Health Economics, Southside, 7th Floor, 105 Victoria Street, London SW1E 6QT

E-mail: lcockcroft@ohe.org • Fax: +44(0)20 7747 8851

Office of Health Economics Research

Further reading

Kerrison S et al. (2000) *Official Health Statistics: An Unofficial Guide*. London: Arnold.

Merry P. *Wellard's NHS Handbook*. East Sussex: JMH Publishing. Published annually.

Office for National Statistics. (2000) *Guide to Official Statistics*. London: TSO.

Office for National Statistics. (2008) *UK Health Statistics*. London: TSO.

Office of Health Economics. Health statistics section on OHE website. *http://www.ohe.org/page/health-statistics.cfm*

1 Population

Population ***Selected key facts and trends***

- **The population in the UK continues to rise, estimated at 63.2m in 2011**
- **In 2011 84 per cent of the population is estimated to live in England, approaching 3 per cent in Northern Ireland, just over 8 per cent in Scotland and 5 per cent in Wales. These proportions are expected to remain broadly similar over the coming decades**
- **The most recent estimates suggest that by 2051 the population in the UK will reach 78.7million**

1.1 Population statistics

Population statistics relate to the structure and dynamics of a population, nationally and sub-nationally. Accurate, timely information on the number of people and their socioeconomic and socio-demographic mix is important for central and local government to target their resources and to plan services such as health care, social services and education. Population estimates for the UK by age group since the NHS was established in 1948 are shown in Table 1.1. Statistics are often presented per 1,000 population, because rates are often more easily interpretable (see Table 1.7 for example). Surveys make use of population statistics to create weightings and 'gross' data up to a population level, thus attempting to ensure that the weighted results more closely represent the overall population rather than the sample taken from that population.

Population estimates

A short description of ONS population estimates can be found at:

http://www.ons.gov.uk/ons/guide-method/method-quality/specific/population-and-migration/pop-ests/index.html

The Census of Population provides a population count once a decade. It is important to estimate the population size in the years between Censuses (the intercensal years). Annual mid-year population estimates by age and sex, both at national and sub-national (i.e. local) level, are published by the ONS in England and Wales, the Statistics Research Agency in Northern Ireland and the Registrar General in Scotland and The most recent Census took place in 2011 in all four constituent countries of the UK. After each Census, the Registrar Generals in England and Wales, Northern Ireland and Scotland publish a set of 'base' mid-year (30th June) population estimates

which are derived from the Census Day population counts, with adjustments made to allow for coverage, under-counting/under-enumeration and for births, deaths and migration occurring between these two dates. Table 1.1 shows population estimates for the UK by age group, and Table 1.2 shows population estimates by constituent country of the UK, both of which are published on the ONS site.

Table 1.1. UK resident population and projections by age group, 1948 - 2051

Millions

	Age group								All
Year	<5	<15	15-29	30-44	45-64	65-74	=>75	=>85	ages
1948	4.3	10.8	10.4	11.3	11.6	3.6	1.7	0.2	49.4
1951	4.3	11.4	10.3	11.1	12.0	3.7	1.8	0.2	50.3
1961	4.2	12.4	10.3	10.5	13.4	4.0	2.2	0.3	52.8
1971	4.6	13.5	11.8	9.8	13.4	4.8	2.6	0.5	55.9
1981	3.5	11.6	12.8	11.0	12.5	5.2	3.3	0.6	56.4
1982	3.5	11.4	13.0	11.0	12.5	5.1	3.4	0.6	56.3
1983	3.6	11.2	13.1	11.1	12.5	5.0	3.5	0.6	56.3
1984	3.6	11.0	13.2	11.2	12.6	4.9	3.5	0.7	56.4
1985	3.6	10.9	13.3	11.3	12.4	5.0	3.6	0.7	56.6
1986	3.6	10.8	13.4	11.5	12.3	5.0	3.7	0.7	56.7
1987	3.7	10.7	13.4	11.6	12.2	5.1	3.8	0.7	56.8
1988	3.7	10.7	13.4	11.7	12.2	5.1	3.8	0.8	56.9
1989	3.8	10.8	13.2	11.8	12.3	5.1	3.9	0.8	57.1
1990	3.8	10.9	13.1	12.0	12.3	5.0	4.0	0.8	57.2
1991	3.9	11.0	12.9	12.1	12.4	5.1	4.0	0.9	57.4
1992	3.9	11.1	12.6	12.1	12.7	5.1	4.0	0.9	57.6
1993	3.9	11.2	12.3	12.1	12.9	5.2	4.0	0.9	57.7
1994	3.9	11.3	12.1	12.3	13.1	5.2	3.9	1.0	57.9
1995	3.8	11.3	11.9	12.4	13.2	5.1	4.1	1.0	58.0
1996	3.7	11.3	11.7	12.6	13.3	5.1	4.2	1.0	58.2
1997	3.7	11.3	11.5	12.8	13.5	5.0	4.2	1.0	58.3
1998	3.6	11.3	11.4	13.0	13.6	5.0	4.3	1.1	58.5
1999	3.6	11.3	11.2	13.1	13.8	4.9	4.3	1.1	58.7
2000	3.6	11.2	11.2	13.3	13.9	4.9	4.4	1.1	58.9
2001	3.5	11.1	11.2	13.4	14.1	4.9	4.4	1.1	59.1
2002	3.4	11.0	11.2	13.5	14.2	5.0	4.5	1.1	59.3
2003	3.4	10.9	11.3	13.5	14.4	5.0	4.5	1.1	59.6
2004	3.4	10.9	11.4	13.5	14.5	5.0	4.5	1.1	59.8
2005	3.4	10.8	11.6	13.4	14.7	5.0	4.6	1.2	60.2
2006	3.5	10.7	11.9	13.3	15.0	5.0	4.7	1.2	60.6
2007	3.6	10.7	12.1	13.1	15.2	5.1	4.7	1.3	61.0
2008	3.7	10.8	12.3	13.0	15.4	5.2	4.8	1.3	61.4
2009	3.8	10.8	12.4	12.8	15.6	5.3	4.8	1.4	61.8
2010	3.9	10.9	12.5	12.7	15.9	5.4	4.9	1.4	62.3
2011	3.9	11.1	12.6	12.9	16.2	5.5	4.9	1.4	63.2
Projections based on 2010 mid-year population estimates									
2016	4.2	11.7	12.5	12.6	16.6	6.4	5.5	1.7	65.3
2021	4.2	12.3	12.1	13.4	16.9	6.6	6.3	2.0	67.6
2026	4.1	12.4	12.3	14.1	16.8	6.8	7.4	2.3	69.8
2031	4.0	12.2	13.0	14.0	16.7	7.6	8.1	2.8	71.7
2036	4.0	12.1	13.6	13.6	17.0	8.1	9.1	3.6	73.6
2041	4.2	12.2	13.8	13.8	17.7	7.6	10.3	3.9	75.3
2051	4.4	13.0	13.4	15.1	18.1	7.6	11.5	5.1	78.7

Notes: Mid-year population estimates from 1982 have been revised based on the results of the 2001Census.
Data from 2002 have been revised due to improved methodology on international migration.

Sources: Annual Abstract of Statistics (ONS).
Population Projections Database (GAD).
Population Estimates and Projections (ONS).
2011Census, Population and Household Estimates for England and Wales (ONS).
2011Census (General Registrar Office for Scotland).
2011Census (Northern Ireland Statistics and Research Agency).

Office of Health Economics Research

Population *Issues and points of interest*

Rebasing the population estimates

When a new Census based population count is introduced into the population estimates process, it is necessary to revise (rebase) the previous Census based population estimates series. This is to ensure consistency in the methodology so that there is no break in the continuity of the series.

Population estimates for 2011 based on the 2011 Census were released in 2013. During 2013 the latest 2011 Census data for all constituent countries of the UK will be utilised to update population estimates for the years between 2001 and 2011. A comparison of 2011 data based on the Census that year and earlier estimates for 2011 based on the 2001 Census shows differences in some age groups. However, it may be expected that the rebased population estimates between 2001 and 2011 will result in relatively small modifications considering the currently published information.

In addition to the problems of under-coverage and inaccuracy as was seen in the 1991 Census, one of the major sources of error in population estimates is inaccuracy in internal migration information. This significantly affects the estimates for sub-national populations involving small areas.

For the 2001 Census ONS established an initiative to produce full and un-biased population estimates through the 'One Number Census'. However, there are some concerns over certain aspects of the population estimates, including where there are areas of transient populations (such as areas with high proportions of students or military personnel), areas with low response rates and the difficulty in separating the effects of non-response from emigration. Recent revisions by ONS to the calculation of population estimates utilising new methodology with regards to international migration, have resulted in updates to previously reported estimates.

An overview of the work being conducted to improve population statistics is available at:
http://www.ons.gov.uk/ons/guide-method/method-quality/imps/index.html

Table 1.2. UK resident population and projections by sex and country, 1951 - 2051

Millions

	England		Wales		Scotland		N Ireland	
Year	Male	Female	Male	Female	Male	Female	Male	Female
1951	19.77	21.44	1.27	1.33	2.44	2.66	0.67	0.70
1961	21.06	22.50	1.29	1.35	2.49	2.70	0.70	0.73
1971	22.57	23.84	1.33	1.40	2.52	2.72	0.76	0.79
1981	22.80	24.03	1.37	1.45	2.50	2.69	0.75	0.78
1982	22.76	24.02	1.36	1.45	2.49	2.68	0.76	0.79
1983	22.78	24.04	1.36	1.45	2.48	2.67	0.76	0.79
1984	22.83	24.08	1.35	1.44	2.47	2.66	0.76	0.80
1985	22.90	24.16	1.25	1.45	2.47	2.66	0.76	0.80
1986	22.95	24.24	1.36	1.45	2.46	2.65	0.77	0.81
1987	23.00	24.30	1.37	1.45	2.46	2.64	0.77	0.81
1988	23.06	24.36	1.38	1.47	2.44	2.63	0.77	0.81
1989	23.13	24.43	1.38	1.47	2.44	2.64	0.78	0.81
1990	23.22	24.49	1.39	1.48	2.44	2.64	0.78	0.82
1991	23.29	24.58	1.39	1.48	2.44	2.64	0.78	0.82
1992	23.35	24.65	1.39	1.49	2.45	2.64	0.79	0.83
1993	23.40	24.71	1.40	1.49	2.45	2.64	0.80	0.84
1994	23.45	24.77	1.40	1.49	2.45	2.65	0.80	0.84
1995	23.55	24.84	1.40	1.49	2.45	2.65	0.80	0.85
1996	23.63	24.89	1.40	1.49	2.45	2.65	0.81	0.85
1997	23.71	24.96	1.40	1.49	2.44	2.64	0.82	0.86
1998	23.79	25.03	1.41	1.49	2.44	2.64	0.82	0.86
1999	23.92	25.12	1.41	1.49	2.44	2.64	0.82	0.86
2000	24.03	25.20	1.41	1.50	2.43	2.63	0.82	0.86
2001	24.17	25.28	1.41	1.50	2.43	2.63	0.82	0.86
2002	24.29	25.36	1.41	1.51	2.43	2.62	0.83	0.87
2003	24.42	25.45	1.42	1.51	2.43	2.62	0.83	0.87
2004	24.56	25.55	1.43	1.51	2.45	2.63	0.84	0.87
2005	24.76	25.71	1.44	1.51	2.46	2.64	0.84	0.88
2006	24.93	25.84	1.44	1.52	2.47	2.65	0.85	0.89
2007	25.11	25.98	1.45	1.53	2.49	2.66	0.86	0.90
2008	25.32	26.13	1.46	1.53	2.50	2.67	0.87	0.90
2009	25.52	26.30	1.46	1.53	2.51	2.68	0.88	0.91
2010	25.76	26.48	1.47	1.54	2.53	2.69	0.88	0.91
2011	26.07	26.94	1.50	1.56	2.57	2.73	0.89	0.92
Projections based on 2010 mid-year estimates								
2016	27.20	27.71	1.52	1.58	2.63	2.76	0.92	0.95
2021	28.32	28.70	1.57	1.62	2.69	2.82	0.95	0.97
2026	29.34	29.64	1.61	1.65	2.75	2.87	0.97	0.99
2031	30.25	30.50	1.64	1.68	2.79	2.91	0.98	1.00
2036	31.11	31.30	1.67	1.71	2.83	2.94	0.99	1.01
2041	31.96	32.08	1.70	1.73	2.86	2.96	1.00	1.02
2051	33.65	33.59	1.75	1.77	2.92	3.00	1.02	1.03

Notes: Mid-year population estimates from 1982 have been revised based on the results of the 2001Census.
England and Wales mid-year population estimates from 1992 to 2002 have been further revised in light of the local authority population studies.
Figures may not sum to totals due to rounding.

Sources: Annual Abstract of Statistics (ONS).
Population Projections Database (GAD).
Population Estimates and Projections (ONS).
2011Census, Population and Household Estimates for England and Wales (ONS).
2011Census (General Registrar Office for Scotland).
2011Census (Northern Ireland Statistics and Research Agency).

Population projections

National and local government and local health organisations need population projections to plan for future provision of health services, housing, schools and pensions (Table 1.2). These national projections are published every second year. The 2004-based projections and earlier projections were produced by the Government Actuary's Department (GAD). National projections since then have been produced by the National Statistics Centre for demography within ONS in consultation with the Northern Ireland Statistics and Research Agency, the General Register Office for Scotland and the Welsh Assembly Government Statistical Directorate. At present future projections are produced by ONS. For the UK and its constituent countries, projections are made for the next 25 years, plus longer-term projections for 40 and 70 years ahead.

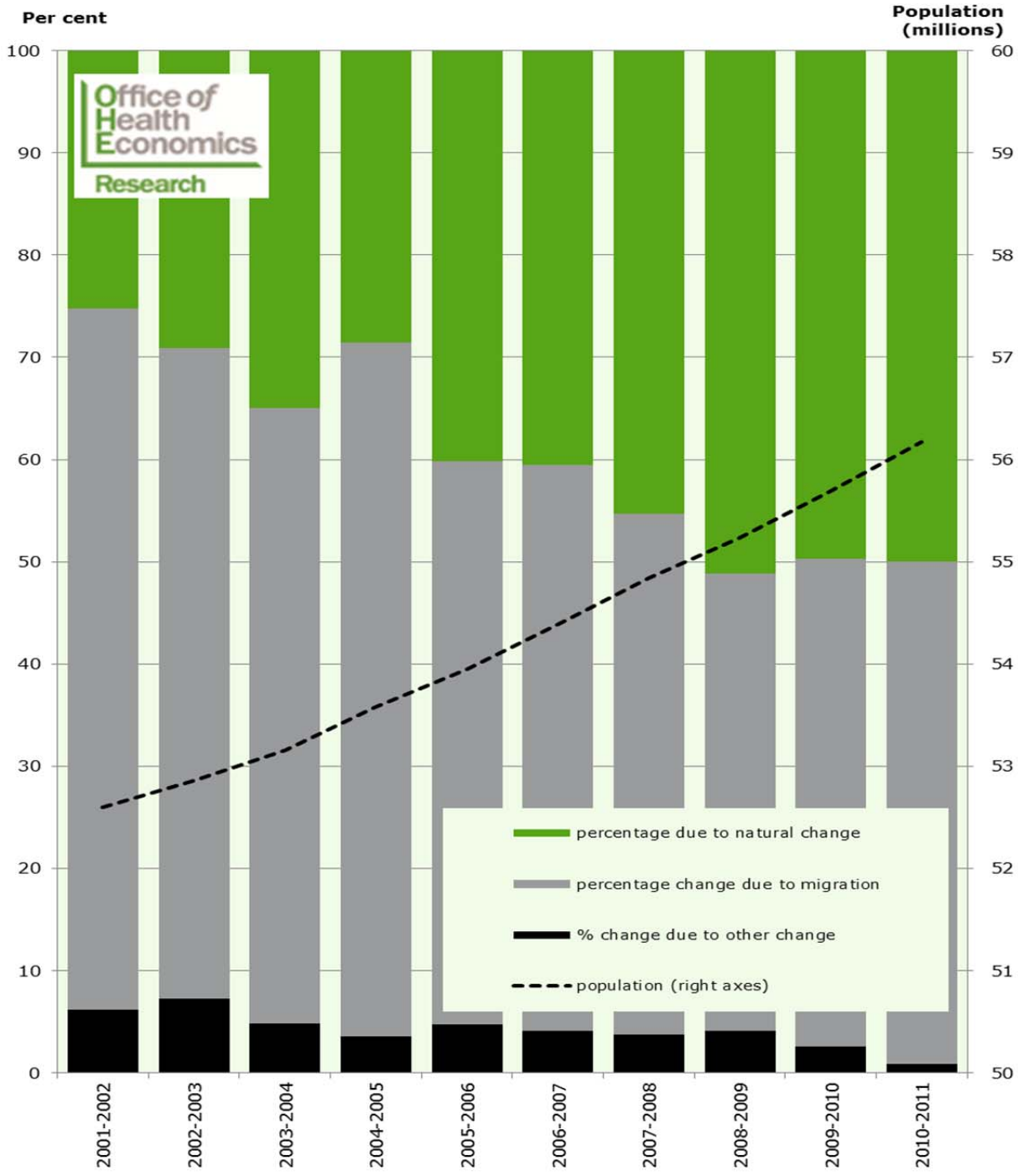
Sub-national UK population projections at local and health area levels are produced separately by the constituent countries: in England by ONS, in Northern Ireland by the Statistics and Research Agency, in Scotland by the General Register Office for Scotland and in Wales by the National Assembly for Wales. Projections for all countries are available on the ONS website.

Population projections are made for successive years using the cohort component method, (ONS 2010), in a process similar to that used to produce the population estimates for the years between Censuses that was described in Section 1.1.1. However, to predict the size and structure of the population at different time points in the future requires assumptions about the future levels of fertility, mortality (thus life expectancy) and migration. The principal projections (also known as medium projections) are based on assumptions derived from the most recent demographic trends analysis. Estimates of the change in these factors over the past decade are shown in Figure 1.1. The aging of the UK population is shown in Figure 1.2.

Other sources of population projections also exist, for example the United Nations (UN) produces international population projections, including the UK, in its publication World Population Prospects. These are calculated under a series of different assumptions. Table 1.3 shows international population projections under medium variant assumptions, see:

http://esa.un.org/unpd/wpp/unpp/panel_population.htm

Figure 1.1. Natural change in England and Wales population 2001/02 - 2010/11

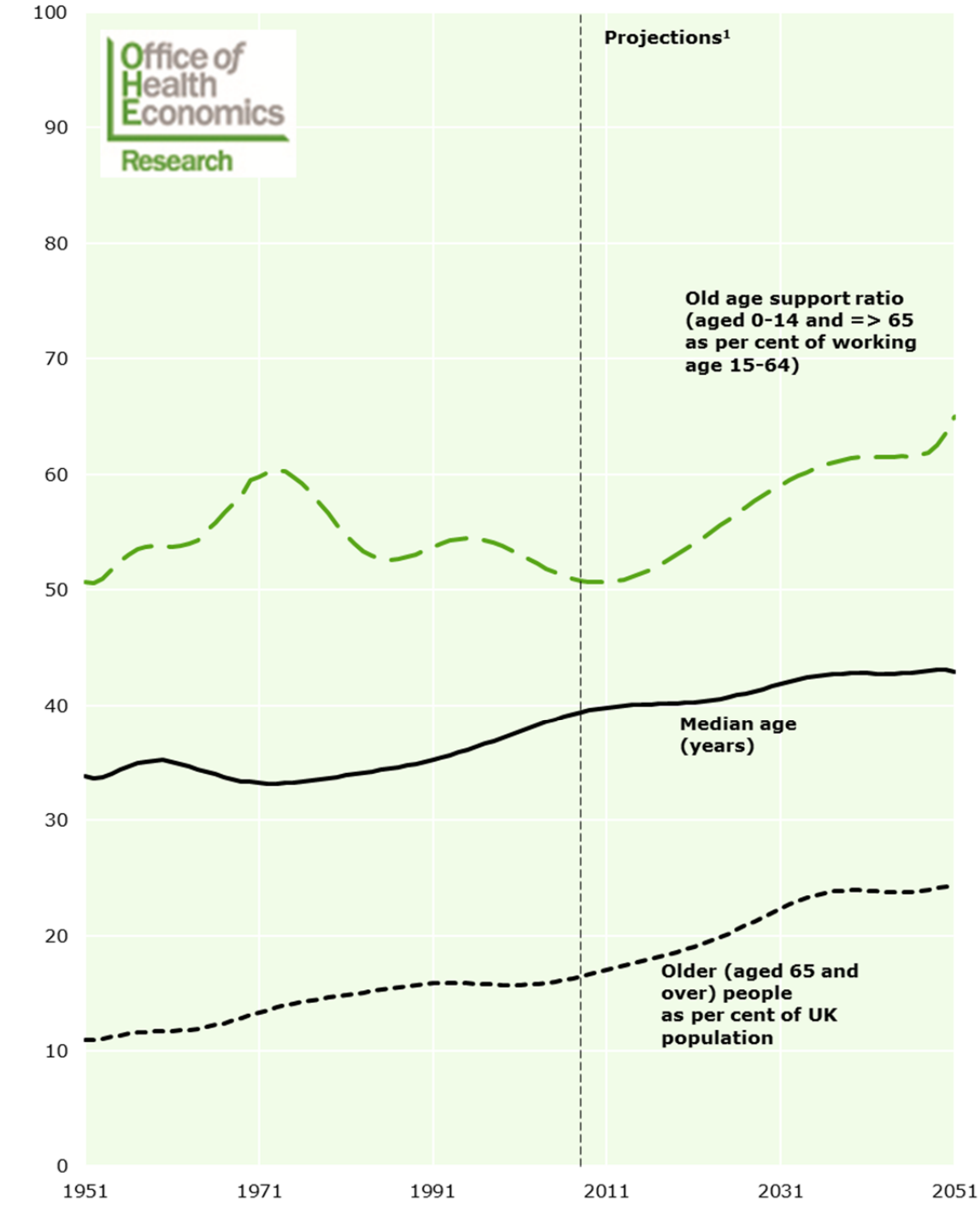


Note: 'Other changes' comprises population change that could either be caused by net migration or have resulted from uncertainty around the 2001 and 2011 Census-based mid-year estimates used as the start and end points for this series. Changes in the size of the armed forces population are also included.

Source: Population Change (ONS), Available at: http://www.ons.gov.uk/ons/rel/pop-estimate/population-estimates-for-england-and-wales/mid-2002-to-mid-2010-revised--national-/sty-components-of-population-change.html. (Accessed May 2013).

Office of Health Economics Research

Figure 1.2. Trends and projections for characteristics of the UK population, 1951 - 2051



Notes: Data presented have been smoothed using b-splines (see Glossary).
1 Projections from 2010 are based on 2010 mid-year estimates.
Sources: Annual Abstract of Statistics (ONS).
Population Projections Database (GAD).
Population Estimates and Projections (ONS).

Office of Health Economics Research

Table 1.3. Total and projected populations of OECD and EU countries, 1950 - 2030

Millions

	Year									
	1950	**1960**	**1970**	**1980**	**1990**	**2000**	**2010**	***2015***	***2020***	***2030***
OECD	**683**	**779**	**879**	**969**	**1,049**	**1,133**	**1,206**	***1,241***	***1,272***	***1,320***
EU27[1]	**373**	**404**	**436**	**458**	**472**	**481**	**501**	***506***	***511***	***516***
Australia	8.2	10.3	12.7	14.7	17.1	19.2	22.3	*23.8*	*25.2*	*27.8*
Austria	6.9	7.0	7.5	7.5	7.7	8.0	8.4	*8.5*	*8.5*	*8.6*
Belgium	8.6	9.2	9.6	9.8	9.9	10.2	10.7	*10.9*	*11.0*	*11.2*
Bulgaria	7.3	7.9	8.5	8.9	8.8	8.0	7.5	*7.3*	*7.0*	*6.5*
Canada	13.7	17.9	21.7	24.5	27.7	30.7	34.0	*35.6*	*37.2*	*39.9*
Cyprus[2]	0.5	0.6	0.6	0.6	0.7	0.8	1.1	*1.2*	*1.2*	*1.3*
Czech Republic	8.9	9.5	9.8	10.3	10.3	10.2	10.5	*10.6*	*10.7*	*10.8*
Denmark	4.3	4.6	4.9	5.1	5.1	5.3	5.6	*5.6*	*5.7*	*5.9*
Estonia	1.1	1.2	1.4	1.5	1.6	1.4	1.3	*1.3*	*1.3*	*1.3*
Finland	4.0	4.4	4.6	4.8	5.0	5.2	5.4	*5.5*	*5.5*	*5.6*
France	41.8	45.7	50.8	54.0	56.8	59.1	62.8	*64.4*	*65.9*	*68.5*
Germany[3]	68.4	72.8	78.2	78.3	79.4	82.1	82.3	*81.5*	*81.0*	*79.5*
Greece	7.6	8.3	8.8	9.6	10.2	10.9	11.4	*11.5*	*11.6*	*11.6*
Hungary	9.3	10.0	10.3	10.7	10.4	10.2	10.0	*9.9*	*9.8*	*9.6*
Iceland	0.1	0.2	0.2	0.2	0.3	0.3	0.3	*0.3*	*0.4*	*0.4*
Ireland	3.0	2.8	3.0	3.4	3.5	3.8	4.5	*4.7*	*5.0*	*5.4*
Italy	46.4	49.5	53.4	56.3	57.0	57.1	60.6	*61.2*	*61.3*	*60.9*
Japan	82.8	93.2	104.4	116.8	123.2	126.7	126.5	*126.1*	*124.8*	*120.2*
Korea, Republic o	19.2	25.1	31.4	37.5	43.0	46.4	48.2	*49.1*	*49.8*	*50.3*
Latvia	1.9	2.1	2.4	2.5	2.7	2.4	2.3	*2.2*	*2.2*	*2.1*
Lithuania	2.6	2.8	3.1	3.4	3.7	3.5	3.3	*3.3*	*3.2*	*3.1*
Luxembourg	0.3	0.3	0.3	0.4	0.4	0.4	0.5	*0.5*	*0.6*	*0.6*
Malta	0.3	0.3	0.3	0.3	0.4	0.4	0.4	*0.4*	*0.4*	*0.4*
Mexico	27.7	37.9	51.9	68.9	83.4	99.5	113.4	*120.1*	*125.9*	*135.4*
Netherlands	10.1	11.5	13.0	14.2	15.0	15.9	16.6	*16.9*	*17.0*	*17.3*
Mexico	1.9	2.4	2.8	3.1	3.4	3.9	4.4	*4.6*	*4.8*	*5.2*
Norway	3.3	3.6	3.9	4.1	4.2	4.5	4.9	*5.1*	*5.2*	*5.6*
Poland	24.8	29.6	32.7	35.6	38.1	38.4	38.3	*38.4*	*38.4*	*37.8*
Portugal	8.4	8.9	8.7	9.8	10.0	10.2	10.7	*10.7*	*10.6*	*10.3*
Romania	16.3	18.4	20.3	22.2	23.2	22.1	21.5	*21.2*	*21.0*	*20.3*
Slovak Republic	3.5	4.1	4.5	5.0	5.3	5.4	5.5	*5.5*	*5.5*	*5.5*
Slovenia	1.5	1.6	1.7	1.8	1.9	2.0	2.0	*2.1*	*2.1*	*2.1*
Spain	28.0	30.5	33.8	37.5	38.8	40.3	46.1	*47.5*	*48.7*	*50.0*
Sweden	7.0	7.5	8.0	8.3	8.6	8.9	9.4	*9.6*	*9.9*	*10.4*
Switzerland	4.7	5.3	6.2	6.3	6.7	7.2	7.7	*7.8*	*7.9*	*8.1*
Turkey	21.5	28.2	36.2	46.2	56.1	66.5	72.8	*77.0*	*80.8*	*86.7*
UK	50.3	52.4	55.6	56.3	57.2	58.9	62.3	*63.9*	*65.8*	*69.3*
USA	157.8	186.3	209.5	229.5	254.9	287.8	310.4	*323.9*	*337.1*	*361.7*

Notes: Figures for the years 2015, 2020 and 2030 are UN projections.
UK data from 2015 are from World Population Prospects and may differ slightly from other tables, as future projections are based on calculations conducted by the United Nations, as opposed to the UK Office for National Statistics.
1 EU27 as constituted since 1st January 2007.
2 Including Northern and Southern Cyprus.
3 Including former East Germany.

Sources: World Population Prospects (United Nations).
For sources of UK data for 1950-2010 see Table 1.1

Office of Health Economics Research

Population ***Key sources and information***

Information on the 2011 Census is available at:
England and Wales
http://www.ons.gov.uk/ons/guide-method/census/2011/the-2011-census/index.html
Northern Ireland
http://www.nisra.gov.uk/Census.html
Scotland
http://www.scotlandscensus.gov.uk/en/

ONS. *Annual Abstract of Statistics*; published annually online with past issues published by TSO, London. Contains statistics on the UK's economy, industry, society and demography. http://www.ons.gov.uk/ons/rel/ctu/annual-abstract-of-statistics/quarter-4-2011/index.html

ONS. *Key Population and Vital Statistics: Local Authority and Health Authority Areas (Series PP1);* published annually online with past issues published by TSO, London. Gives summaries of population, births, conceptions, deaths, mortality and migration for local administrative areas for the whole of the UK and its constituent countries.
http://www.ons.gov.uk/ons/search/index.html?pageSize=50&sortBy=none&sortDirection=none&newquery=Key+population+and+vital+statistics+PP1

ONS. *Health Statistics;* published quarterly until Spring 2012. Provides, in addition to current health findings, information on the most up to date population figures, key vital statistics and expectation of life.

ONS*. National Population Projections – 2010-based. (Series PP2);* published annually online with past issues published by TSO, London*.* This report provides detailed results of the 2010-based population projections, for the UK and its constituent countries. It includes the principal and variant projections for each country, and a summary of the assumptions on which they are based (e.g. fertility and mortality rates, and net migration). http://www.ons.gov.uk/ons/rel/npp/national-population-projections/2010-based-reference-volume--series-pp2/executive-summary.html

ONS. *Population Trends*; previously published quarterly, last issue published in 2011. Provides demographic information together with commentary on a range of topics and the latest updated population figures.

ONS*. Sub-national Population Projections (SNPP);* published annually online with past issues published by TSO, London. Contains long-term population projections by gender and age for the government office regions, unitary authorities, counties, London boroughs, metropolitan districts, health authorities and health districts of England for the base year (2010) and 25 years ahead. http://www.ons.gov.uk/ons/search/index.html?pageSize=50&sortBy=none&sortDirection=none&newquery=SNPP

Mortality ***Selected key facts and trends***

- **Coronary heart disease, stroke and lung cancer were the three leading causes of death in the UK in 2011**
- **They caused 13%, 8% and 6% respectively of all UK deaths in 2011**
- **Age standardised death rates are much higher in Scotland than in the rest of the UK**

1.1 Mortality statistics

In most industrial countries, it is compulsory for births, deaths and marriages to be registered as they occur. Information typically collected by a registration system for births includes: date and place of birth; name and sex of the child; names and occupations of the child's parents; and a description of the informant. For deaths, the information typically collected includes: date and place of death; cause of death; and a range of information relating to the deceased, including: name, sex, date and place of birth, last occupation and usual address; the name of the informant is also recorded.

The well-established death registration system in the UK provides readily available information on the health of the population. Mortality statistics such as mortality rates by specific cause of death have been widely used in monitoring the health of the population and in planning services. See Tables 1.4 and 1.5 for numbers of deaths in the UK and crude death rates per 100,000 population, by leading causes of death.

The Health and Social Care Information Centre publish a wide range of indicators which include a subset related to the prevention of premature mortality. These include the continuous monitoring of mortality in a number of disease areas including cardiovascular disease, respiratory disease, cancer and liver related deaths. (See https://indicators.ic.nhs.uk/webview/.)

Mortality statistics can provide a good starting point for describing a health problem, from which a more detailed investigation can begin. They provide the data for epidemiological studies to examine the pattern of causes of diseases across populations and places, for monitoring disease patterns (e.g. AIDS), for time trend analysis, and for different population groups such as occupation in the study of health inequalities.
(See http://www.ons.gov.uk/ons/rel/vsob1/mortality-statistics--deaths-registered-in-england-and-wales--series-dr-/2011/index.html)

Mortality *Issues*

Despite the legal requirement in the UK to register death and that the system of data collection is well established, the reliability of mortality statistics depends on the informant who supplies the details of the deceased to the Registrar. There may be problems in providing the accurate date of birth and hence the age of the person, as well as the last occupation and economic status. The information on cause of death depends on the clinical judgement of a medical practitioner. The accuracy of the clinical cause of death that is recorded is especially affected by the age of the deceased and in some cases by undetermined causes. Adding to the problem is that prior to 1993 clinical coding in the UK was handled manually. Since then, coding has been carried out by automated computer system. This might cause some discrepancies in time trend analysis (see Rooney CIF and Smith SK (2000): Implementation of ICD10 for Mortality Data in England and Wales from January 2001, Office for National Statistics, Health Statistics Quarterly). Furthermore, the introduction of the ICD version 10 for coding the underlying cause of death in 2000 in Scotland and 2001 in England and Wales has caused some incompatibility between current and previous data on cause of death. This is particularly serious in conditions related to respiratory diseases and in particular pneumonia.

When there are multiple causes listed on a death certificate, an underlying cause is chosen using standard definitions and procedures. However, it is often the case in statistical reporting and analysis that only this underlying cause is utilised, resulting in the loss of potentially useful information when several diseases or conditions are reported on a death certificate.

There are limitations in using mortality statistics in describing the health of the population, especially in measuring the burden of a disease, as they say nothing about the health, and the illnesses, of those who are alive. To have a complete picture requires the collection of information on illness, i.e. morbidity, in the community as well (see Section 1.4 on morbidity statistics).

Table 1.4. Number of deaths by main cause, sex and country, UK, 2011

	Number of deaths			
Cause	**United Kingdom**	**England and Wales**	**Scotland**	**Northern Ireland**
All causes - Males	267,491	234,660	25,913	6,918
Infectious and parasitic diseases	2,827	2,392	372	63
All cancers[1]	83,865	73,709	8,005	2,151
Stomach cancer	3,016	2,634	279	103
Colorectal cancer	8,644	7,578	832	234
Lung cancer	19,638	16,881	2,200	557
Prostate cancer	10,804	9,671	900	233
Diabetes Mellitus	2,788	2,315	382	91
Circulatory system	79,247	69,587	7,695	1,965
Hypertensive disease	2,199	1,950	207	42
Coronary heart disease	43,219	37,723	4,320	1,176
Cerebrovascular disease	16,512	14,335	1,765	412
Respiratory system	36,021	32,033	3,138	850
Pneumonia	11,904	10,824	810	270
BEA and COPD[3]	14,726	13,034	1,340	352
Digestive system	13,614	11,909	1,388	317
Chronic liver disease and cirrhosis	5,583	4,787	663	133
External causes of injury and poisoning	12,990	10,745	1,698	547
Motor vehicle traffic accidents	1,566	1,342	152	72
Suicide and self-inflicted injury	3,436	2,869	394	173
All causes - Females	284,741	249,707	27,748	7,286
Infectious and parasitic diseases	3,552	3,018	440	94
All cancers[1]	75,602	66,242	7,452	1,908
Stomach cancer	1,829	1,565	193	71
Colorectal cancer	7,335	6,428	723	184
Lung cancer	15,600	13,267	1,978	355
Breast cancer[2]	11,702	10,328	1,036	338
Diabetes Mellitus	3,037	2,578	380	79
Circulatory system	80,323	70,119	8,218	1,986
Hypertensive disease	2,993	2,655	286	52
Coronary heart disease	30,818	26,712	3,316	790
Cerebrovascular disease	25,153	21,642	2,829	682
Respiratory system	40,383	35,657	3,653	1,073
Pneumonia	16,477	14,872	1,138	467
BEA and COPD[3]	14,485	12,507	1,599	379
Digestive system	14,561	12,673	1,548	340
Chronic liver disease and cirrhosis	3,458	2,944	432	82
External causes of injury and poisoning	7,690	6,475	977	238
Motor vehicle traffic accidents	496	429	52	15
Suicide and self-inflicted injury	961	780	134	47

Notes: 1All cancers relate to ICD codes C00-C97.
2 Although deaths from breast cancer do occur in males and are included under 'All cancers', they are very rare and so are not shown seperately.
3 Bronchitis, emphysema and asthma and other chronic obstructive pulmonary disease.

Sources: Mortality Statistics Deaths Registered (ONS).
Vital Events Reference Tables (General Register Office of Scotland).
Demographic Statistics (Northern Ireland Statistics and Research Agency).

Table 1.5. Crude death rates per 100,000 population for leading causes of death, UK, 1970 - 2011

	Year							
	1970	**1980**	**1990**	**2000[1]**	**2008**	**2009**	**2010**	**2011**
All deaths	**1,178**	**1,174**	**1,118**	**1,033.12**	**944.39**	**894.29**	**902.10**	**874.04**
From natural causes	1,131	1,131	1,075	996.02	909.91	860.50	876.68	840.72
Coronary heart disease	290	314	295	210.68	143.75	133.91	129.40	117.18
Cerebrovascular disease	165	147	133	103.23	86.57	80.39	79.29	65.94
Malignant neoplasm of trachea[2]	62	71	68	57.35	57.56	56.75	56.12	55.77
Pneumonia[1]	84	104	57	103.02	52.59	48.40	45.62	44.92
Diseases of pulmonary circulation	57	69	40	46.67	44.62	43.61	44.05	38.06
Bronchitis, emphysema and COPD	-	-	-	5.44	46.18	43.44	43.63	44.45
Malignant neoplasm of breast[5]	-	-	-	42.54	38.87	37.42	36.86	36.64
Chronic liver disease and cirrhosis	3	5	6	9.90	12.60	11.97	12.02	11.89
Diabetes mellitus	10	10	15	11.00	10.52	9.93	9.93	9.22
Hypertensive disease	20	11	6	5.53	8.06	7.94	8.35	8.22
Malignant neoplasm of stomach	26	22	17	11.22	8.45	8.15	7.98	7.67
Leukaemia	6	7	7	6.77	7.16	7.23	7.27	7.32
Suicide and self-inflicted injury	8	9	8	7.29	6.94	6.89	6.74	6.97
Malignant neoplasm of uterus[5]	8	7	6	4.95	5.58	5.53	6.14	6.04
Nephritis, nephrotic syndrome	5	9	8	5.24	6.47	6.18	6.07	6.79
Benign and unspecified neoplasms	3	2	3	3.04	5.99	5.63	5.73	5.69
Ulcer of stomach and duodenum	8	9	8	7.50	5.19	4.84	4.48	4.09
Motor vehicle accidents	14	12	10	5.72	4.97	4.19	3.66	3.26
Malignant neoplasm of cervix[5]	-	-	-	4.15	3.07	3.05	2.97	3.03
Asthma	3	3	4	2.44	1.96	1.84	1.84	1.85
Hernia of abdominal cavity	5	4	4	3.67	1.58	1.66	1.79	1.71
Chronic rheumatic heart disease	15	6	4	2.69	1.88	1.90	1.69	1.92
Anaemias	3	2	2	0.96	0.78	0.83	0.74	0.77
Hyperplasia of prostate	3	1	1	0.66	0.66	0.51	0.68	0.58
Tuberculosis[6]	2	1	1	0.86	0.75	0.68	0.63	0.56
Influenza	15	1	2	1.15	0.08	0.49	0.32	0.79
Meningitis	1	1	0	0.39	0.30	0.28	0.25	0.25
Nutritional deficiencies	-	-	-	0.11	0.16	0.21	0.18	0.16
Meningococcal infection	-	-	-	0.38	0.14	0.11	0.11	0.12

Notes: - Not available.
0: <5 deaths per 10 million population.
Prior to 1995, data are accurate only to 0 decimal places.
1 From 2001, and in Scotland from 2000, cause of death information is based on ICD10, the 10th version of the International Statistical Classification of Disease and Health Problems. As a result these figures, in particular pneumonia, are not strictly compatible with earlier years.
2 Including bronchus and lung.
3 COPD - chronic obstructive pulmonary disease. Data prior to 2001 related to bronchitis and emphysema only.
4 Including other forms of heart disease.
5 Per 100,000 female population.
6 Respiratory and other tuberculosis including late effects.

Sources: Annual Abstract of Statistics (ONS). Population Projections Database (GAD).
Mortality Statistics Series DH2 (ONS).
Mortality Statistics Deaths Registered (ONS).
Vital Events Reference Tables (General Register Office of Scotland).
Demographic Statistics (Northern Ireland Statistics and Research Agency).
2011 Census, Population and Household Estimates for England and Wales (ONS).
2011 Census (General Registrar Office for Scotland).
2011 Census (Northern Ireland Statistics and Research Agency).

Office of Health Economics Research

Methods *Age standardisation*

In comparing mortality experience across different populations, the use of crude death rates makes no allowance for differences in the age structures of populations. Though age specific mortality rates can be used for such comparisons, it may be more desirable to use summary statistics that take into account the age structure of the populations. The age standardisation method can be used to control for such confounding age effects, allowing meaningful comparisons to be made between places or over time.

There are two methods of standardisation: direct and indirect. Details of the calculations can be found in most standard textbooks on epidemiology (e.g. Rothman 2002). Both methods begin with choosing a standard population. Within this Guide we have used the European Standard Population to produce direct age standardised mortality rates for a selected number of main causes of death. Table 1.6 shows age standardised rates for all causes for the constituent countries of the UK. Death rates for specific age groups are shown in Table 1.7, these rates can provide additional information, such as the considerable reduction in infant mortality over the last century.

Table 1.6. Age standardised mortality rates (per 100,000 population) for all causes, by sex and country, 2000 - 2011

	Year							
All persons	**2000**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
UK	691	627	598	597	591	563	553	541
England and Wales	678	616	585	585	580	552	542	530
Scotland	821	735	717	715	701	667	656	641
Northern Ireland	724	641	642	632	631	601	594	567
Males	**2000**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
UK	851	749	718	712	701	672	655	641
England and Wales	835	734	702	696	686	658	641	629
Scotland	1,014	890	866	868	839	799	784	762
Northern Ireland	898	790	781	778	766	713	716	686
Females	**2000**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**
UK	569	528	501	502	500	473	468	457
England and Wales	559	519	490	493	490	464	458	448
Scotland	675	613	598	594	588	560	552	543
Northern Ireland	598	525	532	517	525	510	494	472

Notes: Data for 2001 are unavailable.
Data for Scotland for 2011 was not available for all age groups required for standardisation, population estimates by OHE were calculated based on disaggregated 2010 population data for Scotland and 2011 Census data for Scotland.

Sources: Mortality Statistics Series DH2 (ONS).
Mortality Statistics Deaths Registered (ONS).
Vital Events Reference Tables (General Register Office of Scotland).
Demographic Statistics (Northern Ireland Statistics and Research Agency).
Population Estimates and Projections (ONS).
2011 Census, Population and Household Estimates for England and Wales (ONS).
2011 Census (General Registrar Office for Scotland).
2011 Census (Northern Ireland Statistics and Research Agency).

Table 1.7. Age specific mortality rates per 1,000 population, UK, 1870 - 2011

Year	Age Group													
	All ages	<1[1]	0-4	5-9	0-14	5-19	0-24	5-34	5-44	5-54	5-64	5-74	75-84	=>85
1870/72[2]	22.1	149.7	64.5	7.9	4.5	6.6	8.5	10.1	13.0	17.5	30.2	62.3	137.1	286.9
1880/82[2]	19.7	137.2	57.0	6.3	3.5	5.0	6.4	8.1	11.8	17.0	30.6	62.0	133.6	277.6
1890/92[2]	19.7	144.8	57.2	4.9	2.9	4.5	5.7	7.6	11.9	18.6	34.9	71.3	148.1	297.3
1900/02[2]	17.4	142.5	52.5	4.2	2.5	3.6	4.7	6.2	10.0	16.5	31.5	64.6	135.3	276.1
1910/12[2]	14.1	109.7	37.3	3.3	2.1	3.0	3.7	4.7	7.4	13.2	26.5	56.4	123.8	247.8
1920/22[2]	12.7	81.9	30.2	2.9	1.9	2.9	3.7	4.3	6.3	10.6	22.3	51.7	121.7	245.8
1930/32[2]	12.2	66.5	20.0	2.2	1.5	2.5	3.1	3.4	5.2	9.8	20.7	50.8	122.2	261.7
1940	14.6	61.0	16.7	2.0	1.4	2.5	3.9	3.6	5.1	10.4	23.1	53.5	134.3	284.9
1945	13.0	48.8	12.7	1.2	1.0	1.7	3.4	3.1	3.7	7.7	18.0	42.9	103.6	203.9
1950	11.8	31.2	7.0	0.7	0.5	0.9	1.3	1.7	2.2	7.0	17.9	44.6	110.3	235.2
1955	11.8	25.8	6.1	0.5	0.4	0.7	0.9	1.2	2.3	6.3	17.0	43.8	110.0	243.4
1960	11.5	22.5	5.7	0.5	0.4	0.7	0.8	0.9	2.2	5.9	16.3	41.6	102.8	224.0
1965	11.6	19.6	4.8	0.4	0.4	0.7	0.8	0.9	2.2	6.0	16.2	41.3	99.6	222.1
1970	11.8	18.5	4.2	0.3	0.3	0.7	0.7	0.8	2.0	5.9	16.0	41.2	98.0	229.2
1975	11.8	16.0	3.4	0.3	0.3	0.7	0.7	0.8	1.9	5.9	15.2	38.3	94.3	212.8
1980	11.8	12.2	3.1	0.3	0.3	0.6	0.7	0.7	1.7	5.3	14.4	36.1	88.2	204.2
1985	11.9	9.4	2.3	0.2	0.3	0.5	0.6	0.7	1.5	4.5	13.7	34.9	84.8	200.9
1990	11.2	7.9	2.0	0.2	0.2	0.5	0.6	0.8	1.5	3.9	11.8	31.0	76.6	172.3
1991	11.2	7.4	1.8	0.2	0.2	0.5	0.6	0.8	1.5	3.9	11.3	30.9	76.8	181.8
1992	11.0	6.6	1.6	0.2	0.2	0.5	0.6	0.7	1.4	3.6	11.0	30.0	74.5	173.0
1993	11.3	6.3	1.5	0.2	0.2	0.5	0.6	0.7	1.4	3.6	10.9	30.6	77.5	181.7
1994	10.8	6.2	1.4	0.1	0.2	0.4	0.6	0.7	1.4	3.4	10.1	28.5	69.7	164.9
1995	10.9	6.2	1.4	0.1	0.2	0.5	0.6	0.8	1.4	3.5	10.0	28.5	69.9	171.8
1996	10.9	6.1	1.4	0.1	0.2	0.5	0.6	0.8	1.4	3.5	9.8	27.5	67.6	169.8
1997	10.8	5.8	1.4	0.1	0.2	0.4	0.6	0.7	1.4	3.4	9.4	26.6	65.9	169.9
1998	10.8	5.7	1.3	0.1	0.1	0.4	0.6	0.7	1.4	3.4	9.3	26.1	65.0	168.8
1999	10.8	5.8	1.3	0.1	0.1	0.4	0.6	0.7	1.3	3.4	9.0	25.5	64.6	172.3
2000	10.3	5.6	1.3	0.1	0.1	0.4	0.6	0.7	1.3	3.3	8.6	24.0	61.5	164.6
2001	10.2	5.5	1.2	0.1	0.1	0.4	0.6	0.7	1.3	3.3	8.4	22.9	60.3	164.4
2002	10.2	5.2	1.2	0.1	0.1	0.4	0.6	0.7	1.3	3.3	8.1	22.3	60.3	168.1
2003	10.3	5.3	1.3	0.1	0.1	0.4	0.5	0.7	1.3	3.2	8.0	21.8	60.6	173.6
2004	9.7	5.0	1.2	0.1	0.1	0.3	0.5	0.7	1.3	3.1	7.5	20.6	58.0	161.4
2005	9.7	5.1	1.2	0.1	0.1	0.3	0.5	0.6	1.3	3.1	7.4	20.0	56.8	159.1
2006	9.4	5.0	1.2	0.1	0.1	0.4	0.5	0.7	1.3	3.0	7.4	19.2	54.3	150.9
2007	9.4	4.8	1.2	0.1	0.1	0.3	0.5	0.7	1.3	2.9	7.3	18.8	45.4	186.7
2008	9.4	4.7	1.2	0.1	0.1	0.3	0.5	0.7	1.3	3.0	7.2	18.4	52.3	151.6
2009	9.1	4.6	1.1	0.1	0.1	0.3	0.4	0.6	1.3	2.8	7.0	17.5	49.5	143.5
2010	9.0	4.4	1.1	0.1	0.1	0.3	0.4	0.6	1.3	2.8	6.9	17.1	53.0	131.7
2011	8.7	4.3	1.0	0.1	0.1	0.2	0.4	0.6	1.2	2.7	6.7	16.6	46.8	144.4

Notes:
1 Death rates per 1,000 live births.
2 Averages for the periods.

Sources:
Annual Abstract of Statistics (ONS).
Mortality Statistics Deaths Registered (ONS).
Vital Events Reference Tables (General Register Office of Scotland).
Demographic Statistics (Northern Ireland Statistics and Research Agency).
Birth Summary Tables England and Wales (ONS).
General Register Office for Scotland (GROS).
Registrar General Annual Report (NISRA).
Population Trends (ONS).
2011 Census, Population and Household Estimates for England and Wales (ONS).
2011 Census (General Registrar Office for Scotland).
2011 Census (Northern Ireland Statistics and Research Agency).
Population Estimates and Projections (ONS).

Mortality *Key sources and information*

England and Wales

Prior to 1974 tabulated data by age/sex and cause of death appeared in the Registrar General's Statistical Review of England and Wales. From 1974 to 2005 they were published in annual reports in the DH series:

ONS. *Mortality Statistics: General (Series DH1).* London: TSO; published annually. Deaths by sex and age, place of death, usual residence and country of birth of deceased. It also contains tables on expectation of life and on years of life lost due to certain causes of death;

ONS. *Mortality Statistics: Cause (Series DH2)* London: TSO; published annually. Deaths by underlying cause, including age-specific rates, age-standardised mortality rates and time trends in mortality. It also includes tables analysing all conditions mentioned on the death certificate;

ONS. *Mortality Statistics: Childhood, Infant and Perinatal (Series DH3)* London: TSO; published annually. Data on stillbirths, infant deaths and childhood deaths. It also includes figures on infant deaths linked to their corresponding birth records;

ONS. *Mortality Statistics: Injury and Poisoning (Series DH4)* London: TSO; published annually. Accidental and violent deaths by place of accident, nature of injury, cause of accident and verdict at coroner's inquest.

See also:

ONS. *Mortality Statistics: Deaths Registered (Series DR)* London: TSO; published annually. Mortality statistics on deaths registered in England and Wales by age-group, sex and underlying cause of death.

http://www.ons.gov.uk/ons/rel/vsob1/mortality-statistics--deaths-registered-in-england-and-wales--series-dr-/2011/index.html

Northern Ireland

Annual Report of Registrar General for Northern Ireland. The Northern Ireland Statistics and Research Agency: Belfast; published annually. The report contains detailed information such as population, births, deaths, stillbirths and infant deaths and causes of death. The report can be found at:

http://www.nisra.gov.uk/demography/default.asp22.htm

Scotland

Annual Report of Registrar General for Scotland. General Register Office for Scotland: Edinburgh; published annually. The Report contains a general abstract of the numbers of births, deaths and marriages registered during the preceding year. Since 2001 the online version of the *Annual Report* (see the link below) also contains a set of reference tables published as a companion to *Scotland's Population - The Registrar General's Annual Review of Demographic Trends* from 2001 up to 2004. One of these tables contains details of the Scottish mortality statistics:

http://www.gro-scotland.gov.uk/statistics/at-a-glance/annrev/index.html

UK

ONS. *Annual Abstract of Statistics*: London: TSO; published annually. Contains summary mortality statistics by cause for the constituent countries of the UK. http://www.ons.gov.uk/ons/rel/ctu/annual-abstract-of-statistics/quarter-4-2011/index.html

Life expectancy ***Selected key facts and trends***

- **Life expectancy at birth, in the UK, has risen to 78.1 years in men and to 82.1 years in women (2009 figures).**
- **Life expectancy has increased by 1.5 years for men over the last 5 years (2004 to 2009) and by 1.2 years for women.**
- **The average length of survival continues to be higher for those born in England than in the other countries of the UK, with Scotland having the lowest life expectancy in 2009 at 75.8 years for men and 80.3 years for women**

1.2 Life expectancy

Life expectancy is a measure of the average length of survival. It is most often construed to mean the life expectancy at birth for a given population, but it can be calculated for any age. Table 1.8 shows the increasing life expectancy at birth and at age 65 for all constituent countries of the UK since 1981. The average life expectancy at birth is often used as a marker of the health situation of a nation and has increased substantially in the UK over the past century. The life tables are either constructed in single year of age (the complete life table) or in age-intervals of five or ten years (the abridged life table).

Methods *Period and cohort life expectancy*

Life expectancy can be calculated in two ways, namely period and cohort expectations of life. Under the period method, life expectancy at birth represents the average number of years a hypothetical group of babies born at the same time would expect to survive if the babies were to experience the age specific death rates present at the time of their birth, throughout their lifetime. As such, no allowance is made for expected future changes in age specific death rates.

The cohort life expectancy at birth represents the average number of years a hypothetical group of people born at the same time would expect to live, if they were to experience projected levels of age-specific death rates. Cohort methods are therefore useful to estimate how long a person might be expected to live.

Period life expectancies provide a more objective way to compare trends in mortality over time, between areas of a country and with other countries. The calculation of period life expectancy is based on current life tables, the construction of which is based on age and sex specific mortality rates obtained from a population for a particular year or on a three-year average basis.

Life expectancy *Key sources and information*

The current set of interim life tables published by ONS for the England and Wales and its constituent countries is based on the 2011 Census population estimates and corresponding data on births, infant deaths and deaths by individual age from those years, and is available at:
http://www.ons.gov.uk/ons/rel/lifetables/interim-life-tables/2009-2011/index.html

Past information for the UK is available at:
http://www.ons.gov.uk/ons/rel/lifetables/interim-life-tables/2008-2010/index.html

Information is also published by General Register Office for Scotland at:
http://www.gro-scotland.gov.uk/statistics/theme/life-expectancy

Table 1.8. Period life expectancy at birth and at age 65, by sex, by country, UK, 1981 - 2009

	Life expectancy at birth (years) - Males							
	1981	**1991**	**2000**	**2005**	**2006**	**2007**	**2008**	**2009**
United Kingdom	70.81	73.16	75.32	76.89	77.16	77.40	77.71	78.05
England	71.08	73.37	75.61	77.19	77.48	77.74	78.04	78.36
Wales	70.43	73.12	74.82	76.56	76.67	76.85	77.05	77.49
Scotland	69.11	71.38	73.10	74.60	74.78	74.97	75.31	75.75
Northern Ireland	69.17	72.55	74.79	76.09	76.15	76.34	76.66	76.96
	Life expectancy at age 65 (years) - Males							
United Kingdom	12.96	14.14	15.66	16.93	17.16	17.37	17.60	17.83
England	13.07	14.25	15.80	17.07	17.32	17.53	17.77	18.00
Wales	12.54	14.00	15.36	16.72	16.91	17.07	17.23	17.50
Scotland	12.28	13.26	14.66	15.80	15.97	16.17	16.36	16.62
Northern Ireland	12.46	13.91	15.27	16.61	16.78	16.84	17.06	17.28
	Life expectancy at birth (years) - Females							
	1981	**1991**	**2000**	**2005**	**2006**	**2007**	**2008**	**2009**
United Kingdom	76.80	78.70	80.12	81.26	81.47	81.63	81.88	82.12
England	77.04	78.88	80.34	81.49	81.70	81.88	82.13	82.37
Wales	76.36	78.78	79.73	80.94	81.10	81.24	81.42	81.68
Scotland	75.31	77.11	78.56	79.57	79.71	79.86	80.07	80.34
Northern Ireland	75.54	78.39	79.75	80.96	81.18	81.18	81.30	81.40
	Life expectancy at age 65 (years) - Females							
United Kingdom	16.91	17.90	18.83	19.73	19.89	20.04	20.24	20.44
England	17.04	18.02	18.97	19.88	20.05	20.20	20.41	20.62
Wales	16.63	17.90	18.52	19.48	19.63	19.82	19.96	20.15
Scotland	16.04	16.88	17.80	18.61	18.72	18.82	19.01	19.21
Northern Ireland	16.27	17.76	18.49	19.54	19.69	19.75	19.87	20.07

Notes: Figures are based on population estimates and the corresponding number of births and deaths for each three year period centred on the years shown (i.e. figures for 2009 cover 2008-2010 etc.).
Figures are based on interim life tables.

Sources: Population Trends (ONS).
Life Tables (GAD).
Life Tables (ONS).
Life Expectancy, General Register Office for Scotland (GROS).

1.3 Morbidity

There are limitations to using mortality statistics as a measure of the health of a population or the burden of a disease. Mortality can at best only provide a partial picture of the whole problem. As life expectancy increases in most high income countries, the focus has shifted from mortality to measures that indicate the consequences of living with chronic diseases such heart disease, hypertension, stroke and diabetes, and to some extent to the maintenance of good health. The health state of a population has a significant impact on the use of health care resources. As a result both private and public sectors have developed health information systems to collect and provide data on morbidity, such as prevalence (i.e. the total number of cases existing in a population at a given time) and incidence (the number of new cases arising during a specific period) of a disease. Morbidity statistics have been harder to obtain than mortality statistics. However, a diversity of information now is available on morbidity to give a relatively complete picture of the health of a population:

- Primary care information from general medical practice, ophthalmic and dental care
- Secondary care statistics: hospital activity data
- Health specific and health related surveys and the population Census
- Registration of diseases
- Notification of infectious diseases
- Incapacity benefit and sickness absence data.

1.3.1 Primary and secondary care health information

The Clinical Practice Research Datalink (CPRD) and Hospital Episode Statistics (HES) contain a wealth of relevant information relating to morbidity, obtained from patient contacts with primary and secondary health care. Section 3 of this Guide provides additional information relating to secondary care and outlines in greater detail the available sources of information.

The Clinical Practice Research Datalink, is the new English NHS observational data and interventional research service, jointly funded by the NHS National Institute for Health Research and the Medicines and Healthcare Products Regulatory Agency. CPRD combines the General Practice Research Database (GPRD) and the Department of Health's research capability programme, see http://www.cprd.com/home/ for further information. The GPRD is a computerised database of anonymised longitudinal patient data records from primary care. GPRD data are not currently comprehensive, containing information on over 600 GP practices, out of around 10,000 general practices in the UK. CPRD, which enables linkage between datasets from both primary and secondary care, plans to increase both the number of datasets considered and the population

coverage. The patient level records include information such as: demographics, including age and sex of patient; medical diagnosis; prescriptions written; events leading to withdrawal of a drug or treatment; referrals to hospitals; treatment outcomes; hospital discharge reports where patients are referred to hospital for treatment; and miscellaneous patient care information, e.g. smoking status, height, weight, immunisations and laboratory test results.

In Scotland, a non-commercial version of the GPRD was developed by NHS Scotland, and there is an agreement to extend CPRD to include Scotland, Wales and Northern Ireland, a collaboration which is due to begin during 2013. The Practice Team Information (PTI) system collects primary care data from a representative sample of around 60 general medical practices in Scotland and contains information on face-to-face consultations.

Additional useful sources of information about morbidity include the general medical services (GMS) Quality and Outcomes Framework (QOF). See 'Key sources and information' box for GMS on page 134 for further information on sources of QOF data.

1.3.2 Health surveys

Most routinely collected official data on health from health care systems are for administrative purposes (see also Section 3.2 on Hospital Services Statistics). The paucity of clinical and diagnostic information as well as patient demographic and socioeconomic characteristics in some of these datasets limits their usefulness for examining and monitoring the health of a nation. Health related and health specific surveys on the other hand provide an important source of data for this purpose, specifically:

- Population census
- General purpose surveys containing questions on health issues, such as the General Lifestyle Survey GLS (formerly General Household Survey [GHS])
- Health-specific surveys such as the Health Survey for England (HSE).

In 2001 and 2011 a question on general health status was included in the population census:
'Over the last twelve months would you say your health has on the whole been:
Good? Fairly good? Not good?'

Information on permanent disability and health status covering the whole population, available for small areas (from electoral wards of a few thousand to Output Areas of a few hundred people), is vital to health and social services planning at local level. It also provides a unique opportunity to carry out epidemiological studies of the pattern of health status as explained by socioeconomic, demographic and geographic variations.

The GHS provides information on general practice consultations and individuals' self-reported information on long-standing and limiting long-standing illness. The question in the GHS has been phrased as 'Do you have any long-term illness, health problem or disabilities which limit your daily activities or the work you can do?' Answers to this question form the basis of the data shown in Table 1.9. Additional information is also collected in the GHS on lifestyle factors that relate to the health of the nation, such as drinking and smoking prevalence; these are outlined in further detail in Section 1.5.

The HSE is a series of annual surveys designed to measure the health of both adults and children in England. In Northern Ireland, Scotland and Wales, similar health surveys are carried out approximately every three to four years. The HSE contains a series of core questions and additional specific topic questions, for example the HSE in 2009 focused on health and lifestyles, see http://www.hscic.gov.uk/article/2021/Website-Search?productid=10149&q=health+survey&sort=Relevance&size=10&page=1&area=both#top

Table 1.9. Longstanding illness by age and sex, Great Britain, 1975 - 2011

Per cent of population reporting longstanding illness

	Year									
	1975	**1980**	**2000/01**	**2005**	**2006[2]**	**2007[2]**	**2008[2]**	**2009[2]**	**2010[2]**	**2011[2]**
Males	**23**	**29**	**33**	**32**	**33**	**31**	**29**	**30**	**30**	**31**
0-4	8	8	14	14	11	8	9	9	7	11
5-15[3]	12	16	23	19	17	17	15	14	16	16
16-44[3]	17	23	23	22	21	20	18	18	17	20
45-64	35	43	45	44	45	43	39	2	41	42
65-74	50	54	61	58	63	60	58	60	58	59
over 75	63	59	63	65	70	66	64	64	68	69
Females	**25**	**31**	**32**	**33**	**34**	**32**	**30**	**31**	**31**	**33**
0-4	6	8	13	10	10	11	7	7	6	7
5-15[3]	9	11	18	16	15	14	10	10	10	11
16-44[3]	16	23	22	24	23	22	20	20	21	25
45-64	33	42	42	43	44	41	38	39	40	41
65-74	54	60	54	61	63	56	53	56	55	57
over 75	61	66	64	64	70	65	68	67	68	67
All	**24**	**30**	**32**	**33**	**33**	**31**	**29**	**30**	**30**	**32**
0-4	7	8	14	12	11	10	8	8	7	9
5-15[3]	10	14	20	18	16	16	12	12	13	14
16-44[3]	16	23	22	23	22	21	19	19	19	22
45-64	34	42	44	43	45	42	39	40	41	42
65-74	52	57	57	60	60	58	56	58	56	58
over 75	62	64	64	64	70	65	67	66	68	68
Per cent of population reporting limiting longstanding illness										
Males	**14**	**18**	**18**	**18**	**17**	**18**	**16**	**17**	**17**	**18**
0-4	3	3	4	5	3	2	2	3	3	4
5-15[3]	6	8	9	7	7	6	7	7	7	9
16-44[3]	9	12	11	11	10	11	9	9	10	10
45-64	27	28	27	26	23	25	22	25	23	24
65-74	36	39	38	36	37	37	33	36	34	35
over 75	46	45	44	44	47	47	45	42	45	44
Females	**16**	**20**	**19**	**20**	**20**	**19**	**18**	**19**	**19**	**20**
0-4	2	3	4	3	3	3	3	3	4	3
5-15[3]	4	5	8	7	6	5	4	5	6	5
16-44[3]	9	12	11	13	12	12	11	11	13	14
45-64	22	26	27	26	27	25	23	23	23	25
65-74	39	42	35	39	39	36	34	35	34	37
over 75	49	54	48	48	51	48	48	50	50	48
All	**15**	**19**	**19**	**19**	**19**	**18**	**17**	**18**	**18**	**19**
0-4	3	3	4	4	3	3	3	3	3	3
5-15[3]	5	7	8	7	7	6	6	6	7	7
16-44[3]	9	12	11	12	11	11	10	10	11	12
45-64	24	27	27	26	25	25	23	24	23	25
65-74	38	41	37	37	38	37	33	36	34	36
over 75	48	51	47	47	50	48	46	47	48	47

Notes: Longstanding illness refers to an illness, disability or infirmity that has occurred or is likely to occur over a period of time. "Limiting" denotes a longstanding illness that is limiting of activity.
From 1988 to 2004 the General Household Survey was on a financial year basis with interviews taking place from April to the following March.
1Data shown for 2000/01onwards have been weighted to compensate for differential non-response, thus making the results more representative of the population (see General Household Survey (ONS).
2 Results for 2006 and subsequent years include longitudinal data with approximately 75% of the year being re-interviews of the previous year.
3 In 1975 figures relate to age groups 5-14 and 15-44, respectively.

Sources: Living in Britain: Results from the General Household Survey (ONS).
General Lifestyle Survey (ONS).

Office of Health Economics Research

1.3.3 Healthy life expectancy

Whilst life expectancy is still utilised as a measure of the health of a nation, see Section 1.3, it is important to increase not just life expectancy, but life expectancy in good health. Healthy life expectancy, or the number of years remaining that a person of a certain age may be expected to live in 'good health', can be measured in a number of different ways (Smith et al 2008). It is often difficult to determine a consistent measure, because health may be considered differently between different populations or over time. Many measures focus on the number of years defined as disability free.

Regardless of the measure, healthy or disability free life expectancy has continued to rise over the past decade, though to a lesser extent than life expectancy, meaning that a greater number of years are now spent in 'poor health'. Table 1.10 shows ONS estimates of healthy life expectancy based on subjective information about health. Prior to 2007 this was based on a three point system, specifically whether an individual considered their health to be 'good', 'fairly good' or 'not good'. Since 2007 the method used by ONS has changed to align with that from the EU, and is based on whether an individual considers their health to be 'very good', 'good', 'fair', 'bad' or 'very bad'. Both measures are subjective, but the change results in a break in series, see:
http://www.ons.gov.uk/ons/rel/disability-and-health-measurement/health-expectancies-at-birth-and-age-65-in-the-united-kingdom/2008-10/stb-he-2008-2010.html for further information.

From 2013, the ONS will use the Integrated Household Survey (IHS) as the primary source for health expectancies for the UK and its constituent countries. The IHS is a composite survey combining questions asked on a number of ONS social surveys to produce a 'core' dataset of variables from which healthy life expectancy will be estimated. As the IHS sample does not include children, methods of imputation will be used and this is likely to result in a break in the series of healthy life expectancy provided by ONS, see http://www.ons.gov.uk/ons/dcp171776_300519.pdf for further information.

Table 1.10. Residual healthy life expectancy in years at birth and at age 65, by country, UK, 2001 - 2009

Males

At birth	2001	2002	2003	2004	2005	2006	2007	2008	2009
UK	66.8	67.1	67.6	67.9	68.2	68.4	62.5	63.0	63.5
England	67.1	67.5	67.9	68.3	68.5	68.7	63.0	63.5	64.4
Wales	65.5	65.1*	65.5*	66.5*	66.7*	67.1	60.2	62.5	63.0
Scotland	65.3*	65.5*	66.1*	65.6*	66.5*	67.3	60.9	60.1*	59.8
Northern Ireland	65.1*	65.4*	65.7*	66.8*	66.9*	67.1*	60.8*	60.5*	59.2
At age 65	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
UK	11.9	12.0	12.3	12.5	12.8	12.9	10.1	9.9	10.1
England	12.0	12.1	12.5	12.7	12.9	12.9	10.2	10.0	10.3
Wales	11.1	10.7*	10.9*	11.8	12.3	12.7	10.1	10.7	10.3
Scotland	11.5	11.5	11.7*	11.5*	12.2	12.5	9.6	8.8	8.6
Northern Ireland	11.1*	11.4*	11.9*	12.8	12.9	12.9	9.5	9.6	9.5

Females

At birth	2001	2002	2003	2004	2005	2006	2007	2008	2009
UK	69.9	69.9	70.1	70.3	70.4	70.4	64.3	65.0	65.7
England	70.1	70.0	70.2	70.6	70.7	70.7	64.5	65.5	66.4
Wales	69.4	68.9	68.7*	68.3*	68.9	69.1	62.7	62.8	63.0
Scotland	68.6*	69.4	69.7	69.6	69.6	69.9	64.2	63.5	64.1
Northern Ireland	67.2*	67.7*	67.9*	68.4*	68.8*	69.0*	62.9*	62.5*	61.9
At age 65	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**
UK	14.0	14.0	14.3	14.5	14.5	14.5	11.3	11.5	11.6
England	14.2	14.1	14.4	14.6	14.7	14.6	11.4	11.7	11.8
Wales	12.8*	13.1	13.5	13.2*	13.3*	13.0*	10.5	10.1	10.0
Scotland	13.5	13.9	13.8	13.9	14.2	14.4	11.1	10.7	10.8
Northern Ireland	12.5*	12.9*	13.2*	13.6*	13.8*	13.9	10.9	10.7	10.8

Notes: Healthy life expectancy (HLE) combines life expectancy and population data with data on the health of a population to give an index of the expected remaining years of healthy life. Health as defined by ONS as in good or fairly good self-perceived general health.
Figures for 1981through to 2007 are based on population estimates and the corresponding number of births and deaths for each three year period, centred on the years shown (i.e. figures for 2006 cover 2005-2007 etc.).
* Significantly different from England at the 95% confidence level.
From 2007 onwards the method used to calculate healthy life expectancy has been changed to align with that of the EU, resulting in a break in series, see text.

Sources: Government Actuary's Department (GAD).
Office for National Statistics (ONS).

Morbidity ***Key sources and information***

The Clinical Practice Research Database, combines the General Practice Research Database (GPRD) and the Department of Healths research capability programme. *The General Practice Research Database (GPRD)* is a longitudinal survey of medical records for active patients in primary practice in the UK, for further information on CPRD see:
http://www.cprd.com/intro.asp for further information.

Hospital Episode Statistics (HES). Contains data on all admissions to hospitals in England:
www.hesonline.nhs.uk

General Lifestyle Survey (GLS), formerly General Household Survey is a large-scale survey of households in Great Britain. The GHS survey began in 1971 and includes both core and special topics, it is now called the General Lifestyle Survey:

http://www.ons.gov.uk/ons/rel/ghs/general-lifestyle-survey/2011/index.html

Population Census. The latest Census data available are for 2011.The key statistics tables provide information on households with long term illness and on the provision of unpaid care; tables KS21 and KS08 respectively:

http://www.ons.gov.uk/ons/guide-method/census/2011/index.html

Health Survey for England (HSE). The HSE comprises a series of annual surveys, which are now commissioned and published by the Health and Social Care Information Centre. They provide information on various aspects of both child and adult health in England, a link to the 2011 edition is provided below:

http://www.hscic.gov.uk/article/2021/Website-Search?productid=10149&q=health+survey&sort=Relevance&size=10&page=1&area=both#top

Scottish Health Survey (SHeS). Commissioned by the Scottish Government Health Department, the SHeS has both a core and modular structure aimed at gaining knowledge about the health of the population of Scotland:

http://www.scotland.gov.uk/Topics/Statistics/Browse/Health/scottish-health-survey

Healthy life expectancy information is available from a number of sources including:http://www.ons.gov.uk/ons/rel/disability-and-health-measurement/health-expectancies-at-birth-and-age-65-in-the-united-kingdom/2008-10/stb-he-2008-2010.html

http://www.scotland.gov.uk/Publications/2011/10/21133633/2

1.4 Lifestyle factors

Lifestyle has a huge impact on our health and life expectancy. Lifestyle factors include behavioural and social issues, such as smoking, diet, exercise, alcohol and other substance misuse. Smoking is recognised to be related to a number of leading causes of death, including coronary heart disease and lung cancer. Information on the proportion of the population who smoke is available through general and specific surveys, including the General Lifestyle Survey, see Table 1.11 and Figure 1.3. These indicate respectively the reduction in smoking prevalence in all age groups in Great Britain for both males and females over recent decades, and the recent increases in excessive alcohol consumption among women.

Poor nutrition may affect our health and wellbeing in various ways, including obesity, overweight and malnutrition, which can reduce quality of life as well as life expectancy. Obesity had been included in selected General Lifestyle Surveys (formerly General Household Survey). Specific surveys recently conducted include Obesity, Physical Activity and Diet, England, 2013, published by the Health and Social Care Information Centre, see Figure 1.4. This indicates the increasing rates of obesity in England, which is also true of the UK as a whole.

Measuring lifestyle factors ***Issues and points of interest***

Government guidelines can cause some difficulties in obtaining long time series for some lifestyle factors when current knowledge regarding what is acceptable changes. For example, alcohol consumption has been monitored for several decades through the GHS and GLS. A long time series is available related to the government guidelines of no more than 21 units for males and 14 units for females per week. However, this question has been removed from the 2011 GLS survey as new guidelines relate to daily intake and in recent years statistics have been collected on this basis. There have also been recent revisions in methods to convert alcohol volume to units which have resulted in a break in series. See: http://www.ons.gov.uk/ons/rel/ghs/general-lifestyle-survey/2011/rpt-chapter-2.html for further information.

In relation to obesity measures, there is some evidence that waist hip ratio may be a stronger risk factor than body mass index (BMI) for some diseases. At present, BMI remains the prominent measure in national surveys, but it is possible that this will change in the future.

Table 1.11. Prevalence of cigarette smoking by sex and age, Great Britain, 1974 - 2011

Year	All aged 16 and over	16-19	20-24	25-34	35-49	50-59	60 and over
Percentage smoking cigarettes							
Males							
1974	51	42	52	56	55	53	44
1986	35	30	41	37	37	35	29
1998/99[1]	30	30	41	38	33	28	16
2005	25	23	34	34	29	25	14
2006[2]	23	20	33	33	26	23	13
2007[2]	22	22	32	29	25	22	13
2008[2]	22	18	29	30	24	23	13
2009[2]	22	24	24	27	26	22	15
2010[2]	21	20	25	28	25	21	13
2011[2]	21	*18*	30	26	25	20	14
Females							
	All aged 16 and over	**16-19**	**20-24**	**25-34**	**35-49**	**50-59**	**60 and over**
1974	41	38	44	46	49	48	26
1986	31	30	38	35	34	35	22
1998/99[1]	26	32	39	33	29	27	16
2005	23	26	30	29	26	23	13
2006[2]	21	20	29	26	25	22	12
2007[2]	20	20	30	23	23	21	12
2008[2]	21	26	31	25	23	20	12
2009[2]	20	24	28	24	23	20	13
2010[2]	20	17	29	25	23	20	13
2011[2]	19	*19*	28	21	23	18	12
All persons							
	All aged 16 and over	**16-19**	**20-24**	**25-34**	**35-49**	**50-59**	**60 and over**
1974	45	40	48	51	52	51	34
1986	33	30	39	36	36	35	25
1998/99[1]	28	31	40	35	31	28	16
2005	24	24	32	31	27	24	14
2006[2]	22	20	31	30	25	22	12
2007[2]	21	21	31	26	24	21	12
2008[2]	21	22	30	27	24	22	13
2009[2]	21	24	26	25	25	21	14
2010[2]	20	19	27	26	24	20	13
2011[2]	20	18	29	23	24	19	13

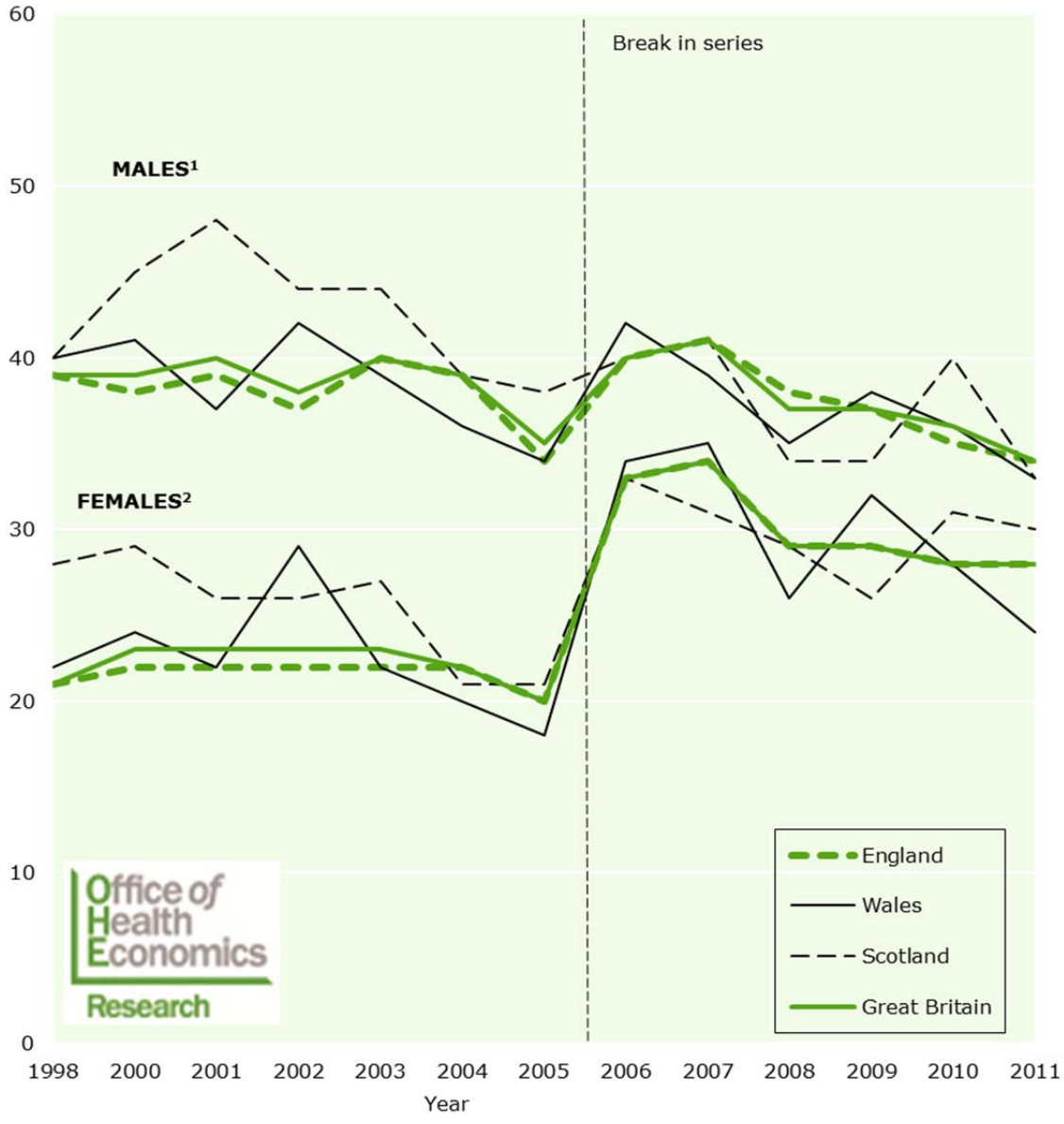
Notes: Data on the prevalence of cigarette smoking are available in the General Household Survey only for the years shown.
From 1988 to 2004 the General Household Survey was on a financial year basis with interviews taking place from April to the following March.
Only selected years have been shown, for earlier decades this has been based in part on the availability of the data.
Figures in italics indicate the estimates are unreliable and any analysis using these figures may be invalid.
1Data shown for 1998 onwards are based on data weighted to compensate for differential non-response, thus making the results more representative of the population (see General Household Survey ONS).
2 Results for 2006 and subsequent years include longitudinal data with approximately 75% of the year being re-interviews of the previous year.

Sources: Living in Britain: Results from the General Household Survey (ONS).
General Lifestyle Survey (ONS).

Office of Health Economics Research

Figure 1.3. Percentage who drank more than 3 units of alcohol for females or 4 units of alcohol for males on a least one day in the last week, by sex and country, 1998 - 2011

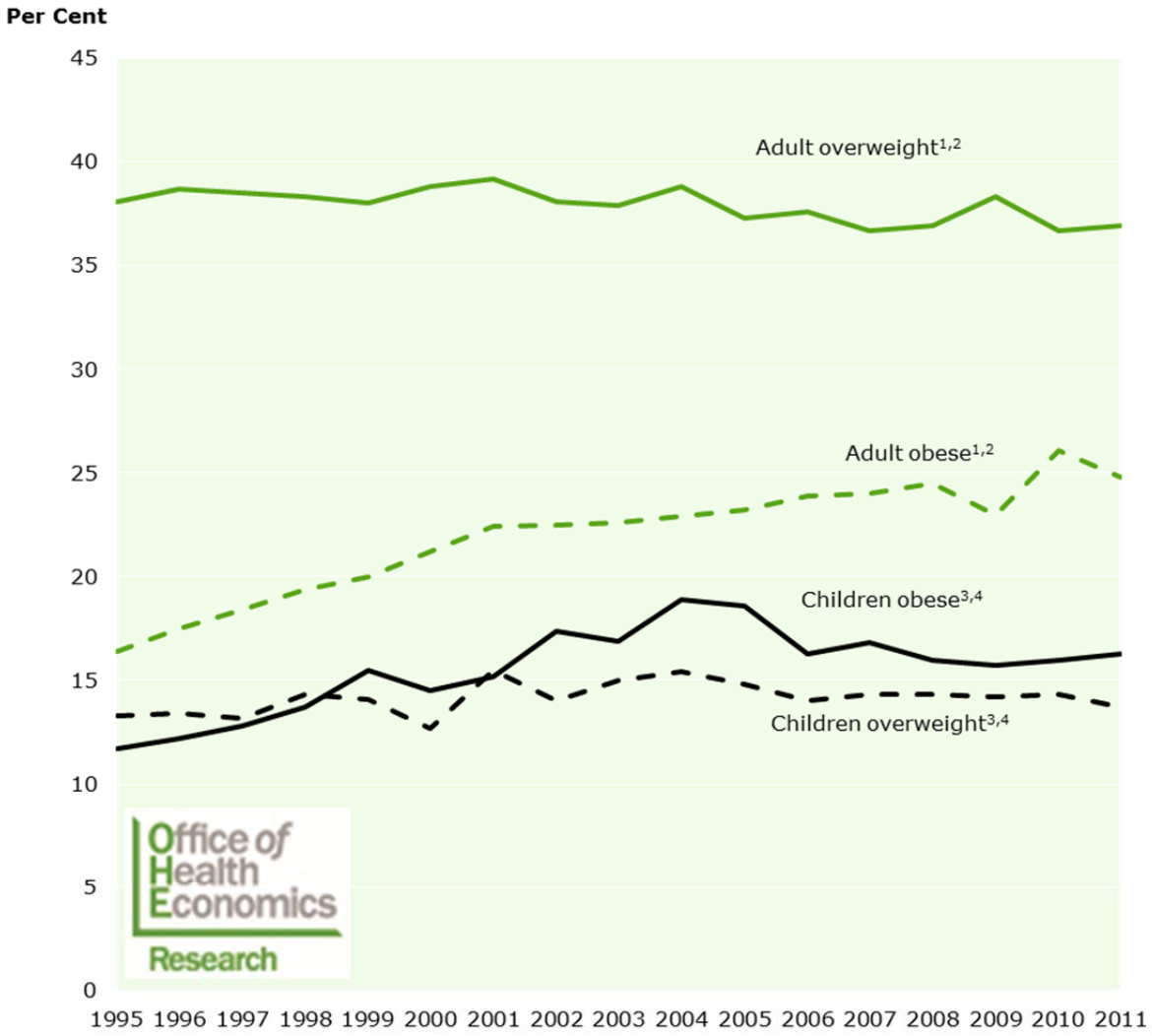
Percentage



Notes: 1 Percentage of males who drank more than 4 units on at least one day in the week preceding the survey.
2 Percentage of females who drank more than 3 units on at least one day in the week preceding the survey.
The General Household Survey have developed an "improved" method that reflects the trend towards larger drink measures and stronger alcoholic drinks, especially wine, which suggests that the "original" method, shown for 1998-2005 may underestimate the number of units.
Data from 2006 onwards uses the "improved" General Household Survey method of converting alcohol volume to units, this resulted in an apparent increase between 2005 and 2006.
Results for 2006 and subsequent years include longitudinal data with approximately 75% of the year being re-interviews of the previous year.

Sources: Living in Britain: Results from the General Household Survey (ONS).
General Lifestyle Survey (ONS).

Figure 1.4. Trends in overweight and obesity prevalence, England, 1995 - 2011



Notes: 1 Aged 16 and over with a valid height and weight measurement.
2 Data from 2003 have been weighted for non-response.
3 Aged 2-15 with a valid BMI measurement.
4 Data from 1995 to 2011 are weighted for child selection, additionally, data from 2003 to 2011 are also weighted for non-response,
Adult BMI categories, Overweight 25 less than 30 kg/m2, obese 30 to less than 40 kg/m2.
Childhood categories are Overweight defined as >= 85th <=95 UK BMI percentile, Obese >=95th UK BMI percentile.

Source: Health Survey for England 2011, December 2012 (HSCIC).

Lifestyle factors ***Key sources and information***

Smoking

Key Statistics relating to smoking prevalence in the UK are available through the General Lifestyle Survey for Great Britain:

http://www.ons.gov.uk/ons/rel/ghs/general-lifestyle-survey/2011/index.html

See the smoking section at:

http://www.ons.gov.uk/ons/rel/ghs/general-lifestyle-survey/2011/rpt-chapter-1.html

The Health and Social Care Information Centre also produces statistics based on a variety of sources relating to England:

https://catalogue.ic.nhs.uk/publications/public-health/smoking/smok-eng-2012/smok-eng-2012-rep.pdf

Alcohol

Information on alcohol consumption is also available in the General Lifestyle Survey for Great Britain:

http://www.ons.gov.uk/ons/rel/ghs/general-lifestyle-survey/2011/index.html

See the drinking section at:

http://www.ons.gov.uk/ons/rel/ghs/general-lifestyle-survey/2011/rpt-chapter-2.html

In addition, information on alcohol related deaths is available on the ONS website, collated from ONS, General Register Office for Scotland and Northern Ireland Statistics and Research agency:

2011 version at: http://www.ons.gov.uk/ons/dcp171778_296289.pdf

Obesity

Statistics relating to overweight and obesity are available in selected General Household Surveys. In addition, the British Heart Foundation has published a useful report relating to obesity:

http://www.bhf.org.uk/publications/view-publication.aspx?ps=1002097

The Health and Social Care Information Centre has published the results of a recent survey containing statistics on obesity, physical activity and diet:

http://www.hscic.gov.uk/article/2021/Website-Search?productid=11194&q=obesity%2c+physical+activity+and+diet&sort=Relevance&size=10&page=1&area=both#top

Other useful sources of information relating to lifestyle factors include publications of large scale prospective studies and journals aimed at monitoring key diseases, which often include key factors related to the initial population.

2 Health care expenditure

Health care expenditure *Selected key facts and trends*

- **Total health care expenditure reached an estimated £152 billion in 2011/12, equivalent to 10.0 per cent of GDP**
- **The UK National Health Service cost an estimated £134 billion that year**

2.1 Total health care expenditure

Driven by the growing population, especially in the number of older people, advances in health care technology and patients' rising expectations, all industrialised countries have seen significant increases in their health care expenditures in recent years. However, due to the recession and subsequent austerity measures, it is likely that these increases will not continue as rapidly as before. UK health expenditure grew rapidly over the decade to 2009/10 as an intended result of government policy. This also will not continue.

2.1.1 Total health care expenditure in the UK

Health care expenditure in the UK comprises publicly funded health care expenditure, private health insurance and out-of-pocket spending on health care treatment and health care related products. There are, however, concerns over the definition of total health care expenditure which is discussed in detail under 'International comparisons' later in this section.

Publicly funded health care accounts for around 88 per cent of total health care expenditure, which reached an estimated £151.7 billion (Table 2.1) in 2011/12. Private health care spend includes private health insurance, treatment in private hospitals, private dental care, purchase of non-prescription over-the-counter drugs and medical devices including spectacles, contact lenses and hearing aids (see Section 2.3 on private health care expenditure).

Information on publicly funded health care expenditure appears in reports published by the UK central government and the governments of the constituent countries within the UK.

There are no official annually published figures for total health care expenditure in the UK. These figures are estimated by pulling health care spending information from various sources as per Table 2.1.

Total health care expenditure is often presented as a per cent of Gross Domestic Product (GDP), for example in 2011/12 it represented an estimated 10.0 per cent of GDP, see Table 2.1. This is described in more detail on page 36.

Table 2.1. Total health care expenditure, UK, 1974/75 - 2011/12

Financial year	UK health care expenditure				UK health care expenditure as % of GDP[4]		
	NHS[1] £m	Private health care[2] £m	Other medical products[3] £m	Total £m	NHS	Private & other	Total
1974/75	4,158	124	282	4,563	4.6	0.5	5.1
1979/80	9,456	286	603	10,345	4.5	0.4	4.9
1984/85	16,349	652	1,263	18,263	4.9	0.6	5.4
1989/90	26,169	1,421	2,124	29,714	4.8	0.7	5.5
1994/95	40,432	2,426	3,825	46,684	5.7	0.9	6.6
1999/00	53,429	4,474	5,297	63,200	5.7	1.0	6.7
2000/01	58,279	5,322	5,797	69,398	5.9	1.1	7.0
2001/02	64,430	5,974	6,116	76,520	6.3	1.2	7.4
2002/03	74,741	6,871	6,572	88,185	6.9	1.2	8.1
2003/04	82,217	7,528	6,782	96,527	7.1	1.2	8.4
2004/05	89,537	8,261	6,796	104,595	7.4	1.2	8.6
2005/06	98,932	8,978	6,922	114,832	7.7	1.2	8.9
2006/07	104,619	9,505	7,407	121,531	7.7	1.3	9.0
2007/08	114,640	9,861	7,713	132,214	8.0	1.2	9.2
2008/09	120,455	10,250	7,691	138,396	8.5	1.3	9.7
2009/10	128,780	*10,542*	7,958	*147,280*	9.1	*1.3*	*10.4*
2010/11	131,187	*10,920*	*8,225*	*150,332*	8.9	*1.3*	*10.2*
2011/12	133,545	*9,663*	*8,492*	*151,700*	8.8	*1.2*	*10.0*

Notes:
Figures in italics are OHE estimates, see notes below for further information.
1Including charges paid by patients. Figures based on published estimated out-turns or planned projections.
2 Consumer expenditure on private medical insurance (PMI) and private medical treatment. Figures in italics are OHE estimates based on available data from Laing and Buisson's Healthcare Market Review.
3 Figures relate to consumer expenditure on medical goods including medicines not purchased on NHS prescription and expenditure on therapeutic equipment such as spectacles, contact lenses and hearing aids. Figures in italics are OHE estimates based on trend.
4 Gross Domestic Product (GDP) at market prices.

Sources:
Consumer Trends (ONS).
Annual Abstract of Statistics (ONS).
Economic Trends (ONS).
The Government's Expenditure Plans (DH).
Department of Health Departmental Report (DH).
Health Statistics Wales (NAW).
NHS Board Operating Costs and Capital Expenditure, ISD Scotland (ISD).
Public Expenditure Statistical Analyses (HM Treasury).
Laing's Healthcare Market Review (Laing and Buisson).
Population Projections Database (GAD).
UK Dentistry Market Research Report (MBD).

Methods ***Adjusting for inflation***

When considering changes in expenditure over time it is useful to adjust for inflation. If a series is not adjusted for inflation it may be described as being in 'cash terms' or 'money of the day'. After adjusting for inflation, figures may be described as being in 'real terms' or at 'constant prices' or for example at '2012/13 prices'.

Economy-wide inflation measures

Gross Domestic Product (GDP) is a measure of the total domestic economic activity. Figure 2.3 shows the relationship between UK total health expenditure and GDP. It is the sum of all incomes earned by the production of goods and services on UK economic territory, wherever the earner of the income may reside. The GDP deflator provides a means to adjust GDP for inflation.

Other widely used measures of inflation include: the Consumer Prices Index (CPI) the Retail Prices Index (RPI) and the Retail Prices Index excluding mortgage payments (RPIX), each of which considers a fixed basket of goods consumed by the householder. Recently, ONS have determined that RPI should no longer be a national statistic, and are considering RPIJ or Jevons, a variant of RPI. For further information see:

http://www.ons.gov.uk/ons/rel/cpi/introducing-the-new-rpij-measure-of-consumer-price-inflation/1997-to-2012/index.html

The GDP deflator is a much broader price index than the CPI, RPI or RPIX (which only measure consumer prices) as it reflects the prices of all domestically produced goods and services in the economy. This breadth makes it more appropriate for deflating public expenditure than the other price indices outlined above.

The HM Treasury website as well as providing up to date GDP deflator series also outlines practical examples of using this information:

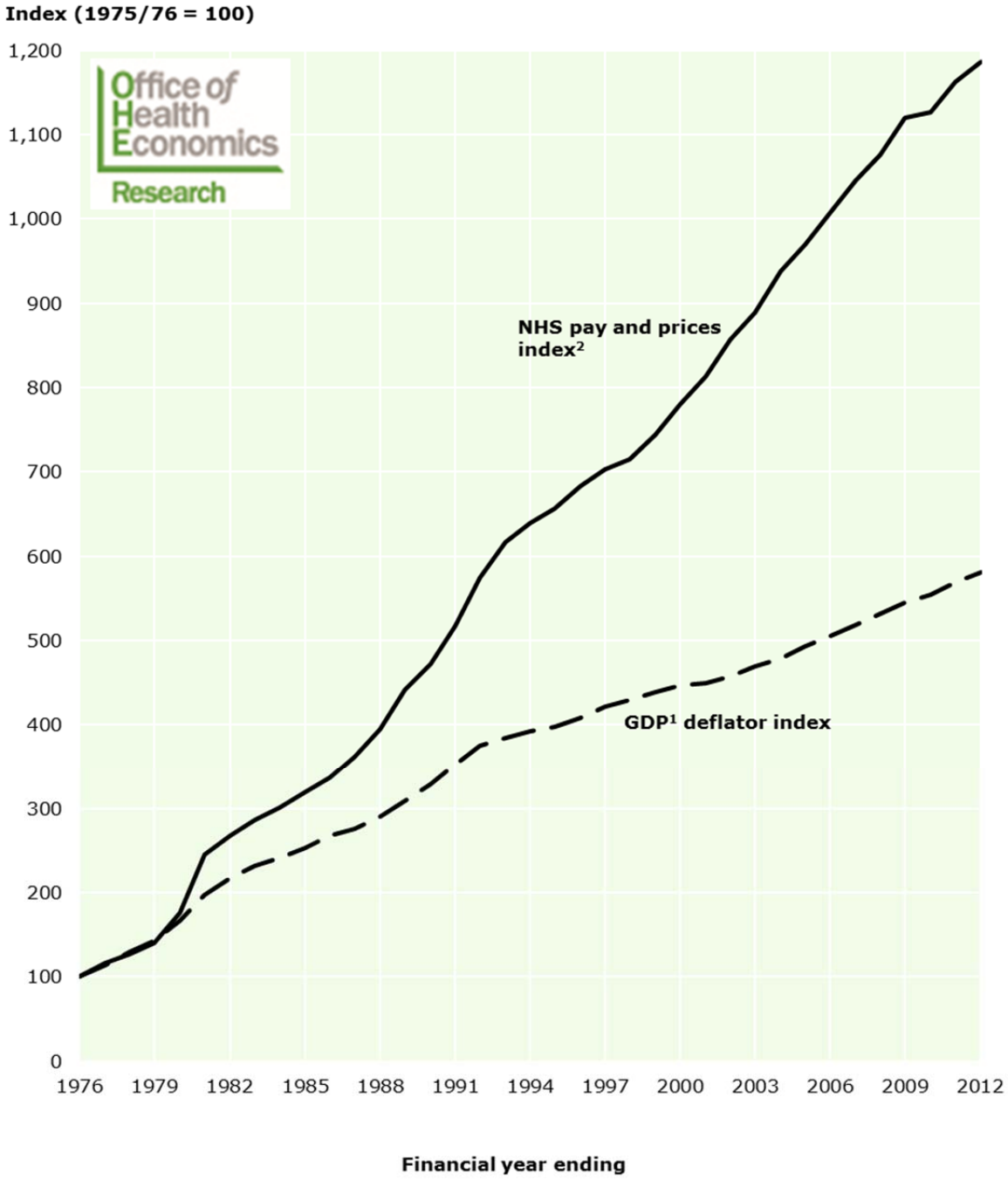
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/205904/GDP_Deflators_User_Guide.pdf

Specific measures of inflation

Measures of inflation also exist that are specific to health care. Prior to 2004/05 an NHS measure of inflation was utilised. Since this time, information has been published only for Hospital and Community Health Services (HCHS) inflation.

HCHS pay and price inflation is a weighted average of two separate inflation indices: the pay cost index (PCI) and the health service cost index (HSCI). The PCI measures pay inflation in the HCHS. The estimate of pay inflation for 2011/12 is based on information supplied by the Department of Health and is based on pay awards to NHS staff, see Figure 2.1. The HSCI is calculated monthly to measure the price change for each of 40 sub-indices of goods and services purchased by the HCHS. The sub-indices are weighted together according to the proportion of total expenditure which they represent to give the overall HSCI value. The pay cost index and the health service cost index are weighted together according to the proportion of HCHS expenditure on pay and non-pay costs. This provides an HCHS combined pay and prices inflation figure.

Figure 2.1. NHS pay and prices index and GDP[1] deflator index, 1975/76 - 2011/12[2]

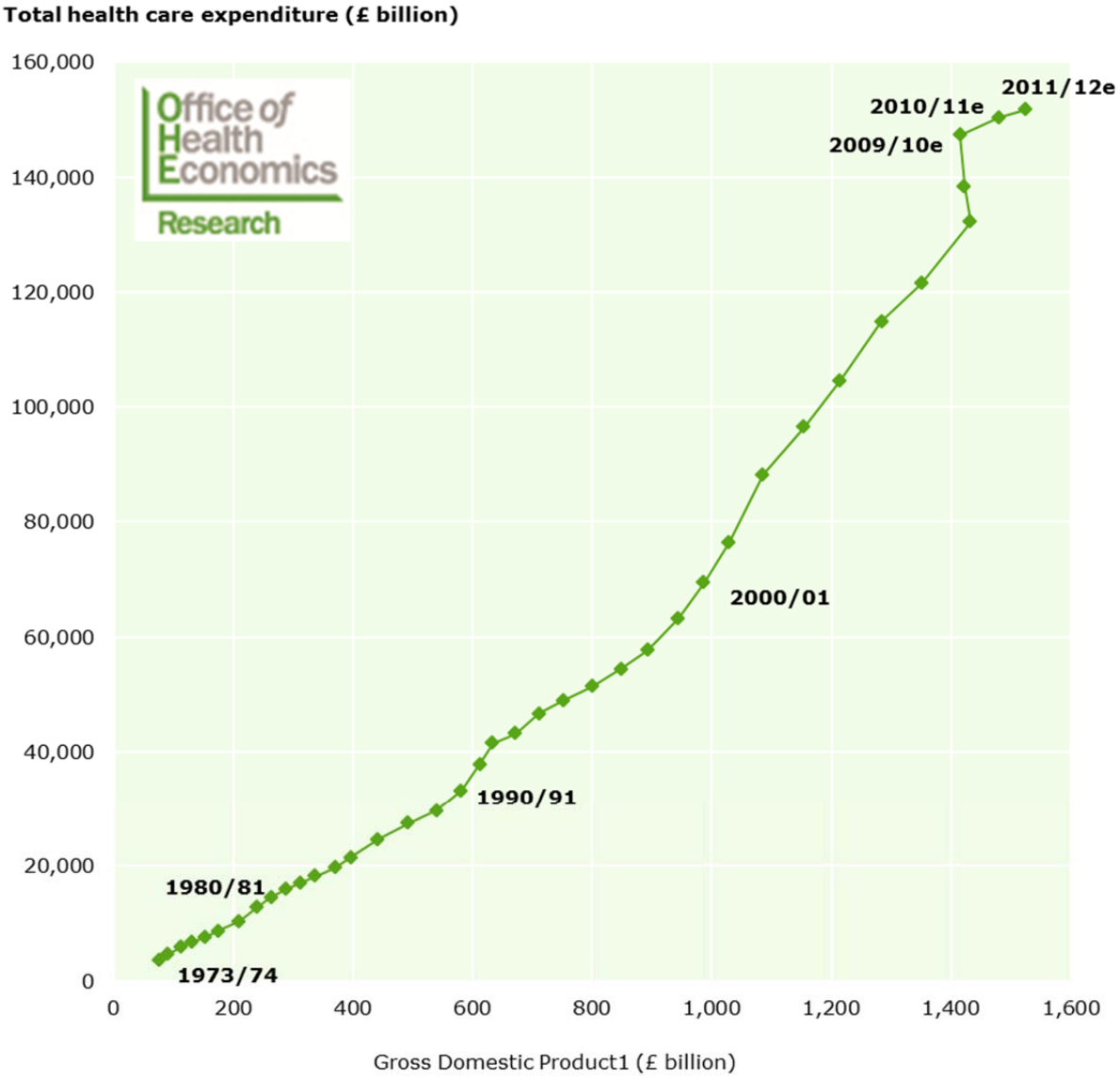


Notes: Data shown reflect data for the financial year ending 31st March e.g. 2012 = 2011/12.
The methodology for the pay cost index was revised in 2011/12 and now uses Electronic Staff Record data at occupation code level. Pay cost data is therefore not comparable with earlier years.
1 UK Gross Domestic Product (GDP) at market prices.
2 Figures relate to Hospital and Community Health Services in England.

Sources: Public Expenditure Team, Finance Directorate (Department of Health).
Economic Data (HM Treasury).
House of Commons Health Select Committee, Public Expenditure on Health and Personal Social Services 2009 (DH).

Office of Health Economics Research

Figure 2.2. Relationship between total UK health care expenditure and GDP[1], 1973/74 - 2011/12



Notes: Total health care expenditure includes both the NHS and the private sector (see also Table 2.1).
1 GDP = Gross Domestic Product at market prices.
e = OHE estimates for total UK health care expenditure.

Sources: Consumer Trends (ONS).
Annual Abstract of Statistics (ONS).
Economic Trends (ONS).
The Government's Expenditure Plans (DH).
Department of Health Departmental Report (DH).
Health Statistics Wales (NAW).
NHS Board Operating Costs and Capital Expenditure, ISD Scotland (ISD).
Public Expenditure Statistical Analyses (HM Treasury).
Laing's Healthcare Market Review (Laing and Buisson).
UK dentistry market research report (MBD).
Population Projections Database (GAD).

2.1.2 International health care expenditure

To examine the expenditure and performance of the UK health care system, it is useful to make comparisons with countries such as those of the Organisation for Economic Co-operation and Development (OECD). There are two obvious methods for comparing health care expenditure between countries:

1. Total health care expenditure expressed as a proportion of gross domestic product (GDP)
2. Total health care expenditure per head of population (i.e. per capita).

Because of exchange rate and purchasing power complications, the first method is usually preferred. It is sometimes useful to compare health care expenditure between countries within the EU using the EU average as a point of comparison, for example, the EU28 as constituted since the accession of Croatia on 1st July 2013.

Methods ***Comparisons with EU averages***

1. The EU28 unweighted average, which is a simple arithmetic mean of the 28 percentages calculated for the individual member states. Thus Malta, the smallest of the member states, would have the same weight as Germany, the largest.
2. The EU28 weighted average, on the other hand, gives different weights to the individual member state. Thus for the EU28 weighted health care expenditure as a proportion of GDP, we have:

$$\sum_i X_i / \sum_i Y_i$$

where X_i is total health care expenditure for EU member state i and Y_i is the corresponding GDP of that country. To allow for possible bias in the calculation of the weighted average caused by the uneven contributions to both the numerator and denominator, it is sometimes advisable to exclude the comparator country in the construction. For example in 2007, the UK accounted for around 16 per cent of total EU27 GDP (i.e. the 27 members of the EU before the accession of Croatia in 2013) but only 7 per cent of total health care expenditure. To compare the UK with the rest of EU, the weighted EU27 average would be dragged down because of this effect.

International health care expenditure ***Issues and points of interest***

The main source of information for international comparisons of health care expenditure is *OECD Health Data.* However, there is a good deal of heterogeneity in how complete the data series are and in the comparability of the data due to the introduction of new members in recent years. As Towse and Sussex pointed out (Getting UK Health expenditure to the EU mean - what does that mean? *BMJ* 2000;320: 640-642), there is a major issue regarding the definition of total health care expenditure. For example, in the UK, expenditure on nursing home care is excluded whilst in Germany it is included. Diverse arrangements for health care funding and delivery among the OECD countries make it difficult to give precise comparisons and interpretation of information. It is therefore necessary to have some knowledge of the health care system in each country and to exercise caution in making cross-country comparisons with these data. It is thus advisable to issue 'health warnings' when making comparisons.

The OECD has, since 2000, introduced 'A System of Health Accounts' (www.oecd.org/health/sha) for health related expenditure reporting in an attempt to address these concerns. Health accounts for the UK on an experimental basis using the OECD system. In 2011 there was a new release of 'A System of Health Accounts', based on collaborative work between OECD, EUROSTAT and the WHO, which resulted in a revised set of health accounts to improve the comparability of international health expenditure over time.

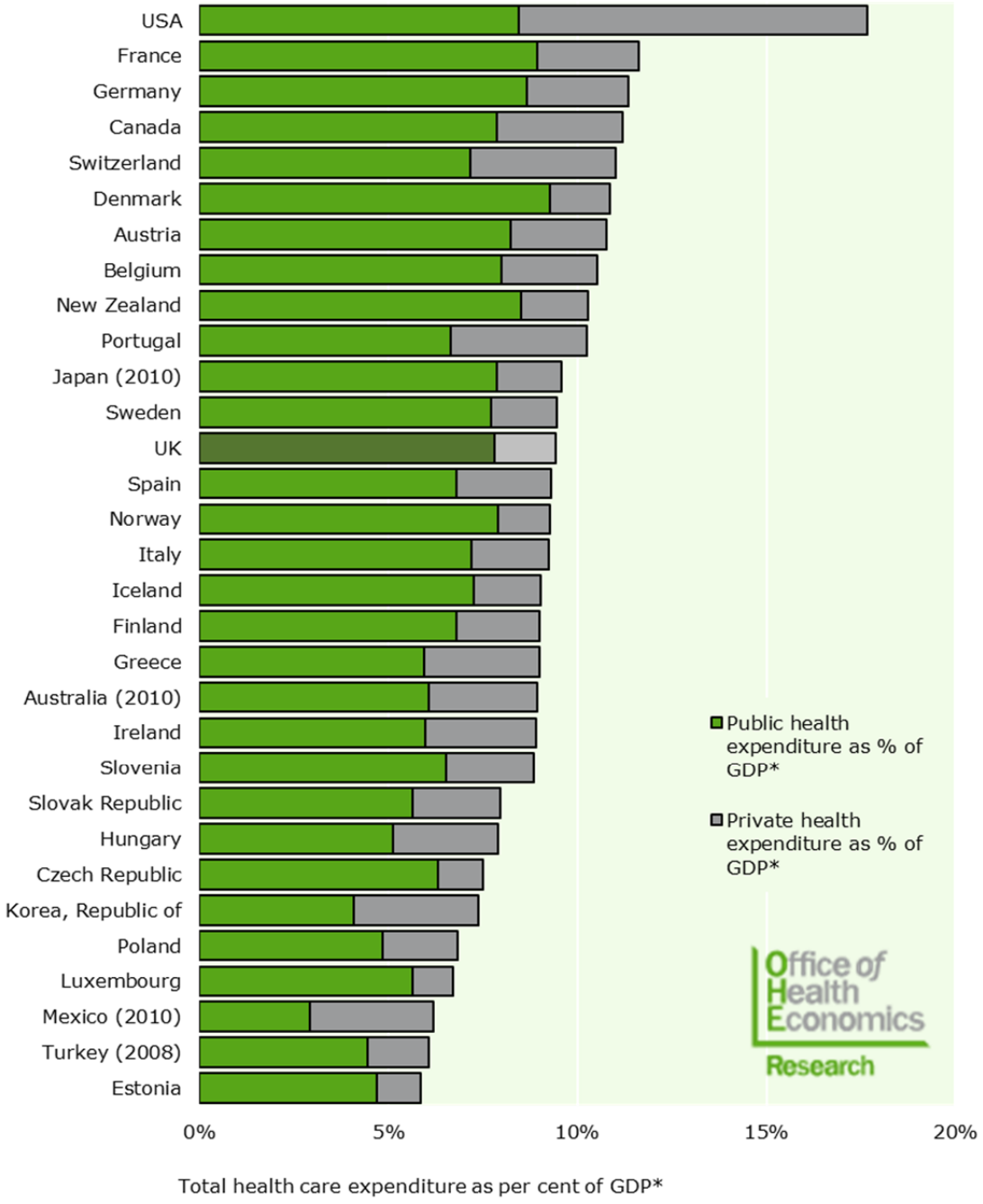
http://www.who.int/nha/sha_revision/en/

In 2012, ONS published data on expenditure on health care in the UK over the period 1997-2010 using the approach advocated by OECD in 'A System of Health Accounts', this enables the comparison of UK expenditure with other international countries on a consistent basis. Currently, ONS provides total healthcare expenditure figures to OECD consistent with their definitions on an annual basis.

A 2012 publication by Forde et al provides a discussion of the methodological developments underlying the OCED 'System of Health Accounts', for further information see:

http://www.healthpolicyjrnl.com/article/S0168-8510(13)00034-1/abstract

Figure 2.3. Public and private health care expenditure as a percentage of GDP* in OECD and EU countries, circa 2011 (based on OECD definitions)



Notes: * GDP = Gross Domestic Product at market prices.
Year is 2011 unless otherwise stated.
Sources: OECD Health Database (OECD).

Office of Health Economics Research

International ***Key sources and information***

Organisation for Economic Co-operation and Development and Centre de Recherche, d'Etude et de Documentation en Economique de la Santé. *OECD Health Database*. Paris: OECD; published annually.

http://www.oecd-ilibrary.org/social-issues-migration-health/data/oecd-health-statistics_health-data-en;jsessionid=60mfgxuhxgay.x-oecd-live-01

ONS. *UK Health Accounts*.

http://www.ons.gov.uk/ons/search/index.html?pageSize=50&sortBy=none&sortDirection=none&newquery=health+accounts

World Health Organisation (2010). *The World Health Report 2010 'Health systems financing: the path to universal coverage*'. Geneva: WHO.

http://www.who.int/whr/2010/en/

OECD. (Annual) *A System of Health Accounts*.

www.oecd.org/health/sha

NHS expenditure ***Selected key facts and trends***

- **The cost of the NHS in the UK was an estimated £134 billion in 2011/12**
- **NHS expenditure in 2011/12 was equivalent to an estimated £2,113 per capita in the UK**

2.2 NHS expenditure

The UK National Health Service (NHS) was established on 5th July 1948, with the aim of providing a comprehensive range of health services to all UK citizens, financed by general taxation and free at the point of use. Since then, the NHS has gone through numerous reorganisations and reforms, though the basic principles of providing universal health care based on clinical need and not on ability to pay remain largely unchanged. As shown in Table 2.2, NHS expenditure in the UK reached an estimated £134 billion in 2011/12. NHS expenditure in Northern Ireland, Scotland and Wales is decided by their respective devolved governments. NHS expenditure in England is determined by the UK Government.

2.2.1 NHS structure

The devolution of some political powers to three of the four countries in the UK in the late 1990s has brought major re-configuration in the structure of the NHS. The Parliament for Scotland took on its full powers on 1st July 1999. These include competence over health, education and housing. In Wales, the National Assembly has been set up at the same time with powers to shape delivery of public services there. However, unlike the Scottish Parliament, the Welsh Assembly does not have law-making power over the running of the NHS. The Northern Ireland Assembly takes an active role in shaping public services in that country.

Each of the constituent countries in the UK has control of and responsibility for planning, organising and allocating resources to its health services. The responsibility for provision and development of health services lies ultimately with the Secretary of State for Health in England, the Minister for Health, Social Services and Public Safety for Northern Ireland, the Minister for Health and Community Care for Scotland and the Minister for Health and Social Services for Wales. They are respectively supported by the Department of Health (DH) in England, the Department of Health, Social Services and Public Safety (DHSSPS) in Northern Ireland, the Scottish Executive Department of Health in Scotland (NHS Scotland) and the NHS Directorate in Wales. At the time of publication, the Department of Health for England, the Department of Health, Social Services and Public Safety (DHSSPS) for Northern Ireland, NHS Scotland and the NHS

Directorate for Wales have overall responsibility for policy, planning, administration and funding of the NHS at the national level. While the organisations responsible for performance management of health care organisations and the mechanism for commissioning health care vary from country to country, the arrangement for provision of primary, secondary and community health care is in general very similar across the UK.

Since 1st April 2013 211 Clinical Commissioning Groups (CCGs) in England are responsible for planning and commissioning the majority of NHS services for their local communities. They receive funding directly from the Department of Health. Nationally, NHS England is responsible for planning and commissioning primary care, cancer services and specialised services. Elsewhere in the UK, the Local Commissioning Groups in Northern Ireland, the Health Boards in Scotland and the Local Health Boards in Wales combine these functions.

Table 2.2. GDP and NHS expenditure, and per capita, UK, 1949/50 - 2011/12

Year	GDP at market prices £ billion	GDP per capita £	NHS expenditure Public[1] £m	NHS expenditure Patients[2] £m	NHS expenditure Total £m	Total NHS as % of GDP	Total NHS cost per head £
1949/50	12.75	253	447	-	447	3.50	9
1950/51	13.54	269	474	8	482	3.56	10
1960/61	26.28	501	839	45	883	3.36	17
1970/71	53.07	953	1,983	64	2,046	3.86	37
1980/81	239.20	4,246	11,396	281	11,677	4.88	207
1990/91	580.77	10,138	27,980	1,198	29,178	5.02	509
1991/92	612.38	10,655	31,757	1,287	33,044	5.40	575
1992/93	633.11	10,988	34,961	1,272	36,233	5.72	629
1993/94	671.84	11,633	36,431	1,132	37,563	5.59	650
1994/95	711.06	12,280	39,515	917	40,432	5.69	698
1995/96	752.38	12,959	41,407	919	42,326	5.63	729
1996/97	800.30	13,750	43,056	865	43,921	5.49	755
1997/98	848.39	14,539	45,321	919	46,240	5.45	792
1998/99	893.23	15,262	47,825	945	48,770	5.46	833
1999/00	944.56	16,082	52,403	1,026	53,429	5.66	910
2000/01	986.86	16,743	57,210	1,069	58,279	5.91	989
2001/02	1,029.35	17,398	63,232	1,198	64,430	6.26	1,089
2002/03	1,085.94	18,287	73,457	1,284	74,741	6.88	1,259
2003/04	1,154.40	19,360	80,846	1,371	82,217	7.12	1,379
2004/05	1,214.41	20,259	88,247	1,290	89,537	7.37	1,494
2005/06	1,284.55	21,294	97,668	1,264	98,932	7.70	1,640
2006/07	1,350.44	22,253	103,272	1,347	104,619	7.75	1,724
2007/08	1,432.89	23,460	113,235	1,405	114,640	8.00	1,877
2008/09	1,422.29	23,132	118,993	1,462	120,455	8.47	1,959
2009/10	1,415.65	22,866	*127,288*	*1,492*	128,780	9.10	2,080
2010/11	1,480.57	23,692	*129,656*	*1,531*	131,187	8.86	2,099
2011/12	1,524.55	24,124	*132,006*	*1,538*	133,545	8.76	2,113

Notes: Figures in italics are OHE estimates of the split in expenditure.
Patient charge income since 2007/08 are OHE estimates based on available data and trends for dental and prescription charges and trends in hospital charge income.
2007/08 information on dental patient charges for Scotland is an estimate hence the use of italics.
GDP = Gross Domestic Product at market prices.
1Excluding patient charges.
2 Figures relate to NHS charges paid by patients for prescription medicines etc. Data on patient charges from 2004/05 onwards is not strictly comparable with previous years, as reliable data for PDS in England and Wales are not available before 2004/05 and therefore data prior to 2004/05 are based on GDS patient charges alone. In 2005/06 there was a shortfall in patient charge income, in part attributable to PDS pilots income being based on the old GDS system of patient charges in England and Wales.

Sources: Consumer Trends (ONS).
Annual Abstract of Statistics (ONS).
Economic Trends (ONS).
The Government's Expenditure Plans (DH).
Department of Health Departmental Report (DH).
Health Statistics Wales (NAW).
NHS Board Operating Costs and Capital Expenditure, ISD Scotland (ISD).
Public Expenditure Statistical Analyses (HM Treasury).
Laing's Healthcare Market Review (Laing and Buisson).
Population Projections Database (GAD).
2011Census, Population and Household Estimates for England and Wales (ONS).
2011Census (General Registrar Office for Scotland).
2011Census (Northern Ireland Statistics and Research Agency).

2.2.2. Reporting NHS expenditure

In the past decade there have been changes in recording of public expenditure. Until 2001/02, the government accounted for expenditure on the basis of cash spent and cash received. From 2001/02, this has been replaced by resource accounts, which record expenditure as it is incurred and income as it is earned. In this way capital and other spending is measured when the resources are consumed rather than when they are paid for. In the health sector this results in resource allocations being made to health care commissioning bodies such as CCGs and NHS England, rather than cash. This causes a break in UK public expenditure time series.

Methods *Calculating costs*

In reporting NHS expenditure, different measures are used depending on whether the focus is on:

- 'Revenue expenditures' (i.e. operating costs) or capital expenditures;
- Cash or accruals basis and the extent to which resource accounting principles are applied;
- Gross or net of charges and receipts including patient charges, revenues from asset sales and other income sources. Figures shown in Table 2.1 are gross, and hence include patient charges, this represents the full cost of the NHS.
- In contrast, net NHS expenditure is shown elsewhere, representing tax-funded expenditure on the NHS but excluding patient charges and other income sources. Net NHS expenditure is shown in Table 2.3.
- It is important to recognise the measure behind the costs calculation and what is and is not included, particularly when comparing across countries or over time, to resolve apparent discrepancies. Wherever possible the same measure should be considered when comparing across regions. This information is often contained in the footnotes to tables.

Table 2.3. NHS net expenditure[1] (revenue and capital) per capita and per household, UK, 1975/76 - 2011/12

Year	England	Wales	Scotland	N Ireland	UK	England	Wales	Scotland	N Ireland	UK
				NHS expenditure per capita						
			(£ cash)					***At 2011/12 prices[2]***		
1975/76	91	97	108	102	93	528	563	627	592	541
1980/81	200	210	240	245	205	587	617	705	721	603
1990/91	467	497	587	573	482	769	819	966	944	794
2000/01	891	990	1,063	901	911	1,153	1,281	1,374	1,166	1,179
2001/02	990	1,079	1,224	1,051	1,016	1,257	1,370	1,554	1,334	1,290
2002/03	1,148	1,187	1,323	1,222	1,167	1,421	1,469	1,639	1,514	1,445
2003/04	1,285	1,367	1,454	1,349	1,305	1,557	1,657	1,761	1,634	1,582
2004/05	1,376	1,470	1,515	1,427	1,393	1,619	1,730	1,783	1,680	1,640
2005/06	1,500	1,573	1,679	1,521	1,519	1,726	1,809	1,931	1,750	1,748
2006/07	1,513	1,684	1,763	1,696	1,548	1,695	1,887	1,976	1,900	1,734
2007/08	1,628	1,767	1,889	1,733	1,660	1,780	1,932	2,065	1,894	1,815
2008/09	1,747	1,857	1,967	1,855	1,774	1,859	1,976	2,094	1,974	1,888
2009/10	1,873	1,972	2,038	1,922	1,893	1,964	2,067	2,137	2,015	1,985
2010/11	1,893	2,008	2,065	2,103	1,919	1,932	2,049	2,108	2,146	1,959
2011/12	2,000	1,942	2,148	2,281	2,017	2,000	1,942	2,148	2,281	2,017
				NHS expenditure per household						
			(£ cash)					***At 2011/12 prices[2]***		
1975/76	258	281	318	316	266	1,496	1,631	1,846	1,833	1,543
1980/81	546	585	667	748	564	1,603	1,717	1,958	2,197	1,656
1990/91	1,173	1,271	1,466	1,669	1,216	1,931	2,091	2,413	2,747	2,002
2000/01	2,155	2,391	2,466	2,431	2,202	2,788	3,093	3,189	3,145	2,848
2001/02	2,384	2,588	2,819	2,818	2,444	3,026	3,284	3,577	3,577	3,102
2002/03	2,753	2,827	3,019	3,248	2,793	3,408	3,501	3,739	4,022	3,458
2003/04	3,076	3,240	3,293	3,553	3,116	3,726	3,926	3,990	4,305	3,775
2004/05	3,285	3,462	3,416	3,717	3,317	3,866	4,074	4,019	4,375	3,903
2005/06	3,574	3,685	3,761	3,908	3,605	4,112	4,239	4,327	4,496	4,148
2006/07	3,596	3,924	3,933	4,381	3,664	4,029	4,396	4,407	4,909	4,105
2007/08	3,862	4,096	4,196	4,457	3,919	4,222	4,478	4,587	4,872	4,285
2008/09	4,132	4,277	4,360	4,775	4,177	4,397	4,551	4,640	5,081	4,445
2009/10	4,418	4,502	4,512	4,921	4,444	4,632	4,720	4,730	5,159	4,659
2010/11	4,462	4,567	4,577	5,349	4,501	4,554	4,661	4,671	5,459	4,594
2011/12	4,720	4,422	4,753	5,767	4,736	4,720	4,422	4,753	5,767	4,736

Notes:

All figures include Hospital and Community Health Services, Family Health and Other Services.
Growth in NHS expenditure for England between 2002/03 and 2003/04 is distorted by a switch from the Exchequer's Annually Managed Expenditure to cover the increased cost of pensions.
Health expenditure is defined under the HM Treasury's total expenditure on services (TES aggregate). This definition allows comparison on the same basis between England and the devolved administrations.
The TES definition of health expenditure for England includes most Department of Health revenue resource near cash (excludes certain items e.g. grants to local authorities) plus local authority spending on health plus what was previously known as 'DIUS' Medical Research Council spending plus National Lottery spending on health.
1Figures pre 1999/00 are on a cash resource basis, from 1999/00 - 2002/03 on a Stage 1Resource Budgeting basis and from 2003/04 on a Stage 2 Resource Budgeting basis.
Figures for Wales, Scotland and Northern Ireland exclude expenditure on departmental administration.
2 As adjusted by the Gross Domestic Product (GDP) deflator at market prices.

Sources:

The Government's Expenditure Plans (DH).
Public Expenditure on Health and Personal Social Services (House of Commons Health Committee).
Health Statistics Wales (NAW).
Scottish Health Service Costs (ISD).
Scottish Budget Documents (The Scottish Government).
Main Estimate (DHSSPSNI).
Household Estimates and Projections (DCLG).
Household Projections (GROS).
Household Data (NISRA).
Department of Health Departmental Report (DH).
2011Census, Population and Household Estimates for England and Wales (ONS).
2011Census (General Registrar Office for Scotland).
2011Census (Northern Ireland Statistics and Research Agency).

Office of Health Economics Research

2.2.3 Spending reviews

In the UK, the budget for public expenditure is set by central government. In recent years, the Government has moved away from the traditional annual expenditure survey to a three-year planning cycle which is updated every two years to be in line with government priorities and economic forecasts. Public expenditure plans are set after the completion of the Spending Review involving government departments, which leads to a three-year financial programme and plans for each department. The 2013 Spending Review set spending plans for each department until 2017/18 together with their Public Service Agreements, a set of objectives and targets to be achieved with the funding provided. Outturns on public spending are published by HM Treasury in the *Public Expenditure Statistical Analyses* every year after the Chancellor's Spending Budget Statement. The report includes trends in outturn data, estimated outturns for the latest year and budget plans over a whole range of public expenditures.

2.2.4 Programme budgeting

Programme budgeting is the analysis of expenditure in distinct therapy areas (broadly defined), such as 'cancer' and 'mental health problems'. Programme budget data has been collected annually in England since 2003/04 for 23 main categories, 22 plus a residual 'other' category. Since 2004/05 a number of subcategories have also been added. Figures are based on an aggregation of PCO returns of spending allocated at local level across programme budget categories.

Table 2.4 shows programme budget expenditure data for recent years for both England and Wales. Within both countries the mental health category is the largest in terms of expenditure. It is not possible to assign all expenditure into programme budget categories: the 'other' area of expenditure accounted for approximately £26billion for England in 2010/11 and £763million for Wales.

Table 2.4. Gross NHS expenditure[1] by Programme Budget categories, 2008/09 - 2010/11

£ million (2010/11 prices[2])

	England			Wales		
	2008/09	2009/10	2010/11	2008/09	2009/10	2010/11
Total below[3]	**74,631**	**82,479**	**81,054**	**4,372**	**4,405**	**4,404**
Mental Health Problems[4]	10,924	11,567	11,906	613	624	637
Circulation Problems (CHD)	7,358	8,221	7,722	500	472	464
Cancers & Tumours	5,350	6,021	5,809	374	362	347
Respiratory System Problems	4,428	4,719	4,428	342	347	349
Musculo Skeletal System Problems[5]	4,394	4,885	5,060	327	340	335
Gastro Intestinal System Problems	4,271	4,703	4,432	295	308	305
Genito Urinary System Disorders[6]	4,174	4,756	4,785	232	239	258
Neurological System Problems	3,852	4,255	4,305	168	169	171
Trauma & Injuries (including burns)	3,438	3,845	3,748	386	379	377
Social Care Needs	3,290	3,594	4,175	46	49	44
Maternity & Reproductive Health	3,228	3,716	3,437	180	189	192
Dental Problems	3,231	3,388	3,306	210	193	188
Learning Disability Problems	3,054	3,231	2,896	114	123	120
Endocrine, Nutritional & Metabolic	2,637	2,967	3,003	158	170	178
Healthy Individuals	1,997	2,172	2,145	141	142	143
Skin Problems	1,884	2,133	2,135	105	106	106
Eye/Vision Problems	1,739	1,984	2,142	109	116	119
Infectious Diseases	1,478	1,959	1,800	73	78	81
Blood Disorders	1,313	1,440	1,355	49	50	46
Neonate Conditions	1,158	1,314	1,053	43	46	43
Poisoning	992	1,097	960	67	63	62
Hearing Problems	442	512	453	25	27	27

Notes:
Figures are based on financial years.
There may be definitional differences between the categories for England and Wales, and hence cross country comparisons should be made with care.
Figures include the totality of PCT expenditure including inpatient, outpatient and FHS prescribing costs, GMS/PMS expenditure on consulting is included in programme budget publications but not broken down into the different programme budget categories and hence not included in the above table.
Figures are sorted by England total for 2008/09.
For Wales 'Other' relates to General Medical Services, open access, continuing care, invalid/uncoded data and valid/'other' data. For England 'Other' relates to GMS/PMS, Strategic Health Authorities and miscellaneous.
1Gross spending of resource allocation between the 23 programme budget categories.
2 As adjusted by the Gross Domestic Product (GDP) deflator at market prices.
3 Excluding other areas of spend/conditions.
4 Including Alzheimer's syndrome.
5 Excluding trauma.
6 Except infertility.

Sources:
Department of Health Resource Accounts (DH).
Programme budget returns from NHS Wales (NAW).
Economic Data (HM Treasury).

2.2.5 NHS funding

The NHS is largely funded by general taxation and National Insurance contributions. A relatively small additional amount each year comes from receipts from land sales, prescription charges and dental charges, and hospital income, such as car park charges and bedside telecommunications charges (see Table 2.5). The Department of Health is voted funds by Parliament for expenditure on the NHS in England and also a much smaller amount for spending on some personal social services (PSS). The allocation is a result of the Spending Review process (see page 48) and is largely based on assumptions about pay, price and demand increases as well as efficiency gains. For Northern Ireland, Scotland and Wales, funding for health care forms part of the total of public funds voted by Parliament to each of those countries, which is then divided up by the devolved administrations among the various (health and non-health) services within the respective countries. HM Treasury is responsible for passing these funds to the various departments.

Table 2.5. NHS sources of finance, 1949 - 2011

Year	Taxation		NHS contribution from National Insurance		Patients' payments[1]		Total NHS income[2]	NHS income as a % of UK government receipts[3]
	£m	% NHS	£m	% NHS	£m	% NHS	£m	
1949	437	100.0	-	-	-	-	437	8.2
1950	477	100.0	-	-	-	-	477	8.7
1960	671	77.5	118	13.6	43	5.0	866	9.8
1970	1,635	82.6	209	10.6	60	3.0	1,979	8.7
1980	9,951	88.4	1,042	9.3	264	2.3	11,257	11.5
1990	22,992	80.9	4,288	15.1	1,146	4.0	28,426	12.9
1991	26,300	82.0	4,513	14.1	1,265	3.9	32,078	14.1
1992	29,548	83.4	4,612	13.0	1,276	3.6	35,436	15.4
1993	31,347	84.2	4,717	12.7	1,167	3.1	37,231	16.0
1994	33,875	85.3	4,869	12.3	971	2.4	39,715	15.8
1995	35,833	85.6	5,101	12.2	919	2.2	41,853	15.4
1996	37,284	85.7	5,360	12.3	879	2.0	43,522	15.3
1997	39,064	85.6	5,691	12.5	906	2.0	45,660	15.0
1998	41,037	85.3	6,162	12.8	939	1.9	48,138	14.5
1999	44,569	85.3	6,690	12.8	1,006	1.9	52,264	14.9
2000	49,103	86.0	6,905	12.1	1,058	1.9	57,067	15.2
2001	54,116	86.0	7,610	12.1	1,166	1.9	62,892	16.1
2002	62,169	86.2	8,732	12.1	1,263	1.7	72,164	18.3
2003	62,608	77.9	16,391	20.4	1,349	1.7	80,348	19.4
2004	67,562	77.0	18,857	21.5	1,288	1.5	87,707	19.8
2005	75,803	78.5	19,510	20.2	1,271	1.3	96,583	20.3
2006	82,882	80.3	18,988	18.4	1,326	1.3	103,197	20.1
2007	89,663	80.0	21,081	18.8	1,391	1.2	112,135	20.9
2008	94,825	79.7	22,729	19.1	1,448	1.2	119,002	21.8
2009	102,535	80.9	22,679	17.9	*1,485*	1.2	126,699	24.6
2010	105,689	80.9	23,375	17.9	*1,521*	1.2	130,586	26.0
2011	107,619	80.9	23,799	17.9	*1,537*	1.2	132,955	25.2

Notes: All figures relate to calendar years.
Figures in italics are OHE estimates.
%NHS refers to the percentage of total NHS funding from each source.
1Patient charges for 2004 onwards are not comparable to earlier years, as reliable data for PDS in England and Wales are not available before 2004/05 and therefore data prior to 2004/05 are based on GDS patient charges alone. In 2005/06 there was a shortfall in patient charge income, in part attributable to PDS pilots income being based on the old GDS system of patient charges in England and Wales.
2 Prior to 1974 total NHS income includes services provided by former Local Health Authorities (LHAs). From 1974 onwards, services provided by LHAs were transferred to the NHS.
3 UK government receipts include taxes and National Insurance contributions.
Data for LHAs collected from 1951to 1973 is included in the total but not identified separately.

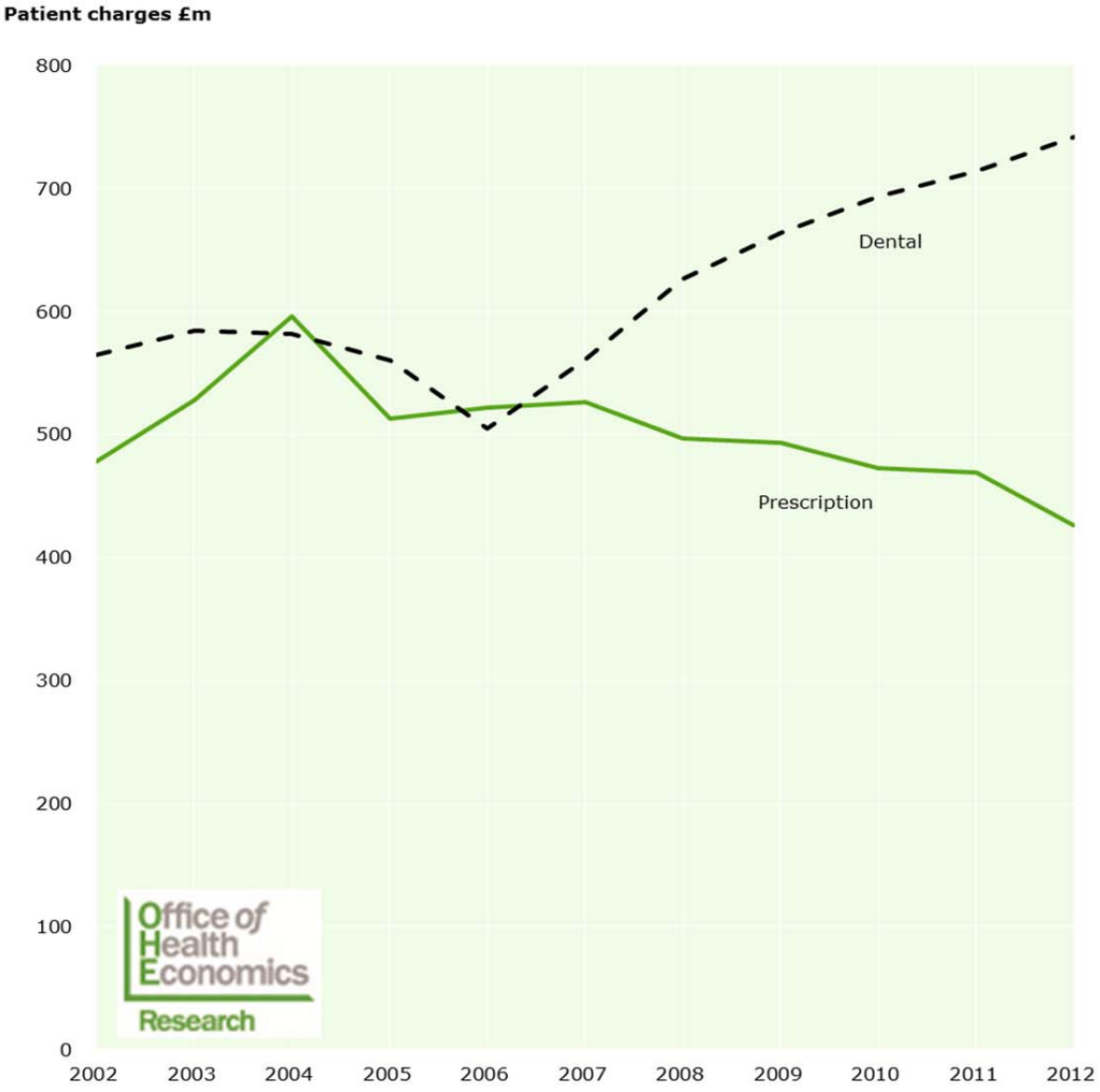
Sources: Economic Trends (ONS).
Economic and Labour Market Review (ONS).
Annual Abstract of Statistics (ONS).
The Government's Expenditure Plans (DH).
Freedom of Information (FOI) request to Department of Health (DH).

Patient charge income

The NHS is primarily free at the point of service; however charges do apply to some services. Since 1952 - except for the period between February 1965 and June 1968 - patients requiring NHS medicines via prescriptions have been subject to a charge in England. In Northern Ireland prescriptions have been free since April 2010, in Scotland since April 2011 and in Wales they have been free since April 2007. There have been numerous increases in the charges over time. Further detail regarding prescription charges is given in Section 4, page 143. Although public funds continue to finance some General Dental Services expenditure, part of funding across the UK comes from patient charges. In recent years the system of dental charges has undergone considerable change and is no longer consistent between the four countries. The current system of dental charges is outlined in 'Dental charges – Issues and points of interest' on page 156. There is also some hospital charge income, such as for car parking and bedside telecommunications.

Information relating to patient charge income was previously available in the Annual Abstract of Statistics. However, in recent years this has become more disparate. The Health and Social Care Information Centre produces some information for England, as does the Information and Statistics Division for Scotland. To fill gaps, we have obtained some of the information presented in Table 2.5 and Figure 2.4 via Freedom of Information Act requests and have made estimates based on trends in previously published data. Changes in the reporting of patient charge revenue has resulted in inconsistencies and breaks in the series, which are outlined in Figure 2.4.

Figure 2.4 NHS patient dental and prescription charges, UK, 2002 - 2012



Notes: Prescription charges were not introduced until 1952, then temporarily abolished in 1966 - 1968.
Figures for prescription charge income for 2002 to 2008 are taken from the Annual Abstract of Statistics and relate to by patients for pharmaceutical services. Figures for 2009 onwards relate to prescription charge revenue, including income received by Pharmacists for pre-payment certificates.
Data from 2002 to 2008 are based on General Dental Services alone, 2009 data onwards also includes Personal Dental Services income.

Sources: Annual Abstract of Statistics (ONS).
Economic data (HM Treasury).
Dental Care Information (ISD).
Private Communication (HSCBSO).

Office of Health Economics
Research

2.2.6 Components of NHS expenditure

Based on health care programmes on which the resources are spent, total NHS revenue expenditure, excluding capital expenditure, can be broken down into three main areas:

- Hospital, Community and Family Health Services (HCFHS) discretionary (cash-limited) expenditure
- Family Health Services (FHS) non-discretionary (non-cash-limited) expenditure
- Central Health and Miscellaneous Services (CHMS) expenditure.

Expenditure on Hospital, Community and Family Health Services is shown in Figure 2.5.

Discretionary Hospital, Community and Family Health Services (HCFHS) expenditure

By far the largest share of NHS resources goes to provide the cash-limited budget of the Hospital, Community and Family Health Services (HCFHS). This pays for:

- Secondary and tertiary health care services provided by NHS hospitals, plus ambulance services and community health care services such as community nursing and residential nursing care. Taken together these are referred to as the Hospital and Community Health Services (HCHS)

- The cash-limited ('discretionary') Primary Medical Services expenditure. Up until the introduction of the new GP contract in April 2004, remuneration of GPs, unlike most NHS expenditure, was not subject to an overall cash limit, i.e. not constrained to remain within a fixed overall budget. Most GPs were remunerated for their NHS work under the terms of the nationally negotiated GP contract. These funds were labelled General Medical Services non-cash-limited (GMSNCL) and were paid directly by the Department of Health (and its counterparts in Northern Ireland, Scotland and Wales) to individual GPs. The rest of GPs opted to join 'personal medical services (PMS)' schemes. They were paid on a different, locally negotiated, basis from the GP contract. The funds for PMS payments, which included purchasing services in addition to GPs' remuneration, passed directly from the Department of Health to the individual GPs. Local PCOs had no discretion to allocate these funds for other purposes. On the other hand funds for reimbursement of practice staff, premises and computer expenses were subject to a cash-limit. Under the new GP contract (see Section on FHS), however, from 2004/05 onwards GMS non-discretionary funding also became part of the overall cash limited allocation to PCOs (see Section on FHS) and is now known as Primary Medical Services

- The costs of prescribing in the community

- Centrally managed budgets which are spent in the NHS e.g. for training and research and development.

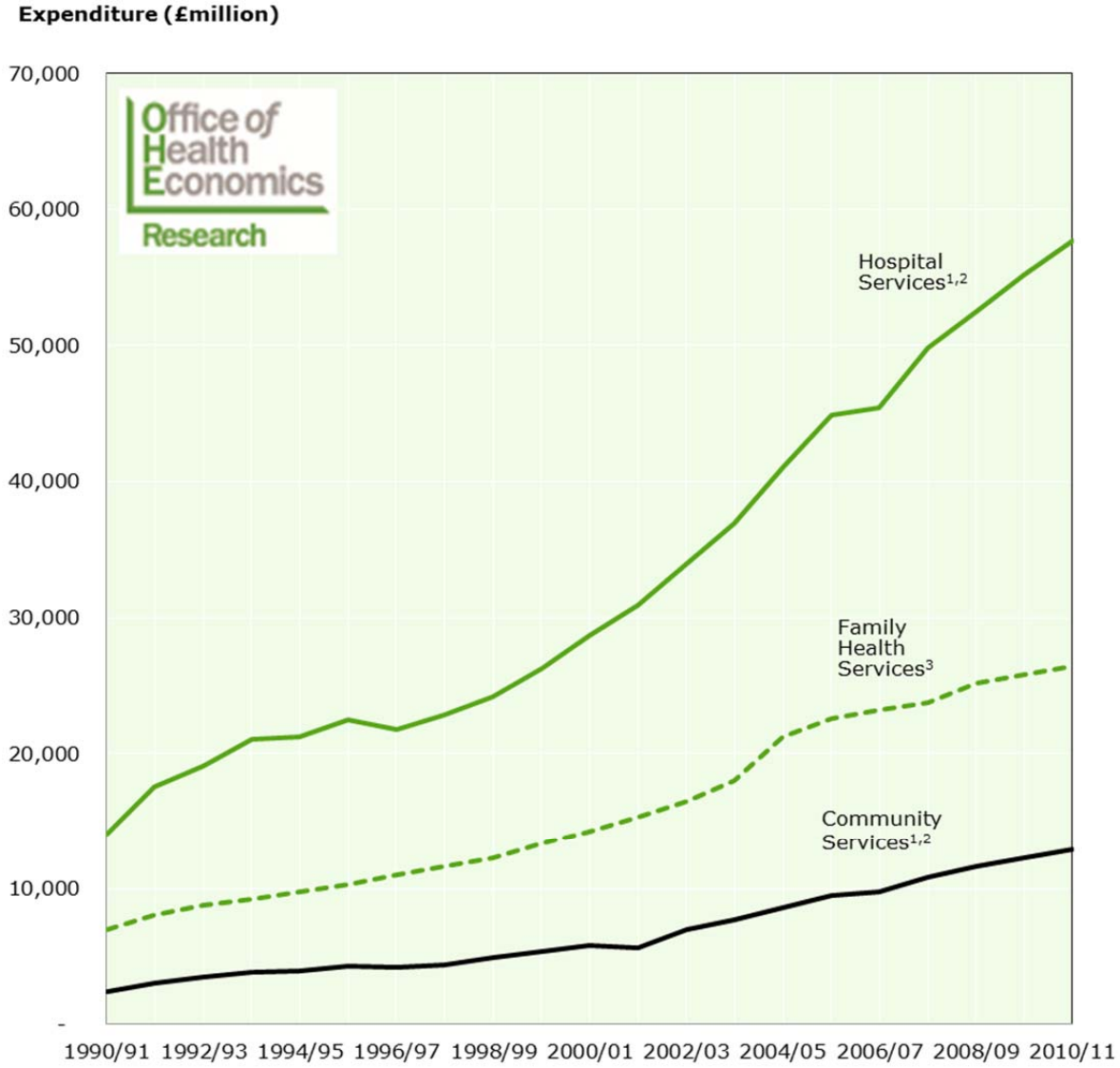
2.2.7 Non-discretionary Family Health Services (FHS) expenditure

A small percentage of NHS resources are used to fund that part of the Family Health Services that are non-cash-limited. It includes payments to dentists, opticians and pharmacists contracted to the NHS. Formally this is labelled as the costs of the General Dental Services (GDS), General Ophthalmic Services (GOS) and General Pharmaceutical Services (GPS). A small number of dentists have opted for locally negotiated 'personal dental services (PDS)' contracts rather than the national GDS contract. The 'other FHS' funds are effectively paid directly by the Department of Health to the individual practitioners contracted to the NHS – dentists, opticians and pharmacists. PCTs cannot allocate these funds to other purposes. Details about these services are discussed in the section of the Guide on FHS.

Central Health and Miscellaneous Services (CHMS)

Central Health and Miscellaneous Services (CHMS) cover a disparate range of activities that receive funds directly from the Department of Health (and its counterparts in Northern Ireland, Scotland and Wales) and also cover the Departments' own administration costs. CHMS include paying for: medical treatment received by UK nationals in other European Economic Area member states; supporting key public health functions; the Health Protection Agency; grants to voluntary organisations; welfare foods; and many other activities.

Figure 2.5. UK NHS gross expenditure by service, 1990/91 - 2010/11



Notes: All figures include income received and charges paid by patients.
There is a break in the statistical series at 1994, as a result of changes in NHS accounting policy.
Figures for 2007/08 and 2008/09 include actual data for Scotland, Wales and Northern Ireland and OHE estimates for England, see Table 2.6 for further information.
1 From 1991/92, HCHS figures include capital charges, depreciation and certain other expenditure not previously included.
2 The apparent reduction in HCHS expenditure since 1995/96 was due to changes to accounting practice and the structure of the NHS.
3 Figures include costs of prescription medicines dispensed by chemists and appliance contractors, dispensing fees and other allowances.

Sources: The Government's Expenditure Plans (DH).
Annual Abstract of Statistics (ONS).
Health Statistics Wales (NAW).
Health and Personal Social Services Statistics for England (DH).
Scottish Health Statistics (ISD).
Annual Statistical Report (HSCBSO).
Department of Health Departmental Report (DH).
Economic Trends (ONS).
NHS Board Operating Costs and Capital Expenditure (ISD Scotland).
NHS Pay Modernisation (NAO).
Public Expenditure Statistical Analyses (HM Treasury).

2.2.8 Cost of hospital services

All NHS organisations have a statutory duty to submit annual accounts for the previous year, which are then consolidated and published in the NHS Summarised Accounts. One of the mandatory annual returns by NHS Trusts in England is the TFR2, which was introduced at the start of the internal market in the early 1990s. It provides cost information for the analysis of final accounts across services and specialties. The costing is on a top-down basis by applying methods of direct allocation or apportionment of costs to individual specialties or care programmes. Average unit costs are derived by dividing the total cost of a particular specialty or service by the total associated activity level. Thus, for example, for a particular NHS Trust, the average unit cost of an orthopaedic outpatient new attendance is:

$$\frac{\text{Total cost allocated or apportioned to orthopaedic outpatient new attendances}}{\text{Total number of orthopaedic outpatient new attendances}}$$

Historic data are available from *The CIPFA Health Services Financial Database* compiled from the TFR2 returns. It contains, among other financial information, a set of average unit costs by consultant specialty across NHS Trusts in England. For details see:

www.cipfastats.net

In Scotland, the *Scottish Health Services Costs ('Cost Book')* published annually by ISD contains information on Scottish health services costs both at national and individual hospital level. The main source of data is the Scottish Financial Returns (SFRs). The costing information is largely functional based providing costs of inpatients, day cases and outpatients by specialty. Unlike England, there is no Healthcare Resource Group (HRG, see below) based cost information available. In Wales, hospital cost information by NHS Trust appears in the 'Red Book' published annually by the National Assembly for Wales based on financial returns similar to those of England. However, similar information for Northern Ireland is not readily available.

Previously, hospital expenditure was available separately from community expenditure in the constituent countries of the UK. However, it is often the case that hospital and community health services (HCHS) expenditure are now combined together. As such Table 2.6 shows this combined information rather than expenditure for hospital services alone. In recent years, hospital expenditure represented about four fifths of the total HCHS spend.

Table 2.6. NHS hospital and community gross expenditure (revenue and capital) per capita, UK, 1991/92 - 2010/11

Year	England	Wales	Scotland	Northern Ireland	UK
			Hospital and community expenditure per capita (£ cash)		
1991/92	387	384	476	407	395
1992/93	423	473	511	432	434
1996/97	467	431	587	549	478
1997/98	485	460	604	590	497
1998/99	518	499	613	601	527
1999/00	560	545	666	653	571
2000/01	608	604	731	727	622
2001/02	645	655	800	784	663
2002/03	706	728	847	869	724
2003/04[2]	764	794	1,028	*953*	793
2004/05[2]	842	862	1,142	*1,031*	873
2005/06	917	919	1,240	1,105	950
2006/07	921	947	1,457	1,183	975
2007/08	-	985	1,552	1,257	-
2008/09	-	1,042	1,628	1,270	-
2009/10	-	1,058	1,677	1,285	-
2010/11	-	1,053	1,687	1,287	-
			At 2010/11 prices[1]		
1991/92	586	582	721	617	599
1992/93	627	701	758	640	643
1996/97	631	581	793	742	646
1997/98	641	608	800	780	658
1998/99	671	648	795	779	684
1999/00	713	695	849	832	727
2000/01	771	766	926	922	788
2001/02	802	815	995	975	824
2002/03	856	883	1,028	1,054	878
2003/04[2]	907	942	1,220	*1,131*	942
2004/05[2]	970	994	1,317	*1,189*	1,007
2005/06	1,034	1,036	1,397	1,245	1,070
2006/07	1,012	1,039	1,599	1,298	1,071
2007/08	-	1,055	1,662	1,346	-
2008/09	-	1,087	1,697	1,324	-
2009/10	-	1,087	1,722	1,320	-
2010/11	-	1,053	1,687	1,287	-

Notes: All figures include patient payments, capital expenditure and capital charges from 1991/92.
- Data not available.
1As adjusted by the Gross Domestic Product (GDP) deflator at market prices.
2 Figures in italics for Northern Ireland for 2003/04 and 2004/05 are OHE estimates and are interpolations based on available data.

Sources: The Government's Expenditure Plans (DH).
Annual Abstract of Statistics (ONS).
Health Statistics Wales (NAW).
Scottish Health Statistics (ISD).
Economic Data (HM Treasury).
Population Projections Database (GAD).
Household Estimates and projections (DCLG).
Household projections (GROS).
Household data (NISRA).

2.2.9 'Payment by Results' and national tariff (England)

Traditionally, commissioning of hospital and community health services (HCHS) by commissioning bodies such as PCOs (CCGs in England, Health Boards in other countries of the UK) from NHS providers, the NHS Trusts, was largely through block contracts where prices were negotiated locally and Trusts were paid a set amount for the totality of a year's work. This funding was largely fixed, with little variation if activity increased or fell at the margin. The publication by the Department of Health in 2002 of 'Reforming Financial Flows: Introducing Payment by Results':

http://webarchive.nationalarchives.gov.uk/+/www.dh.gov.uk/en/Managingyourorganisation/Financeandplanning/NHSFinancialReforms/index.htm

heralded significant changes in commissioning health care in the NHS in England with the aim to focus purchasing on quality and quantity rather than price. Under 'Payment by Results' (PbR), CCGs pay for the majority of hospital activity from NHS Trusts at national tariff prices. The national tariff is based on average costs in NHS Trusts in England, adjusted for case-mix as measured by HRG. As the most recent data are three years behind the year in which the national tariff is to apply (e.g. the 2010/11 national tariff is based on the 2007/08 Reference Costs), they are adjusted for pay and prices inflation, less assumed efficiency improvement, and for the impact of major new technologies. Regional variations in labour, capital and land costs are estimated and recognised in a market forces factor (MFF), i.e. location-specific mark-up.

2.2.10 NHS Reference Costs

Since 1998, as part of the efficiency component of the NHS performance assessment framework, NHS Trusts in England have been required to produce annually a set of accounting costs for a range of hospital based surgical and medical treatments. The exercise in recent years has expanded to cover outpatient and other hospital services. In order to produce costing information on a consistent basis and to allow for differences in case-mix so that costs are comparable between hospitals, most of the unit costs from the acute sector are based on Healthcare Resource Groups (HRGs) as discussed in the next section. This results in the annual publication of *Reference Costs* by the Department of Health, see:

https://www.gov.uk/government/publications/nhs-reference-costs-financial-year-2011-to-2012

The aim is to provide a benchmark for improvement, to inform good practice across the NHS and identify sources of inefficiency and to set the national tariff of prices for health care services. The Reference Costs also provide a source of information for the negotiation of service agreements between commissioners and providers. Prior to 2003, the Reference Costs consisted of two main parts: the National Schedule of Reference Costs and

the National Reference Cost Index (NRCI). In 2003, the national tariff was added.

The National Schedule of Reference Costs contains the English NHS national average treatment cost on an HRG basis of surgical and medical procedures as well as other care programmes across a wide range of hospital and community health services. It includes unit cost information, average length of stay and activity levels on elective/day case and non-elective (i.e. emergency) inpatients, excess bed days, outpatient care, other acute services, community services, mental health, transport, paramedic and accident and emergency services. For each service and for each HRG the total activity, the average (mean) cost, the cost range (minimum and maximum cost across NHS Trusts) and inter-quartile range (i.e. the range spanned by the middle 50 per cent of providers of that HRG in the NHS in England) are shown. Detailed information for individual NHS Trusts and PCOs is included in a large electronic database.

To give a single figure for each NHS organisation to summarise their cost performance so that comparisons can be made, a National Reference Cost Index (NRCI) is compiled based on each hospital's reference costs, with adjustment made to allow for unavoidable local variation in (labour, capital and land) costs across the country. This adjustment is done by applying a location-specific market forces factor (MFF). The latest reference cost data for England are shown in Tables 2.7, 2.8 and 2.9, for elective inpatients, non-elective inpatients and day cases respectively.

2.2.11 Healthcare Resource Groups (HRGs)

Average unit costs derived from Trust financial returns such as TFR2 and SFR are of limited use in comparing performance between Trusts. Such unit costs by specialty do not take into account the large cost variations between treatments undertaken within the same specialty due to differences in case-mix or length of stay. The unit cost of orthopaedic inpatients, for example, says nothing about the range of treatments undertaken within the specialty and their associated costs. Healthcare Resource Group (HRG) based unit costs have been introduced in the NHS to rectify this shortcoming.

Modelled on the US Diagnostic Related Groups (DRGs), HRGs, now in the fourth version (HRG4), are groupings of clinically similar treatments that use similar levels of resources. For admitted patient care (APC), treatment episodes are assigned to a particular HRG on the basis of procedure (as defined by OPCS4) together with the diagnosis (as defined by ICD 10 codes), while taking into account the patient's age, length of stay, outcome (death/discharge) and any secondary diagnoses for complications and/or co-morbidities. For instance, elective hospital inpatient admissions for major knee procedures are divided into those without complications, those with intermediate complications and those with major complications, each having a different average length of stay, and each being categorised to a distinct HRG (HB21A, HB21B and HB21C).

HRG4 represents a major revision and has considerably increased the number of groupings from 650 to over 1,400. Further information about HRGs can be found on the Health and Social Care Information Centre web site:

http://www.hscic.gov.uk/article/2021/Website-Search?q=HRG&area=both

HRG spells are becoming the 'unit of currency' within the NHS in England, providing a standardised unit of much, but not all, acute hospital activity for health care commissioning. HRG spell based unit costs are also used in the compilation of the Reference Cost publication in England as per Section 2.2.7 and in the support of the NHS Payment by Results pricing system for activity based funding of hospitals (see Section 2.2.6)

Table 2.7. Reference costs per FCE and average length of stay of top 10 Healthcare Resource Groups (HRGs) ranked by total cost, elective inpatients, England, NHS and non-NHS providers, 2011/12

NHS Trusts

HRG4 code	Healthcare Resource Group (HRG)	No. of FCEs	Mean cost[1] (£)	Quartile range[1] (£)		LOS[2] (days)
				25%	75%	
HB21C	Major Knee Procedures for Non-Trauma, Category 2, without CC	45,812	5,740	5,082	6,321	4.5
HB12C	Major Hip Procedures for Non-Trauma, Category 1, without CC	34,414	5,942	5,146	6,523	4.4
MA07D	Major Open Upper Genital Tract Procedures without Major CC	29,554	3,288	2,717	3,715	2.9
HB21B	Major Knee Procedures for Non-Trauma, Category 2, with CC	11,157	6,101	5,470	6,718	5.3
FZ74B	Complex Large Intestine Procedures, 19 years and over without Major CC	9,807	6,128	5,149	6,855	6.5
HR05Z	Reconstruction Procedures Category 2	8,282	6,734	5,571	7,844	5.6
EA14Z	Coronary Artery Bypass Graft (First Time)	5,968	9,333	8,263	10,253	5.3
HC04C	Extradural Spine Intermediate 1 without CC	12,912	3,880	3,108	4,750	2.2
HB11C	Major Hip Procedures for Non-Trauma, Category 2, without CC	7,675	6,258	5,262	6,845	4.7
GA10D	Laparoscopic Cholecystectomy, 19 years and over, with length of stay 1 day or more, without CC	18,173	2,343	1,881	2,761	1.3

Non-NHS providers[3]

HRG4 code	Healthcare Resource Group (HRG)	No. of FCEs	Mean cost[1] (£)	Quartile range[1] (£)		LOS[2] (days)
				25%	75%	
HB12C	Major Hip Procedures for Non-Trauma, Category 1, without CC	994	5,938	5,755	6,306	3.6
CZ25Q	Cochlear Implants without CC	82	23,549	23,580	23,580	1.0
HB61C	Major Shoulder and Upper Arm Procedures for Non-Trauma, without CC	345	5,574	5,134	6,572	1.0
HB21B	Major Knee Procedures for Non-Trauma, Category 2, with CC	258	6,567	5,131	6,796	3.9
SA18Z	Bone Marrow Harvest	67	22,528	22,528	22,528	1.0
HC04C	Extradural Spine Intermediate 1 without CC	331	3,570	3,572	3,697	1.3
HR06A	Reconstruction Procedures Category 1, 19 years and over	127	8,090	7,851	9,380	1.5
HC03C	Extradural Spine Intermediate 2 without CC	210	4,247	4,109	4,586	1.3
HB22C	Major Knee Procedures for Non-Trauma, Category 1, without CC	349	2,527	2,134	2,837	1.0
HB12B	Major Hip Procedures for Non-Trauma, Category 1, with Intermediate CC	129	5,975	4,632	6,217	3.8

Notes: CC = complications and co-morbidity. LOS = average length of stay.
The average cost provided relates to the mean value across all trusts, the interquartile ranges may relate to the data from a single trust if that trust has a large proportion of the activity, and potentially making the lower and upper quartile both the same, see http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@ps/documents/digitalasset/dh_118330.pdf for further details.
Any errors in the figures shown for 25% and 75% quartile range are in the source document.
1 Mean cost corresponds to national average unit cost, calculated by the Department of Health, on a weighted basis, whereas interquartile range is based on individual data submissions for providers.
2 Average length of stay is derived by Department of Health using method of truncation by excluding bed days that fall outside nationally set upper limit lengths of stay.
3 Independent sector providers of care to NHS funded patients.

Source: The NHS Reference Costs (DH).

Table 2.8. Reference costs per FCE and average length of stay of top 10 Healthcare Resource Groups (HRGs) ranked by total cost, NHS Trusts, non-elective inpatients, England, 2011/12

Long stay

HRG4 code	Healthcare Resource Group (HRG)	No. of FCEs	Mean cost[1] (£)	Quartile range[1] (£) 25%	75%	LOS[2] (days)
DZ11A	Lobar, Atypical or Viral Pneumonia, with Major CC	125,185	2,433	1,921	2,765	7.5
AA22A	Non-Transient Stroke or Cerebrovascular	91,268	3,127	2,444	3,656	8.8
LA04D	Kidney or Urinary Tract Infections, with length of stay 2 days or more, with Major CC	78,545	2,922	2,267	3,276	9.6
NZ14B	Emergency or Upper Uterine Caesarean Section, without CC	56,156	3,292	2,690	3,719	3.5
EB03H	Heart Failure or Shock, with CC	50,431	2,716	1,998	3,123	8.1
NZ11F	Normal Delivery with Induction, without CC	62,370	2,173	1,773	2,554	2.6
EB01Z	Non-Interventional Acquired Cardiac Conditions	102,395	1,216	843	1,329	2.5
HA12B	Major Hip Procedures for Trauma, Category 1, with CC	14,981	8,075	6,935	9,183	15.3
NZ14A	Emergency or Upper Uterine Caesarean	31,282	3,752	3,082	4,337	4.1
FZ47B	Non-Malignant General Abdominal Disorders, with length of stay 2 days or	75,187	1,517	1,271	1,687	3.7

Short stay

HRG4 code	Healthcare Resource Group (HRG)	No. of FCEs	Mean cost[1] (£)	Quartile range[1] (£) 25%	75%	LOS[2] (days)
NZ11B	Normal Delivery without CC	149,508	1,044	725	1,243	-
EB01Z	Non-Interventional Acquired Cardiac Conditions	325,494	433	305	482	-
NZ19Z	Ante-natal Major Disorders	207,618	582	361	761	-
NZ16Z	Ante-natal Routine Observation	148,329	557	364	748	-
FZ47C	Non-Malignant General Abdominal Disorders, with length of stay 1 day or less	160,934	468	325	523	-
NZ11F	Normal Delivery with Induction, without CC	58,048	1,142	818	1,400	-
NZ17Z	Ante-natal False Labour including Premature Rupture of Membranes	111,165	569	351	741	-
LA04G	Kidney or Urinary Tract Infections, with length of stay 1 day or less	89,621	433	322	456	-
PB02Z	Minor Neonatal Diagnoses	55,842	621	350	673	-
AA26A	Muscular, Balance, Cranial or Peripheral Nerve Disorders, Epilepsy or Head Injury, with CC	76,028	439	320	482	-

Notes: CC = complications and co-morbidity.
- Data not available. According to Department of Health Reference Costs 2011-12, a non-elective inpatient stay is short when the stay is zero or one day.
1Mean cost corresponds to national average unit cost, calculated by the Department of Health, on a weighted basis, whereas interquartile range is based on individual data submissions for providers.
2 LOS: Average length of stay is derived by Department of Health using method of truncation by excluding bed days that fall outside nationally set lengths of stay.

Source: The NHS Reference Costs (DH).

Table 2.9. Reference costs per case of top 10 Healthcare Resource Groups (HRGs) ranked by total cost, day cases, England, 2011/12

NHS Trusts

HRG4 code	Healthcare Resource Group (HRG)	No. of day cases	Mean cost[1] (£)	Quartile range[1] (£)	
				25%	75%
BZ02Z	Phacoemulsification cataract extraction and lens implant	274,612	851	708	951
FZ61Z	Diagnostic Endoscopic Upper GI Tract Procedures with Biopsy, 19 years and over	278,563	453	332	541
JC15Z	Skin Therapies Level 3	171,787	664	371	875
LB72A	Diagnostic Flexible Cystoscopy, 19 years and over	244,587	395	274	472
EA36A	Catheter, 19 years and over	85,636	1,059	744	1,281
FZ51Z	Diagnostic Colonoscopy, 19 years and over	135,127	527	413	578
FZ52Z	Diagnostic Colonoscopy with Biopsy, 19 years and over	123,319	570	450	658
HB23C	Intermediate Knee Procedures for Non-Trauma, without CC	45,926	1,349	1,063	1,674
FZ60Z	Diagnostic Endoscopic Upper GI Tract Procedures, 19 years and over	135,758	431	316	501
AB04Z	Major Pain Procedures	84,163	695	492	893

Non-NHS providers[2]

HRG4 code	Healthcare Resource Group (HRG)	No. of day cases	Mean cost[1] (£)	Quartile range[1] (£)	
				25%	75%
BZ23Z	Minor Vitreous Retinal Procedures	2,117	957	957	957
HB61C	Major Shoulder and Upper Arm Procedures for Non-Trauma, without CC	385	4,343	4,067	4,473
HB23C	Intermediate Knee Procedures for Non-Trauma, without CC	830	1,926	1,852	2,416
HB22C	Major Knee Procedures for Non-Trauma, Category 1, without CC	599	2,256	1,991	2,582
HB62C	Intermediate Shoulder and Upper Arm Procedures for Non-Trauma, without CC	242	2,904	2,462	4,246
JC15Z	Skin Therapies Level 3	708	879	900	900
BZ02Z	Phacoemulsification cataract extraction and lens implant	573	1,039	823	1,366
FZ18C	Inguinal, Umbilical or Femoral Hernia Procedures, 19 years and over without CC	373	1,538	1,211	1,836
HA22C	Major Knee Procedures for Trauma, Category 1, without CC	76	5,909	6,192	6,192
HB61B	Major Shoulder and Upper Arm Procedures for Non-Trauma, with CC	103	4,279	2,716	5,558

Notes: CC = complications and co-morbidity.
The average cost provided relates to the mean value across all trusts, the interquartile ranges may relate to the data from a single trust if that trust has a large proportion of the activity, and potentially making the lower and upper quartile both the same, see http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/@ps/documents/digitalasset/dh_118330.pdf for further details.
1Mean cost corresponds to national average unit cost, calculated by the Department of Health, on a weighted basis, whereas interquartile range is based on individual data submissions for providers.
2 Independent sector providers of care to NHS funded patients.

Source: The NHS Reference Costs (DH).

2.2.12 Cost of 'Family Health Services'

The function of the Family Health Services (FHS) is outlined in Section 4. Here we cover the key costs that relate to those services. The FHS include the General Medical Services (GMS), the General Pharmaceutical Services (GPS), the General Dental Services (GDS) and the General Ophthalmic Services (GOS). Information relating to the costs of these four services is outlined in the following sections. Table 2.10 shows the costs of the four areas of expenditure in the UK. The FHS represented around one fifth of total NHS expenditure in the UK in 2010/11. In terms of per capita spend for the UK, GMS represented £157 per capita, GPS £202, GDS £55 and GOS £10 in 2010/11.

2.2.13 The cost of the General Medical Services

Until April 2004, funding for services provided by general medical practitioners (GPs) was not cash limited (i.e. it was termed non-discretionary funding). GPs, in addition, were reimbursed for premises costs including rent, rates and improvement grants, and also for the costs of employing practice staff and of information management and technology costs (IM&T). These latter reimbursements were met out of PCT cash-limited revenue funding. However from 2004/05 onwards all GMS and PMS funding has become part of the overall cash-limited PCT funding allocation. This causes a break in the time series figures for GMS expenditure.

Also introduced in 2004 throughout the UK was the Quality and Outcomes Framework (QOF), which was revised in 2006 (see: www.gpcontract.co.uk). This is a system for the management and payment of general medical practitioners. QOF rewards GP practices for implementing 'good practice' and often represents a significant proportion of their outcome. QOF data can also be useful for information relating to prevalence of specific diseases.

For England, expenditure on GMS and PMS is published by the Health and Social Care Information Centre (HSCIC) in *Investment in General Practice*. For Scotland and Wales, costs of GMS are published in *Scottish Health Statistics and Health Statistics for Wales* respectively. However, there is no officially published figure for Northern Ireland.

Table 2.10. Cost of Family Health Services (FHS) at 2010/11 prices[1], UK, 1949/50 - 2010/11

Year	Pharma-ceutical £m	General Medical £m	General Dental £m	General Ophthalmic £m	Total FHS cost: Cash £m	Total FHS cost: Real index[1] 49/50=100	Total FHS as a % of NHS cost
1949/50	875	1,152	1,179	588	3,794	100	35.5
1950/51	944	1,140	1,086	522	3,693	97	32.9
1955/56	938	1,158	596	164	2,856	75	26.4
1960/61	1,319	1,635	787	183	3,924	103	28.1
1965/66	2,099	1,408	948	298	4,753	125	26.9
1970/71	2,381	1,941	1,180	332	5,833	154	26.6
1975/76	2,759	1,940	1,360	432	6,492	171	21.3
1980/81	3,490	2,170	1,422	354	7,436	196	22.1
1985/86	4,347	2,749	1,653	362	9,111	240	24.4
1990/91	5,245	3,783	1,989	220	11,237	296	23.9
1995/96	7,220	4,567	2,154	380	14,322	377	24.3
1996/97	7,620	4,682	2,144	394	14,840	391	25.0
1997/98	8,012	4,850	2,145	395	15,401	406	25.2
1998/99	8,282	4,938	2,254	386	15,860	418	25.1
1999/00	8,972	5,236	2,285	439	16,932	446	24.9
2000/01	9,491	5,653	2,396	454	17,994	474	24.4
2001/02	10,193	5,828	2,506	460	18,986	500	23.7
2002/03	10,961	5,971	2,560	454	19,946	526	22.0
2003/04	11,678	6,605	2,593	468	21,344	563	21.9
2004/05	11,862	9,405	2,699	482	24,448	644	23.7
2005/06	11,727	10,222	2,954	501	25,404	670	22.8
2006/07	11,978	9,992	2,951	536	25,458	671	22.2
2007/08	11,884	9,883	3,103	565	25,435	670	20.7
2008/09	12,664	9,737	3,244	586	26,232	691	20.9
2009/10	12,530	10,009	3,335	630	26,504	699	20.0
2010/11	12,612	9,784	3,436	620	26,453	697	20.2

Notes:
All General Medical figures for England, reported up to and including 2003/04 were based on a former statement of financial allowance (SFA).
New GMS arrangements since 2004/05 are wholly discretionary and are not "comparable against or reconcilable to the figures shown up to 2003/04" (Departmental Report DH).
The expenditure record for GDS for 2005/06 was enhanced by an accounting adjustment to increase the estimate of GDS creditor payments outstanding at the year end (see DH Departmental report).
In 2006/07, the allocation to PCTs for GMS services in England was not increased and the Gross Investment Guarantee ceased to apply.
All figures include charges paid by patients. Except Welsh pharmaceutical and dental figures which are net of patient charges.
General Pharmaceutical Services figures from 2005/06 are not strictly comparable with those of earlier years, as the English data include payments from PCTs under the new pharmacy contract (Departmental Report DH).
1At constant prices, as adjusted by the Gross Domestic Product (GDP) deflator at market prices.

Sources:
Health and Personal Social Services Statistics for England (DH).
Health Statistics Wales (NAW).
Scottish Health Statistics (ISD).
Annual Statistical Report (HSCBSO).
Annual Abstract of Statistics (ONS).
Department of Health Departmental Report (DH).
Economic Trends (ONS).
NHS Board Operating Costs and Capital Expenditure (ISD Scotland).
NHS Pay Modernisation (NAO).
GOS data for England (HM Treasury).
Public Expenditure Statistical Analyses (HM Treasury).

2.2.14 The cost of General Pharmaceutical Services and the cost of medicines

General Pharmaceutical Services (GPS) costs consist of:

- the cost of medicines
- pharmacies' remuneration in the form of dispensing fees
- other costs including container costs and allowances.

Since 1957, the regulation of prices of pharmaceutical products sold to the NHS, excluding unbranded generic medicines from 1986 onwards, has collectively and indirectly been set by periodic negotiation between the ABPI (on behalf of the whole pharmaceutical industry) and the DH (on behalf of the health departments of all four countries of the UK), through the Pharmaceutical Price Regulation Scheme (PPRS), see: https://www.gov.uk/search?q=Pharmaceutical+Price+Regulation+Scheme+&tab=government-results

The scheme applies to all companies supplying branded medicines to the NHS, and limits the rate of profit earned from sales to the NHS. Schemes typically last for five years between renegotiations with the latest PPRS being for 2009-2013 inclusive.

The reimbursement prices of unbranded generic medicines are in effect set by generic medicines manufacturers and wholesalers in a competitive marketplace. The average price of a basket of generic versions of the same drug from different manufacturers is used in the Drug Tariff to determine the level of reimbursement to dispensers.

The agreed reimbursement prices for all medicines are known as NHS Basic Prices or Net Ingredient Costs (NIC) and constitute the basis on which the NHS Business Services Authority (NHSBSA) costs NHS prescriptions. The NIC, however, does not represent the total amount spent by the NHS on medicines, as NIC is the cost before discounts and other reimbursement deductions. It also does not include dispensing cost or fees or any adjustment for income obtained when a prescription charge is paid.

The prescribing budget in primary care is cash-limited to the extent that it comes within the CCG unified budget allocation, so that any overspend on the prescribing budget has to be offset by a reduction in other parts of the CCG budget and vice versa. Thus although the formula used to derive CCGs' funding allocations in England is calculated using a weight of about 15 per cent for prescribing, individual CCGs are free to determine how to allocate their total unified budget between prescribing and other expenditures as they wish. The setting of prescribing budgets by CCGs for GP practices in their area is based on a mix of a weighted capitation methodology, historic prescribing patterns and local judgement.

Statistical information about the volume of prescriptions and the associated costs is published regularly by departments or agencies of the respective countries in the UK. Details are described in the 'Key sources and information' on page 154. Further statistics related to prescription costs

and the NHS medicines bill are presented within the pharmaceutical section of Section 4.

The cost of General Ophthalmic Services

The objective of the General Ophthalmic Services (GOS) within the Family Health Services is to provide, through community optician practices, preventative and corrective eye care for children, people aged 60 and over, people on low incomes and those suffering from, or pre-disposed to, eye disease, in England, Northern Ireland and Wales. In Scotland, eyesight tests became free for everyone since 2006, this resulted in an increase in the cost of the GOS in Scotland, see Table 2.11. For England, the DH Departmental Report provides information relating to expenditure on GOS. In Northern Ireland this information is available from the Annual Abstract of Statistics, ONS, in Scotland via the costs book from ISD; and for Wales from the Health Statistics Wales publication by NAW.

There is a specific programme budget category for eye and vision care which includes expenditure on primary care services provided through the GOS, which provide sight tests and optical vouchers to those patient groups entitled to them. This cost is higher than the cost of GOS presented in the Departmental Report as it also includes the cost of secondary and additional primary care services directly attributable to problems relating to eyes and vision. In England, from April 2010 arrangements for managing the ophthalmic budget changed, with responsibility being devolved to PCTs (forerunners of the current CCGs).

The cost of the General Dental Services

The NHS General Dental Services (GDS) are usually the first point of contact that patients have with NHS dental treatment. Patients register with an NHS General Dentist (a 'High Street dentist') to receive the full range of NHS treatment provided by dentists. Further information about the GDS activity and workforce is contained in Section 4. Here we consider costs associated with GDS.

In England there has was a progressive movement of dental practices into Personal Dental Services (PDS) pilots, the majority of PDS pilots then switched to the new GDS contract terms, with current PDS agreements being typically reserved for specialist care within the community. From April 2006, GDS was commissioned from funds devolved to PCTs in England. Since April 2013 NHS England has taken responsibility for commissioning GDS services. Formerly General Dental Practitioners claimed item of service fees for each individual treatment provided in England, but now remuneration is based on NHS England agreeing with each dental practice an annual contract sum for a specified level of dental services. Information on NHS dental costs for England is included in the DH Annual Report and Accounts. Gross expenditure represents the total cost of the services, and net expenditure represents the cost to the NHS after deducting income from patient dental charges.

For Northern Ireland, dentists operate under one contract, the GDS, and information on the costs of the GDS is available through the Annual Abstract of Statistics.

Information on fees for Scotland is available at http://www.isdscotland.org/Health-Topics/Dental-Care/General-Dental-Service/fees-paid-to-dentists.asp. Dental costs for Scotland comprise Hospital, Community and Family Health Services (GDS) costs; these are contained in the costs book and are available at: http://www.isdscotland.org/Health-Topics/Finance/Costbook/Dental.asp Information on the net cost to each NHS Board of providing General Dental Services to their local population is available in the cost book R390 see: http://www.isdscotland.org/Health-Topics/Finance/Costs/.

The cost of GDS in Wales is available in the Health Statistics Wales annual report, additional information, such as patient charges, is available through the StatsWales site through the GDS section see:

https://statswales.wales.gov.uk/Catalogue/Health-and-Social-Care/General-Dental-Services.

Table 2.11. Cost of General Medical Services (GMS), General Pharmaceutical Services (GPS), General Dental Services (GDS) and General Ophthalmic Services (GOS) per capita, UK, 1990/91 - 2010/11

Year	England	Wales	Scotland	Northern Ireland	UK	England	Wales	Scotland	Northern Ireland	UK
	GMS expenditure per capita[1] (£ cash)					GPS expenditure per capita[2] (£ cash)				
1990/91	41	41	44	37	41	56	68	59	68	57
1995/96	56	57	61	51	57	87	105	93	120	89
2000/01	76	74	80	63	76	122	157	144	165	127
2001/02	79	78	85	66	79	133	169	160	179	139
2002/03	82	82	92	76	83	146	186	178	193	152
2003/04	93	92	103	90	93	159	199	192	213	165
2004/05	139	132	124	107	136	166	191	197	223	172
2005/06	153	142	137	123	150	166	196	201	226	172
2006/07	153	145	137	124	150	174	203	207	234	180
2007/08	154	147	137	123	151	175	208	210	241	182
2008/09	154	149	135	132	152	193	214	216	250	198
2009/10	160	152	140	133	157	191	216	221	262	197
2010/11	159	152	141	130	157	196	220	223	272	202
	GDS expenditure per capita[3] (£ cash)					GOS expenditure per capita (£ cash)				
1990/91	22	20	20	22	22	2.3	2.7	2.7	2.6	2.4
1995/96	27	24	27	30	27	4.6	5.5	5.1	5.2	4.7
2000/01	32	31	32	37	32	5.9	7.2	6.5	7.1	6.1
2001/02	34	33	36	38	34	6.1	7.5	6.7	7.4	6.3
2002/03	35	34	39	39	36	6.1	7.4	6.9	7.9	6.3
2003/04	36	35	39	39	37	6.4	7.5	7.1	8.2	6.6
2004/05	39	36	43	39	39	6.8	7.8	7.9	8.4	7.0
2005/06	44	37	47	40	43	7.1	8.0	9.0	9.2	7.4
2006/07	44	46	54	37	44	7.5	8.1	13.0	9.3	8.0
2007/08	47	50	57	39	47	7.9	8.7	15.5	9.6	8.6
2008/09	50	53	61	40	51	8.4	9.0	16.4	10.4	9.1
2009/10	51	51	70	41	52	9.1	10.0	18.0	11.0	9.9
2010/11	54	54	71	45	55	9.1	9.8	17.7	11.0	9.9

Notes:
All figures include salaries, fees, allowances, superannuation, directly reimbursed expenses (e.g. rent and rates) and other expenses in financial years ending 31st March.
In 2006/07, the allocation to PCTs for GMS services in England was not increased and the Gross Investment Guarantee ceased to apply.
1Figures from 2004/05 for England based on new GMS contract figures.
2 Prior to 2005/06 figures for gross Family Health Services expenditure on the GPS were directly available for England from the Departmental Report (DH), after 2005/06 this data was no longer published in the same form.
Figures from 2005/06 onwards for England relate to expenditure for the Community Pharmacy Contractual Framework, which was introduced in April 2005, and the FHS drugs bill.
3 All figures include charges paid by patients.
The expenditure record for GDS for 2005/06 was enhanced by an accounting adjustment to increase the estimate of GDS creditor payments outstanding at the year end (see DH Departmental report).

Sources:
The Government's Expenditure Plans (DH).
Health and Personal Social Services Statistics for England (DH).
Department of Health Departmental Report (DH).
Scottish Health Statistics (ISD).
Health Statistics Wales (NAW).
Annual Abstract of Statistics (ONS).
NHS Pay Modernisation (NAO).
Annual Statistical Report (HSCBSO).
Economic Trends (ONS).
Economic Data (HM Treasury).
2011Census, Population and Household Estimates for England and Wales (ONS).
2011Census (General Registrar Office for Scotland).
2011Census (Northern Ireland Statistics and Research Agency).

Office of Health Economics Research

NHS expenditure ***Key sources and information***

Reports prepared for Parliament – the '*Command papers*'- about public expenditure on health:

Department of Health. *Annual Report and Accounts*. Published online https://www.gov.uk/search?q=department+of+health+annual+report&tab=government-results

House of Commons Health Committee. *Public Expenditure on Health and Personal Social Services*. Published online with past issues published by TSO, London. This report contains formal replies from the Department of Health to an annual written public expenditure questionnaire (PEQ) from the House of Commons Health Select Committee on current issues including expenditure
http://www.parliament.uk/business/news/2008/12/public-expenditure-on-health/

HM Treasury reports including *Public Expenditure Statistical Analyses* and *Comprehensive Spending Review*
http://www.hm-treasury.gov.uk/pespub_index.htm

National Audit Office (NAO) *Healthcare across the UK: A comparison of the NHS in England, Scotland, Wales and Northern Ireland*
http://www.nao.org.uk/report/healthcare-across-the-uk-a-comparison-of-the-nhs-in-england-scotland-wales-and-northern-ireland/

Summarised accounts of NHS organisations: individual NHS organisations such as Strategic Health Authorities, PCTs and NHS Trusts in England and similar bodies in Wales, Scotland and Northern Ireland are required to prepare annual accounts under Section 98 of the NHS Act 1977. In England and Wales the accounts are audited by auditors appointed by the Audit Commission. Similar arrangements exist in Northern Ireland and Scotland.

Comptroller and Auditor General. *NHS Summarised Accounts for England*. London: published annually online with past issues published by TSO, London. http://www.official-documents.gov.uk/document/hc1012/hc12/1297/1297.asp

Auditor General for Northern Ireland. *NHS Summarised Accounts for Northern Ireland.* Belfast: TSO; published annually.
Auditor General for Scotland. *NHS Summarised Accounts for Scotland*. Edinburgh: TSO; published annually.
Auditor General for Wales. *NHS Summarised Accounts for Wales*. Cardiff: published annually online with past issues published by TSO, London

http://www.assemblywales.org/bus-home/bus-business-fourth-assembly-laid-docs/gen-ld9414-e.pdf?langoption=3&ttl=GEN-LD9414%20-%20NHS%20Wales%20Summarised%20Accounts%202012-13

Other publications/sources:

Office for National Statistics (ONS). *Expenditure on Health in the UK: 2011*
http://www.ons.gov.uk/ons/dcp171766_308689.pdf

NHSScotland. *Cost Book*. Published annually
http://www.isdscotland.org/Health-Topics/Finance/Costs/

Department of Health. *PCT Revenue Resource Limits Exposition Book*
https://www.gov.uk/government/publications/exposition-book-2011-2012

National Assembly for Wales, StatsWales. *NHS Expenditure by Budget Category*

https://statswales.wales.gov.uk/Catalogue/Health-and-Social-Care/Health-Finance/NHS-Programme-Budget/NHSExpenditure-by-BudgetCategory-Year

Private health care expenditure ***Selected key facts and trends***

- **In 2011 private health care expenditure rose above £19bn, of which approximately £11bn was on private medical insurance and treatment and £8bn on the purchase of private medical products**
- **In 2010 there were 3.2million subscribers to private medical insurance**

2.2.15 Private health care expenditure

Although every UK citizen is entitled to receive NHS health care services that are, for the most part, free at the point of delivery, for various reasons (such as shorter waits, greater convenience and access to a specific consultant) a significant minority choose also to pay for some of their own non-emergency health care. Private health care expenditure is that part of consumer spending which includes expenditure on subscriptions to private medical insurance (PMI), out of pocket payments for private hospital care, consultations with family doctors not covered by health insurance, payments for private beds in NHS hospitals, private dental treatment, over-the-counter medicines and purchases of other medical devices and therapeutic equipment such as prescription spectacles, contact lenses and hearing aids. Spending on private medical insurance was an estimated £11.3 billion in the UK in 2011, and expenditure on private medical products reached almost £8bn. This information is provided per household in Table 2.12 and contrasted with NHS expenditure. As a percentage of total consumer spending, private health care expenditure has remained relatively constant in recent years at around 2 per cent.

Among the major users of private health care are subscribers to provident schemes and other commercial insurance organisations that make limited payments for private acute hospital treatment in return for annual subscriptions. The number of subscribers is shown in Table 2.13.

Table 2.12. Private health care and gross NHS expenditure per household, UK, 1973 - 2011

Year	Total private health care expenditure [2] (£m cash)	Expenditure per household (£ cash)			Index[1] of real expenditure per household 1973 = 100		
		Private health care[3]	Private medical products[4]	NHS[5]	Private health care[3]	Private medical products[4]	NHS[5]
1973	344	5	12	148	100	100	100
1975	448	7	16	261	92	90	121
1980	1,064	17	35	550	117	98	128
1985	2,098	34	63	799	167	130	134
1986	2,392	39	71	858	184	142	139
1987	2,706	49	75	931	218	142	144
1988	3,083	56	83	1,066	238	148	156
1989	3,434	60	93	1,145	238	155	156
1990	3,877	72	99	1,254	265	155	160
1991	4,636	86	117	1,402	298	170	167
1992	5,171	87	137	1,538	294	194	178
1993	5,486	92	144	1,606	303	200	182
1994	6,185	102	163	1,702	332	222	190
1995	6,452	108	167	1,782	341	222	194
1996	7,244	129	178	1,840	394	229	195
1997	7,992	149	187	1,922	448	237	199
1998	8,693	169	194	2,011	498	240	204
1999	9,513	181	214	2,166	521	259	216
2000	10,832	209	236	2,345	600	284	232
2001	11,785	236	244	2,561	665	290	249
2002	13,173	269	263	2,914	742	305	277
2003	14,080	293	272	3,222	787	308	299
2004	14,898	322	271	3,491	845	299	316
2005	15,624	348	268	3,806	891	289	336
2006	16,731	368	286	4,034	916	300	346
2007	17,439	378	298	4,345	920	305	365
2008	17,978	391	299	4,569	923	298	372
2009	18,545	398	307	4,815	927	302	387
2010	18,823	406	302	4,914	921	289	385
2011	19,514	422	305	4,951	935	285	379

Notes:
1At constant prices, as adjusted by the GDP deflator at market prices.
2 Figures relate to spending on Private Medical Insurance (PMI) and private medical products
3 Consumer expenditure on Private Medical Insurance (PMI) and private medical treatment. 2011data for General Practice and longer term social care of mentally ill people have been estimated.
4 Figures relate to consumer expenditure on medical goods including medicines not purchased on NHS prescription and expenditure on therapeutic equipment such as spectacles, contact lenses and hearing aids.
5 Including charges paid by patients.
GDP = Gross Domestic Product.

Sources:
Annual Abstract of Statistics (ONS).
The Government's Expenditure Plans (DH).
Lee Donaldson Associates (for data from 1973-1984).
Laing's Healthcare Market Review (Laing and Buisson).
Regional Trends (ONS).
Northern Ireland Statistics and Research Agency (NISRA).
Economic Trends (ONS).
UK dentistry market research report (MBD).

Office of Health Economics Research

Table 2.13. Number of private medical insurance subscribers, people covered and payments, UK, 1955 - 2010

United Kingdom

Year	Subscribers[1] 000s	People insured[1] 000s	Sub-scriptions paid £m	Benefits paid £m	People insured as % of UK population	Subscriptions paid as % of total private health care spending
1955	274	585	2	2	1.2	-
1960	467	995	5	4	1.9	-
1965	680	1,445	9	8	2.7	-
1970	930	1,982	20	17	3.6	-
1975	1,087	2,315	55	46	4.1	41
1976	1,057	2,251	71	53	4.0	43
1977	1,057	2,254	91	65	4.0	44
1978	1,118	2,388	105	68	4.3	46
1979	1,292	2,765	122	84	5.0	46
1980	1,647	3,577	154	128	6.4	43
1981	1,863	4,063	205	195	7.3	44
1982	1,917	4,182	286	245	7.5	48
1983	1,954	4,254	355	291	7.6	53
1984	2,010	4,367	413	341	7.8	66
Laing and Buisson survey estimates for all insurers						
1985	2,380	5,057	520	456	8.9	70
1986	2,428	4,951	609	513	8.7	72
1987	2,590	5,283	711	581	9.3	67
1988	2,809	5,918	819	689	10.4	66
1989	3,083	6,254	951	815	11.0	70
1990	3,300	6,692	1,110	984	11.7	68
1991	3,300	6,651	1,284	1,128	11.6	65
1992	3,366	6,670	1,464	1,202	11.6	73
1993	3,392	6,351	1,551	1,226	11.0	73
1994	3,390	6,613	1,617	1,295	11.4	68
1995	3,430	6,673	1,718	1,388	11.5	68
1996	3,484	6,772	1,873	1,502	11.6	62
1997	3,486	6,679	2,000	1,586	11.5	56
1998	3,585	6,824	2,072	1,704	11.7	51
1999	3,560	6,536	2,223	1,834	11.1	51
2000	3,664	6,881	2,446	1,930	11.7	48
2001	3,700	6,682	2,645	2,052	11.3	46
2002	3,682	6,677	2,844	2,177	11.3	43
2003	3,641	6,579	2,960	2,259	11.0	41
2004	3,546	6,417	3,005	2,327	10.7	37
2005	3,511	6,359	3,105	2,401	10.6	35
2006	3,574	6,305	3,236	2,499	10.4	34
2007	3,586	6,384	3,378	2,591	10.5	35
2008	3,607	6,366	3,647	2,803	10.4	36
2009	3,437	-	3,586	2,823	-	34
2010	3,238	-	3,643	2,822	-	34

Notes: The apparent decreases in some quantities in 1986 and 1993 are due to the revision of BUPA's multiplier which converts the number of subscribers to the estimated number of people covered.
- Not available. Only available direct from Laing and Buisson.
Self insured TPA (Third-Party Administrator) business is not included.
1Figures relate to 31st December.

Sources: Lee Donaldson Associates (for data from 1955-84).
Laing's Healthcare Market Review (Laing and Buisson, for data from 1985 onwards).

Office of Health Economics Research

Private health care expenditure ***Key sources and information***

Laing and Buisson. *Laing's Healthcare Market Review*. London: Laing and Buisson; published annually.

Laing's Healthcare Market Review provides information on private hospital care activity and expenditure in medical and surgical treatment, outpatient attendances and fees paid to consultants for private patient treatment. The main sources of information for this Review are audited accounts and NHS financial returns:

http://www.laingbuisson.co.uk/MarketReports/MarketReportsHome/tabid/570/ProductID/550/Default.aspx

ONS. *Consumer Trends.* published quarterly online with past issues published by TSO, London.

Consumer Trends is a quarterly publication by the ONS which contains details on Household Final Consumption Expenditure for the UK. Most of the data are derived from the National Expenditure and Food Surveys, which have replaced the Family Expenditure Survey and the National Food Survey since 2001. *Consumer Trends* provides annual estimates for a range of household expenditures on goods and services, including out-of-pocket expenditure on medical goods. This out-of-pocket expenditure covers pharmaceutical products (over-the-counter drugs), other medical products (bandages, dressings etc.), therapeutic equipment (prescription spectacles, contact lenses, hearing aids etc.), outpatient medical services (private consultations), dental services, paramedic services and hospital services (private treatment):

http://www.ons.gov.uk/ons/rel/consumer-trends/consumer-trends/q1-2013/tsd-q1-2013-consumer-trends-dataset.html

3 Hospital activity and workforce

Hospital activity and workforce *Selected key facts and trends*

- **Over 1.2 million people are employed in NHS hospital and community services in the UK**
- **In 2011/12 there were just under 21 million inpatient and day case admissions funded by the NHS in the UK**

3.1 NHS hospital services statistics

NHS Foundation Trusts and NHS Trusts are the main providers of NHS funded hospital and other specialist health services in the UK. The services range from acute medical and surgical care to mental and community health care. Hospital and community health services consume around half of all NHS resources and employ nearly 1.3 million people. This section begins with a description of how health services data are collected. Information on the NHS workforce is covered in the next sub-section, followed by a detailed account of NHS hospital activity.

3.1.1 Health services information collection

Hospital data collection in the NHS is largely a by-product of hospital administration systems. These data are mainly used for performance management, monitoring the use of public resources and policy formulation purposes. In the NHS a substantial amount of information is collected through statutory aggregate returns submitted monthly, quarterly or annually by NHS organisations and centrally managed for processing and dissemination.

Since the creation of the NHS in 1948, there have been a number of changes in the way NHS information is collected. This can result in discontinuities in data series. Changes in government and NHS reforms often brought further changes in NHS information collection, such as fast track performance monitoring returns covering referral to treatment waiting times.

The four constituent countries of the UK have developed their own separate information strategies, causing more disparity in data definition, method of collection and dissemination of health care information.

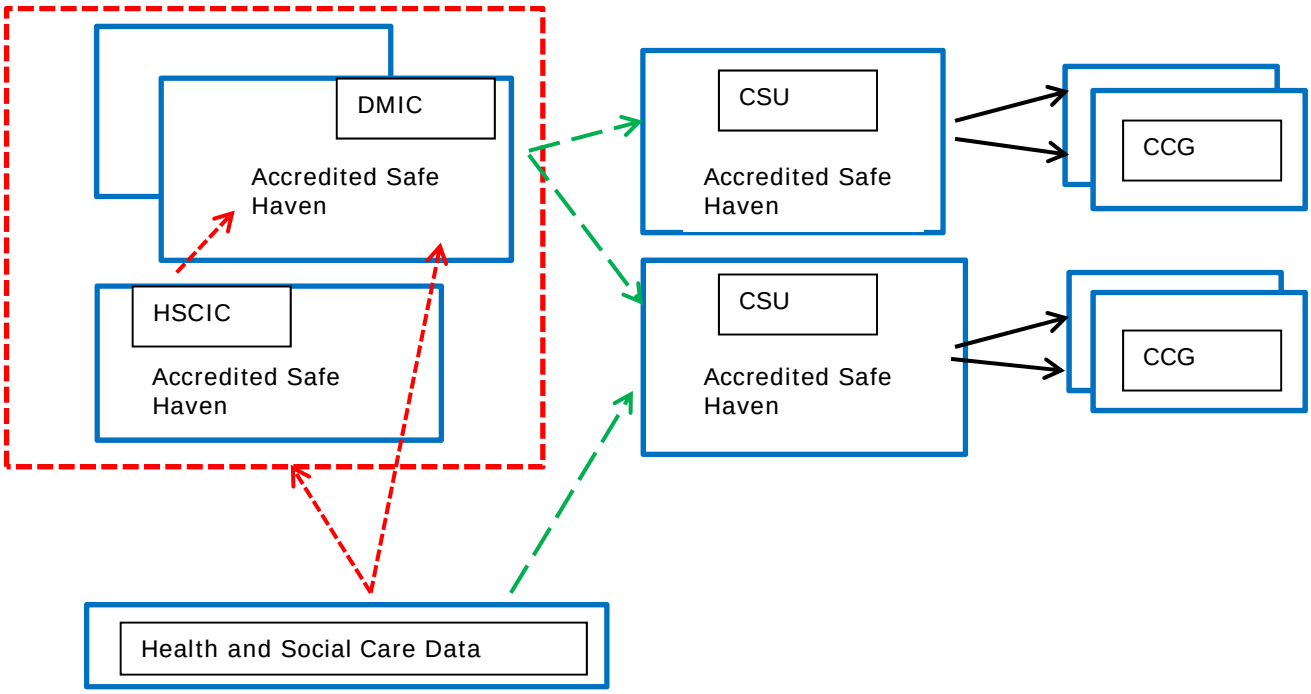
The Health and Social Care Information Centre (HSCIC), a special health authority established on 1st April 2005, now has the responsibility for the coordination of the development, collection and provision of health and social care information in England (http://www.hscic.gov.uk/). Its function includes supporting the delivery of IT infrastructure, information systems and standards to ensure information flows efficiently and securely across the health and social care system to improve patient outcomes. Health

statistics in Northern Ireland are handled by the Information and Analysis Directorate (IAD) within the Department of Health, Social Services and Public Safety. The Information and Statistics Division (ISD) within the NHS in Scotland is responsible for the collection, analysis and dissemination of information about health and health care for Scotland. The source of data for NHS Wales is statistical returns made to the Statistics Directorate within the National Assembly for Wales either directly or through Health Solutions Wales (and in some cases to the Department of Health in England) by Local Health Boards, Trusts and other NHS organisations in Wales.

An overview of the data collection and dissemination process in England is shown in Figure 3.1. The data for Central Statistical Returns in any hospital is taken from its Patient Administration System (PAS) which is fed by a number of systems within the hospital which may be manual or electronic. This data is then processed and output disseminated, see the 'Key sources and information' on page 90 for further information on where this information is published.

Since 1 April 2013 there have been significant changes to the information governance arrangements for commissioning data flows. The Health and Social Care Information Centre (HSCIC) has produced a manual that states that 'The Health and Social Care Act 2012 (HSCA) provides a model where the expectation is that personal confidential data[1] (PCD) will be managed centrally (for purposes other than direct care) in order to protect confidentiality'. Figure 3.1 shows how PCD will flow from health and care data providers into the HSCIC for national flows and into the HSCIC hosted DMIC for local data flows. (See http://www.england.nhs.uk/wp-content/uploads/2013/03/hscic-data.pdf.)

Figure 3.1. NHS mandatory and principal voluntary data flows in England



Key:
Flows with Personal Confidential Data (PCD)
Recorded-level flows not containing personal identifiers(e.g. pseudonymised, geocoded) AND some with minimal identifiers
Flows with no PCD (e.g. anonymised or summary).

Acronyms:
HSCIC – Health and Social Care Information Centre
DMIC – Data Management Integration Centres
CSU – Commissioning Support Unit
CCG – Clinical Commissioning Groups
Notes: The chart above covers mandatory and principal voluntary health and social care data flows in place from April 2013. In includes data flows other than those needed for direct care. Onward data flows to Local Authorities and NHS England Area Teams are not shown, but will need to be effectively anonymised or aggregated.

Source: Health & Social Care Data Flows: Information Governance - Preparing for Transition - What You Need to Know (HSCIC) at: http://www.england.nhs.uk/wp-content/uploads/2013/03/hscic-data.pdf

Hospital workforce ***Selected key facts and trends***

- **In 2011 there were over 121,000 medical and dental staff and over 466,000 nursing and midwifery staff working in hospital and community health services in the UK**
- **In addition, there were over 284,000, 159,000, and 197,000, administration and clerical, professional and technical, and domestic ancillary staff respectively working in hospital and community health services in the UK in 2011**

3.2. NHS workforce statistics

Most of the people working for the NHS are directly employed by the NHS. There are three main groups of people providing services for the NHS:

- Employed by the NHS
  - Medical and dental staff for hospital and community health services (HCHS)
  - Non-medical staff for hospital and community health services
- Independent practitioners contracted to the NHS including GPs, dentists and pharmacists
- Staff in private or charitable sector organisations contracted to provide services for the NHS.

Each of the four countries of the UK uses a distinct but similar method for the collection of workforce statistics. Each year censuses are carried out by the Health and Social Care Information Centre in England and its counterparts in Northern Ireland, Scotland and Wales to collect workforce statistics about staff in post on a specified day (usually the 30th September) covering medical, dental and non-medical staff working in NHS hospital and community health services. The Health and Social Care Information Centre in England also publishes monthly workforce data for all HCHS staff groups (excluding primary care) using data from the Electronic Staff Record (ESR). The ESR is a payroll and human resources information system, which contains records for almost all NHS employed staff (apart from those employed in primary care) in England. This data is still on a provisional basis http://www.ic.nhs.uk/pubs/provisionalmonthlyhchsworkforce, and is not directly comparable to earlier workforce data as it is not validated in the same way, or subject to the same level of scrutiny as workforce census data, for further information see: http://www.hscic.gov.uk/media/9354/Technical-paper-differences-with-the-census/pdf/Technical_paper_Differences_with_the_Census_1010_v2.pdf.

For independent practitioners such as GPs dentists and pharmacists, details can be found in the section of this Guide on Family Health Services. Table

3.1 shows the workforce numbers, in full-time equivalents (FTE), for the UK in broad groupings.

3.2.1 NHS workforce classification

The classification of medical, dental and non-medical staff in Northern Ireland, Scotland, and Wales is similar to that in England. However, there were major changes in England in 2003 in the way NHS staff statistics are presented. Since 2003 the NHS workforce has been grouped into professional staff and supporting staff: Professionally qualified clinical, qualified nursing, midwifery and health visiting staff (comprising qualified therapeutic and technical staff, allied health professions, other qualified scientific, therapeutic and technical staff and qualified ambulance service staff); support to clinical staff (including support to doctors and nursing staff, support to scientific, therapeutic and technical staff and support to ambulance service staff); and NHS infrastructure support staff (including central functions, hotel, property and estates staff, managers and senior managers).

Table 3.1. Number of full-time equivalent staff employed in NHS hospitals and community services by category, UK, 1951 - 2011

30th September

Year	Medical and dental[1]	Nursing and midwifery[2]	Professional and technical[3]	Admin. and clerical[4]	Domestic ancillary[5]	Total[6]
1951	15,102	188,580	14,110	29,021	163,666	410,479
1955	16,870	206,567	19,404	33,421	157,917	434,179
1960	20,651	242,164	24,002	38,450	202,968	528,235
1965	23,860	290,338	32,720	47,872	218,191	612,981
1970	28,511	343,664	41,696	56,877	229,313	700,061
1975	35,899	440,981	57,011	110,429	235,209	879,529
1980	41,760	467,500	74,558	126,124	258,368	968,310
1985	47,308	504,000	91,471	137,982	221,334	1,002,095
1990	55,838	507,100	103,097	164,370	156,995	987,400
1995	64,466	421,983	118,415	193,210	123,289	921,362
1996	67,093	421,521	121,933	191,615	127,451	929,613
1997	71,180	419,124	124,008	191,652	123,571	929,535
1998	73,056	420,903	127,604	193,396	123,758	938,717
1999	74,580	427,994	132,344	199,184	123,372	957,474
2000	76,591	436,539	136,344	206,375	123,529	979,378
2001	78,932	430,153	142,917	218,318	128,722	999,043
2002	84,137	446,462	151,667	234,319	132,851	1,049,435
2003	88,574	460,843	160,625	251,969	136,059	1,098,070
2004	95,801	471,056	169,971	267,385	139,103	1,143,316
2005	100,357	480,860	177,104	280,505	144,396	1,183,222
2006	105,293	478,529	180,062	274,390	139,645	1,177,918
2007	107,292	471,365	176,125	265,310	146,084	1,166,174
2008	111,936	474,601	181,388	275,259	153,958	1,197,142
2009	117,596	481,573	190,313	302,100	161,705	1,253,286
2010	118,262	475,940	158,726	299,760	199,220	1,251,909
2011	120,723	466,772	159,097	284,767	197,682	1,229,040

Notes: All figures are based on aggregates of England, Wales, Scotland and Northern Ireland and may be based on different definitions and timing of coverage. The totals include staff working in the personal social services in Northern Ireland.
1Medical and dental staff include community staff from 1990 onwards.
2 Full-time and part-time, including Community Health Services staff in England. The exclusion of nurses on Project 2000 training courses produced an apparent reduction in numbers since 1990.
3 Excluding works, maintenance, ancillary, ambulance and transport staff and part-time staff in Scotland.
4 Including general and senior managers.
5 Including Health care assistants, support staff and estates and maintanance staff.
6 These are totals of the columns shown. As some categories of employment are not shown, these totals are underestimates of the total NHS hospital workforce.

Sources: NHS Hospital, Public Health Medicine and Community Health Service Medical and Dental Workforce Census (HSCIC). Copyright © 2013. Re-used with the permission of The Health and Social Care Information Centre. All rights reserved.
NHS Hospital and Community Health Services non-medical staff in England (HSCIC). Copyright © 2013. Re-used with the permission of The Health and Social Care Information Centre. All rights reserved.
Health Statistics Wales (NAW).
Scottish Health Statistics (ISD).
Annual Abstract of Statistics (ONS).

3.2.2 HCHS medical and dental staff

The annual workforce census collects information on qualified medical and dental staff holding full time or part time permanent appointments that involve clinical work in NHS hospitals, public health and community health services. Senior medical staffs at university medical schools that hold honorary, unpaid contracts with NHS Foundation Trusts or NHS Trusts are also included. Excluded from the census are agency staff and locum appointments. Information collected includes demographic details such as age, sex and ethnic origin; appointment details on grading and clinical specialty; and country of qualification. To avoid double counting caused by multiple appointments, staff holding more than one appointment are counted only once using whichever appointment is the most appropriate. The higher staff per capita levels in Scotland and Northern Ireland compared to England and Wales are shown in Table 3.2.

Hospital doctors in training (junior doctors) work under the supervision of a consultant. They receive training and hold short-term contracts with NHS Foundation Trusts or NHS Trusts.

Junior doctors are graded according to the stage of training and qualifications achieved before becoming a consultant. A grading restructuring that took place in 1996 following the Calman Report (Department of Health, 1993) on future training for medical and dental specialties, resulted in the introduction of a new grade known as Specialist Registrar, which combined and replaced the previous Registrar and Senior Registrar grades. In 2008 a new grade of specialty doctor was created, with some other grades being closed to new applicants; see Table 3.3 for further details. Compared to 1999 there have been major changes in the numbers of FTE staff within selected groups; for example in 2012 there were over 13,000 more consultants than in 2002, see Table 3.3.

In general, the medical and dental grades are:

- House Officer (pre-registration)
- Senior House Officer
- Specialist Registrar – the final stage of training
- Staff grade – for those who do not wish, or are not able, to become a consultant
- Consultant
- Specialty doctor - senior, career grade doctors working in hospitals.

Details can be found on the following website about ‘specialty training’:

http://www.mmc.nhs.uk/

and information on careers within the NHS can be found at:

http://www.nhscareers.nhs.uk/media/1695028/table-diagram.jpg.

Table 3.4 shows medical staff and consultant numbers across Great Britain by specialty for 2011. Calculations based on this data and population counts for the constituent countries show that the number of staff per capita is higher in Scotland than England for most specialties, although there may be some definitional differences between the countries.

Table 3.2. Medical and dental staff (full-time equivalents) employed in NHS hospitals, UK, 1951 - 2011

30th September

Year	Medical and dental staff[1]				Staff[1] (per 100,000 population)			
	England and Wales[2]	Scotland	Northern Ireland[3]	United Kingdom	England and Wales[2]	Scotland	Northern Ireland[3]	United Kingdom
1951	13,639	971	492	15,102	31	19	36	30
1955	15,028	1,253	589	16,870	34	25	42	33
1960	17,045	2,883	723	20,651	37	56	51	39
1965	19,483	3,524	853	23,860	41	68	58	44
1970	23,299	4,134	1,078	28,511	48	79	71	51
1975	29,337	4,680	1,882	35,899	59	89	124	64
1980	34,298	5,163	2,299	41,760	69	99	150	74
1985	39,278	5,588	2,442	47,308	79	109	156	84
1990	47,322	5,940	2,576	55,838	94	117	161	98
1995	55,078	6,642	2,745	64,466	107	130	166	111
1996	56,873	7,457	2,763	67,093	111	146	166	115
1997	60,629	7,771	2,781	71,180	118	153	166	122
1998	62,424	7,831	2,801	73,056	121	154	167	125
1999	64,121	7,986	2,473	74,580	123	157	147	127
2000	65,990	8,032	2,570	76,591	127	159	153	130
2001	67,962	8,333	2,637	78,932	130	165	156	134
2002	72,422	8,931	2,783	84,137	138	177	164	142
2003	76,468	9,143	2,963	88,574	145	181	174	149
2004	83,283	9,424	3,093	95,801	157	186	181	160
2005	87,427	9,643	3,287	100,357	164	189	191	167
2006	91,825	10,026	3,442	105,293	171	196	198	174
2007	93,053	10,682	3,557	107,292	172	208	202	176
2008	97,157	11,184	3,596	111,936	178	216	203	182
2009	102,520	11,471	3,605	117,596	187	221	202	190
2010	103,290	11,305	3,667	118,262	187	216	204	190
2011	105,207	11,824	3,692	120,723	188	223	204	191

Notes: Figures from 1990 onwards for England and Wales and from 1996 for Scotland include community staff.
1 All figures relate to full-time equivalents.
2 In England figures include principals in general practice who are working in hospitals or medical and dental officers to whom paragraph 94 and 106-107 of the Terms and Conditions of Service apply.
3 From 1974 onwards figures include health and social services staff and relate to 31st December. From 1999 onwards figures have been revised to exclude bank staff, staff on career breaks and home helps.

Sources: Health and Personal Social Services Statistics for England (DH).
Health Statistics Wales (NAW).
Scottish Health Statistics (ISD).
Annual Abstract of Statistics (ONS).
NHS Hospital, Public Health Medicine and Community Health Service Medical and Dental Workforce Census (HSCIC). Copyright © 2013. Re-used with the permission of The Health and Social Care Information Centre. All rights reserved.
Workforce Key Facts Bulletins (DHSSPSNI).
Population Estimates (ONS).
2011 Census, Population and Household Estimates for England and Wales (ONS).
2011 Census (General Registrar Office for Scotland).
2011 Census (Northern Ireland Statistics and Research Agency).

Table 3.3. Number of hospital and community medical and dental staff (full-time equivalents), by grade, England, 2000 - 2012

30th September

	Year							
	2000	**2002**	**2007[1]**	**2008**	**2009**	**2010**	**2011**	**2012**
Total	**62,094**	**68,260**	**87,533**	**91,586**	**96,598**	**97,636**	**99,394**	**100,899**
of which medical staff	57,941	64,170	85,749	89,544	94,430	94,566	96,310	97,756
Consultant[2]	22,186	24,756	31,430	32,679	34,654	35,781	36,965	38,197
Associate specialist	1,381	1,578	2,650	2,803	3,135	3,343	3,286	3,123
Specialty doctor[3]	-	-	-	361	2,691	4,162	4,889	5,349
Staff grade	3,855	4,799	5,438	5,292	2,915	1,213	702	491
Registrar group[4]	12,199	13,031	30,175	34,272	36,700	37,527	38,134	38,489
Senior house officer[5]	15,322	16,912	10,672	8,001	8,049	7,600	7,578	7,500
House officer[6]	3,683	3,989	5,203	6,025	6,467	6,207	6,234	6,229
Other grades[7]	3,468	3,194	1,964	2,153	1,987	1,803	1,606	1,522

Percentage distribution[8] of hospital medical and dental staff, England

30th September

	Year							
	2000	**2002**	**2007[1]**	**2008**	**2009**	**2010**	**2011**	**2012**
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**
of which medical staff	93	94	98	98	98	97	97	97
Consultant[2]	36	36	36	36	36	37	37	38
Associate specialist	2	2	3	3	3	3	3	3
Specialty doctor[3]	-	-	-	0	3	4	5	5
Staff grade	6	7	6	6	3	1	1	0
Registrar group[4]	20	19	34	37	38	38	38	38
Senior house officer[5]	25	25	12	9	8	8	8	7
House officer[6]	6	6	6	7	7	6	6	6
Other grades[7]	6	5	2	2	2	2	2	2

Notes: Figures relate to NHS doctors and dentists working outside general practice.
Percentages less than 0.5% are displayed as 0.
1Since 2007 the Modernising Medical Careers programme has seen the introduction of new training grades, changes in categorisation and re-organisation of training staff. This particularly affects the Registrar Group and Senior House Officers.
2 Including Directors of Public Health.
3 Negotiations between NHS Employers and the British Medical Association's Staff and Associate Specialist Committee resulted in the creation of the new specialty doctor grade from April 2008. From this date, the grades of staff grade, clinical assistant, hospital practitioner and the old contract of associate specialist were closed to new applicants. Existing eligible staff within the grades listed above and senior clinical medical officers and clinical medical officers (both of which are within the 'other' grades) had the opportunity to apply to be re-graded to the associate specialtist or specialty doctor grades. The result of these new contracts is seen from 2009 onwards with the decline in staff grade and growth of the specialty doctor grade.
4 This group comprises doctors in the specialist registrar, senior registrar and registrar grades.
5 From 2006 onwards this group includes Foundation House Officer 2 (FHO2).
6 From 2006 onwards this group includes Foundation House Officer 1(FHO1).
7 This includes hospital practitioner, clinical assistant and other staff. From 2010 this includes staff in training of unknown grade.
8 Figures may not sum to 100 due to rounding.

Source: NHS Hospital, Public Health Medicine and Community Health Service Medical and Dental Workforce Census (HSCIC).

Table 3.4. Full-time equivalent hospital and community medical staff and consultants by selected specialty, by country, Great Britain, 2011

30th September

	Medical Staff			Consultants		
	England	Wales	Scotland	England	Wales	Scotland
All specialties	**96,310**	**5,627**	**11,237**	**36,301**	**2,172**	**4,329**
Accident and emergency	5,284	274	476	1,100	54	134
Anaesthetics	11,896	725	1,151	5,680	347	642
Cardiology	2,537	137	182	947	52	78
Cardio-thoracic surgery	847	38	72	306	13	47
Child and adolescent psychiatry	1,044	65	73	631	39	60
Dermatology	863	62	139	470	32	61
Diabetes and endocrinology	1,238	69	92	483	31	60
Forensic psychiatry	590	28	51	292	14	41
Gastroenterology	2,016	82	149	801	43	89
General medicine	5,828	478	1,117	839	72	107
General surgery	6,839	450	926	1,859	126	249
Genito-urinary medicine	812	21	22	326	11	14
Geriatric medicine	3,197	174	435	947	67	142
Haematology	1,384	69	153	658	38	81
Histopathology	1,651	55	99	1,199	44	73
Learning disabilities	451	31	141	248	21	109
Medical microbiology and virology	701	44	86	479	37	57
Medical oncology	764	33	57	298	20	10
Mental illness (General psychiatry)	5,655	297	727	2,198	102	278
Nephrology (Renal medicine)	1,135	67	131	416	23	60
Neurology	1,096	42	89	544	18	58
Neurosurgery	676	26	72	214	10	25
Obstetrics and gynaecology	5,529	336	639	1,782	106	208
Occupational health	126	9	32	76	6	22
Old age psychiatry	1,221	65	105	594	29	47
Ophthalmology	2,426	135	214	959	58	102
Otolaryngology	1,605	115	174	552	37	76
Paediatrics	7,390	448	724	2,386	147	220
Palliative medicine	529	53	49	221	25	18
Plastic surgery	1,014	32	101	344	12	36
Radiology	3,481	191	399	2,354	147	284
Radiotherapy (clinical oncology)	1,075	49	155	505	22	81
Rheumatology	908	41	77	483	23	40
Thoracic medicine (Respiratory medicine)	1,914	92	143	657	40	82
Traumatic and orthopaedic surgery	5,588	363	538	1,961	134	219
Urology	1,652	97	134	625	37	68

Notes: All figures relate to full-time equivalents and include principals in general practice who are working in hospitals or medical officers to whom paragraph 94 and 106-107 of the Terms and Conditions of Service apply.
Anaesthetics for England includes intensive care.
Data for Wales relate to hospital staff only.
Due to differences in definitions figures may not be comparable across countries.

Sources: Health and Personal Social Services Statistics for England (DH).
NHS Hospital, Public Health Medicine and Community Health Service Medical and Dental Workforce Census (HSCIC). Copyright © 2013. Re-used with the permission of The Health and Social Care Information Centre. All rights reserved.
Health Statistics Wales (NAW).
Scottish Health Statistics (ISD).

Office of Health Economics Research

Methods ***Counting the workforce***

A sizeable number of NHS employees work part-time and some staff hold multiple appointments with more than one contract with the NHS. As such it is important to recognise the measure of workforce being used. In the NHS the number of Full-Time Equivalents (FTEs), also called whole-time equivalents (WTEs), is the number of hours contracted to work in a grade as a proportion of the full time contract hours of that grade. Statistical publications on NHS workforce are based either on head counts or FTE or both. WTE/FTE is a measure of the work of staff, including part time staff based on hours worked. For example, one part-timer working three days per week is equivalent to 0.6 (i.e. 3/5) WTE. The use of head counts to consider NHS workforce could be misleading if the aim is to consider the level of staffing provision. FTEs may be more useful to reflect the size of workforce than head counts. However, the use of FTE has some methodological problems. It is often useful to consider both measures, or if not to pay particular attention to factors that may have affected the measure when considering trends over time or making cross country comparisons. For instance, the change in nursing staff contract hours from 40 to 37.5 hours in the 1980s means that there is a break in the time-series using FTE as a measurement of nursing workforce. The change in hours for doctors in training (junior doctors) as a result of the European Working Time Directive (2009) has also had significant effect on medical workforce statistics. For details of the European Working Time Directive see:
http://www.nhsemployers.org/PlanningYourWorkforce/MedicalWorkforce/EWTD/Pages/EWTD.aspx

3.2.3 HCHS non-medical staff

Non-medical staff employed by the HCHS includes those working in NHS Foundation Trusts, NHS Trusts, Primary Care Trusts (PCTs), Strategic Health Authorities (SHAs) and Special Health Authorities. According to the occupational coding system introduced in 1995, HCHS non-medical staff can be grouped into:

- Nursing, midwifery and health visiting staff
- Scientific, therapeutic and technical (ST&T) staff
- Management and support staff.

Based on the professional qualifications attained, the first two groups are further classified into qualified, unqualified (assistant) and those in training but on the NHS payroll. Two points are worth noting. Firstly, since 1989, nurses in training (student nurses) have been excluded from the NHS workforce statistics as nurse education was moved from hospitals to universities with the introduction of Project 2000. Secondly, prior to 1994 non-medical NHS staff were classified according to pay scale. These re-classifications have brought some problems in making comparisons over

time. An additional group, nurse assistant practitioners, is included in the data from 2011.

Scientific, therapeutic and technical (ST&T) staff include those allied health professionals (AHP) working in areas such as chiropody, dietetics, occupational therapy or in speech and language therapy. Management and support staff include those working in the ambulance services and administrative staff. Further details on the 2011 workforce census are available at:

http://www.hscic.gov.uk/article/2021/Website-Search?productid=4889&q=workforce+2011&topics=13209&sort=Relevance&size=10&page=8&area=both#top

Table 3.5. NHS hospital and community nursing and midwifery staff[1], and per 100,000 population, UK, 1951 - 2011

30th September

	Nursing and midwifery staff[1] ('000s)				Staff[1] (per 100,000 population)			
Year	England and Wales[2]	Scotland[3]	Northern Ireland[4]	United Kingdom	England and Wales[2]	Scotland[3]	Northern Ireland[4]	United Kingdom
1951	162.0	22.0	4.6	188.6	370	431	336	375
1955	176.2	25.1	5.3	206.6	396	491	380	406
1960	206.3	29.4	6.4	242.1	451	568	451	462
1965	246.9	35.1	8.3	290.3	518	674	565	534
1970	290.4	43.1	10.2	343.7	594	827	669	618
1975	371.6	52.5	16.8	440.9	751	1,003	1,103	784
1980	394.4	53.3	19.8	467.5	795	1,026	1,292	830
1985	428.2	55.2	20.6	504.0	859	1,076	1,316	891
1990	430.0	56.2	20.9	507.1	850	1,106	1,310	886
1995	354.5	52.4	15.1	422.0	691	1,027	916	727
1996	354.6	51.9	15.0	421.5	690	1,019	901	725
1997	353.3	51.5	14.3	419.1	685	1,012	858	719
1998	355.4	51.1	14.5	420.9	687	1,006	862	720
1999	362.0	51.4	14.6	428.0	697	1,013	872	729
2000	370.3	51.3	14.9	436.5	710	1,013	886	741
2001	362.9	52.2	15.0	430.2	693	1,031	890	728
2002	377.4	53.2	15.8	446.5	718	1,052	933	753
2003	390.2	54.1	16.5	460.8	739	1,070	971	774
2004	399.5	54.5	17.1	471.1	753	1,074	998	787
2005	408.0	55.4	17.4	480.9	764	1,088	1,011	798
2006	404.4	56.8	17.4	478.5	753	1,110	997	790
2007	396.4	57.0	17.9	471.4	733	1,109	1,019	773
2008	399.1	57.7	17.7	474.6	733	1,117	998	773
2009	405.2	58.4	18.0	481.6	739	1,126	1,004	779
2010	400.4	57.9	17.7	475.9	725	1,108	983	764
2011	393.0	56.3	17.5	466.8	701	1,063	967	739

Notes:
1 Staff numbers are in full-time equivalents and include unqualified staff, unless specified otherwise.
2 From 1968 onwards, figures include community health services and hospital staff and from 1971 onwards they include headquarters, blood transfusion units and agency staff. Data from 2001 for England, no longer include bank staff. Data from 2011 for England include nursing assistant practitioners (see: http://www.nhsemployers.org/PlanningYourWorkforce/SupportWorkforce/developingyoursupportworkforce/Pages/DevelopingYourSupportWorkforce.aspx).
3 Figures relate to hospital and community nurses and midwives including unqualified nursing staff from 1994 onwards.
4 Figures include whole-time and part-time staff. From 1974 onwards, figures include personal social services staff. Figures from 2000 onwards exclude all home helps and all agency/bank staff. Prior to 1995 figures relate to headcount.

Sources:
Health and Personal Social Services Statistics for England (DH).
Health Statistics Wales (NAW).
Scottish Health Statistics (ISD).
Annual Abstract of Statistics (ONS).
Population Estimates (ONS).
Population Projections Database (GAD).
2011 Census, Population and Household Estimates for England and Wales (ONS).
2011 Census (General Registrar Office for Scotland).
2011 Census (Northern Ireland Statistics and Research Agency).

Hospital workforce ***Key sources and information***

England

The Health and Social Care Information Centre (HSCIC). Medical and Dental and Non-Medical Workforce numbers:
http://www.hscic.gov.uk/article/2021/Website-Search?productid=4889&q=workforce+2011&topics=13209&sort=Relevance&size=10&page=8&area=both#top

Earlier data available for England from: Department of Health. *Hospital, Public Health Medicine (PHM) and Community Health Service (CHS) Medical and Dental Workforce Statistics for England: Statistical Bulletin.*

Department of Health. *NHS Hospital and Community Health Services Non-medical Staff in England: Statistical Bulletin.*

Department of Health. *Staff in the NHS*. This annual DH publication using the new classification of NHS staff provides an overview of staff numbers within the NHS in England covering primary and secondary care, and including management.

ONS. *Annual Abstract of Statistics*. The Table entitled 'Health and personal social services workforce summary' contains details of medical, dental and non-medical NHS staffing in Great Britain in the last 10 years.

Reforms to workforce can be found through the following website:
http://www.nhsemployers.org/healthwhitepaper/Pages/HealthWhitePaper.asp

Northern Ireland

NHS workforce statistics based on the Northern Ireland HPSS Census are published on the internet at:
http://www.dhsspsni.gov.uk/stats-hsc

Scotland

ISD. *Scottish Health Statistics*: The section on 'Workforce Statistics', which comes under Information and Statistics on the ISD-online website, covers the whole workforce of the NHS in Scotland. The summary tables contain workforce analysis on all staff, medical and dental, GPs, General Dental Practitioners, nursing and midwifery and allied health professionals:
http://www.isdscotland.org/Health-Topics/Workforce/

Wales

Health Statistics Wales published by the Welsh Assembly includes a chapter on 'Staffing' with summary tables showing the NHS workforce in Wales.
http://wales.gov.uk/topics/statistics/headlines/health2012/1209272/?lang=en

HCHS activity *Selected* key *facts and trends*

- **The number of episodes of inpatient and day case care in NHS hospitals in the UK was over 20 million in 2011/12**
- **The number of day cases has increased in recent years, and stood at approximately 5.9 million in 2011/12 in the UK**
- **The number of hospital beds has decreased in recent decades. In 2010/11 there were approximately 186,000 available beds in the UK of which 85 per cent were occupied on average**

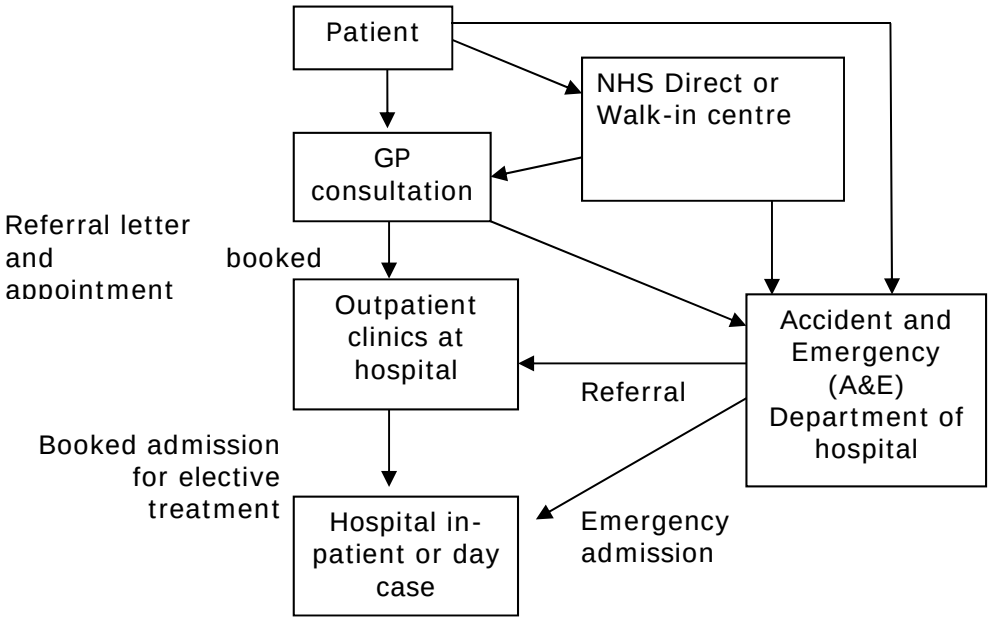
3.3 NHS Hospital and Community Health Services (HCHS) activity

In general the NHS in the UK provides four levels of health care:

- Primary care – the Family Health Services (FHS) as provided by GPs, dentists, opticians and pharmacists in the community
- Secondary care – specialised care provided by NHS Foundation Trusts and Trusts
- Tertiary care – through NHS Foundation Trusts and Trusts providing highly specialised care such as care for cancer patients or rehabilitation care for patients after stroke
- Community care – NHS Foundation Trusts and Trusts in partnership with local social services provide care to vulnerable groups such as the elderly or people with learning disabilities living in the community.

This section focuses on hospital activity otherwise known as secondary care. Figure 3.2 shows typical pathways to inpatient and day case admissions. The majority of hospital expenditure goes on inpatient care, with the remainder going on outpatients, accident and emergency and day care. Community health services include: patient care in the community; professional groups including therapists providing services such as chiropody, physiotherapy and psychotherapy; and immunisation and screening.

Figure 3.2 Patient pathways to inpatient or day case treatment



3.3.1 Hospital activity data

Statistics about hospital service activities for the UK are compiled from the following key sources:

- Patient level data sets such as Hospital Episode Statistics for England (see Section 3.3.3)

- For Northern Ireland, hospital activity for inpatients and day cases is collected through each hospital's Patient Administration System (PAS) and is recorded in the Hospital Inpatient System (HIS) (see: http://www.dhsspsni.gov.uk/index/stats_research/hospital-stats/inpatients.htm

- Information published by ISD on acute hospital care, derived from hospital administrative systems across Scotland http://www.isdscotland.org/Health-Topics/Hospital-Care/Inpatient-and-Day-Case-Activity/

- For Wales, inpatient and day case activity is available from the Patient Episode Database for Wales (PEDW), which is held at Health Solutions Wales. (See: http: //www.wales.nhs.uk/sitesplus/922/page/50308.).

The Department of Health (England) completed a major review of its data collections in 2004/05 with the aim of reducing the burden of information collection on NHS staff. This resulted in some changes, which are outlined

on the Health and Social Care Information Centre website. A list of hospital services central returns for England is available at:

http://www.datadictionary.nhs.uk/web_site_content/navigation/central_return_forms_menu.asp

3.3.2 Hospital admitted patient care (APC) patient-level information

Unlike aggregated returns, which are used mainly for administrative purposes, hospital patient-level activity databases allow further analyses to be carried out, including medical and surgical treatments received and outcomes such as death or re-admission. In England the Hospital Episode Statistics (HES) system and in Wales the Patient Episode Database (PEDW) contain extracts of patient-based records of all episodes of care in NHS hospitals including acute, maternity and mental health inpatient care. In Northern Ireland the Hospital Inpatient System (HIS) is very similar to HES in England. The Scottish Morbidity Record (SMR) system has long been developed to enable record linkage for more sophisticated analysis. The English HES system also now makes use of the NHS number (a unique identifier for each patient) to provide such linkage.

There are some issues with simply summing up the constituent countries to produce a UK figure. E.g. in 2011/12 there was a total of 20.7 million discharges and deaths/FCEs in the UK (see measures of hospital admitted patient care: issues and points of interest on page 94). However, care must be taken when interpreting this figure as it is the sum of activities within hospitals that are measured in different ways in the constituent counties, see Table 3.6 and the box below. In addition to issues across countries, there are some general points to note about measuring admitted patient care. These are also outlined in the box below.

Measures of hospital admitted patient care ***Issues and points of interest***

The metric used in measuring hospital inpatient activity has gone through a number of important changes in the past two decades, see http://www.isb.nhs.uk/documents/dscn/dscn2001/332001.pdf for example. In England the use of hospital 'discharge or death' as a measure of hospital activity was replaced by 'episode of care' in the mid 1980s under the recommendations of the Steering Group on Health Services Information (Körner's System). A patient admitted to hospital under the care of a consultant constitutes a consultant episode. The left-hand part of Figure 3.3 shows a hospital stay where a patient has been under the care of two consultants during the period from admission to hospital to discharge within a financial year. More recently there has been a shift towards 'spell' based data in England although HES data is still reported as FCEs and admissions.

Hospital Spell (sometimes known as a provider spell) is the period of care by a single Trust between admission and discharge (or death), e.g. provider spell 1 in Figure 3.3.

Finished Consultant Episode (FCE) is the episode of day case or inpatient care under one consultant. In the example in Figure 3.3, provider spell consists of two FCEs.

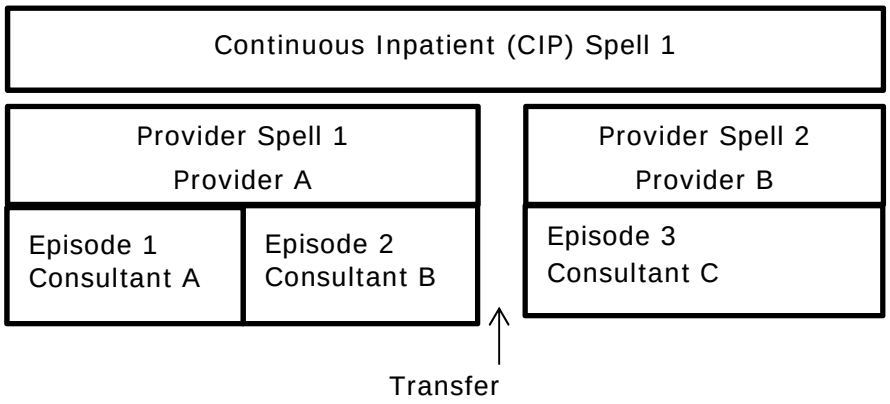
First Finished Consultant Episode (FFCE) is the first FCE within each spell, as used in the Chief Executive's Annual Report to the NHS in reporting hospital inpatient activity.

Continuous Inpatient Spell (CIP) is a continuous period of care within the NHS from admission to discharge, regardless of any transfers which may take place. It may involve one or more than one hospital provider, e.g. the total period in Figure 3.3.

Discharges and Deaths is the measure used to count NHS hospital activity in Northern Ireland, Scotland and Wales. However, what is classified as a discharge differs between countries. For example in Scotland an inpatient discharge marks the end of an inpatient episode and occurs when the patient is either: discharged to a location external to the NHS; transferred to another NHS inpatient or day case service; or dies. In Northern Ireland a discharge relates to an admission leaving hospital; as such, transfers between consultants/to another NHS inpatient or day case service within the same hospital do not count as a discharge. For Wales, discharges and deaths are based on hospital spells i.e. the total continuous stay of a patient in hospital, transfers between consultants within hospital are not classified as discharges.

It is important to recognise these differences when comparing the activity between the constituent countries in the UK and over time. In England, the majority of spells constitute a single episode; however, this is not the same for all diagnoses or admissions.

Figure 3.3. Continuous inpatient spell



In 1987/88, finished consultant episodes (FCEs) became the activity measure for hospital admitted patient care in England and the building block for the Hospital Episode Statistics (HES) system set up at the same time to replace the Hospital Activity Analysis (HAA) to capture all consultant episodes provided by NHS Trusts in England. In addition to being used for counting hospital activity, FCEs also became the contract currency for buying hospital care by commissioners such as Health Authorities (later Primary Care Trusts and now Clinical Commissioning Groups) from NHS Trusts on behalf of their residents. The use of FCE as a unit of contracting currency for commissioning hospital care was not without problems and controversies. The most serious problem is the so-called episode inflation caused by different interpretations of FCE. A hospital emergency admission to an observation ward before transferring to the care of the appropriate consultant, for instance, would create two FCEs even though no treatment has been carried out during the first episode. It has been reported (Jarman 2004), that across the country in 2001/02, the ratio of the number FCEs to hospital spells in NHS Trusts varied from 1.1 to 1.9. With the 'Payment by Results' reform of NHS financial flows in England in 2004, hospital spells have been reintroduced as the standard measure of hospital activity (see: http://www.ncvo-vol.org.uk/sites/default/files/DH_PBR.pdf).

Northern Ireland, Scotland and Wales are not affected by these definitional changes as they decided to retain hospital discharges and deaths as the measure of hospital inpatient activity and did not switch to FCEs. However, the term episode is used from time to time interchangeably in health services activity reports. Thus it is important to be cautious in using trends data in comparing performance among the four countries of the UK.

The total number of discharges and FCEs in the UK, has quadrupled from 4.9 million in 1960 to 20.7 million in 2011/12 (see Table 3.6). This is equivalent to less than one discharge/FCE for every ten members of the population in 1960, increasing to one FCE per three members of the population in 2011/12. There has also been an increase in discharges/FCEs per available bed for all countries

since 1951 (see Table 3.6). Table 3.7 shows numbers of FCEs/discharges and deaths for selected specialties.

Table 3.6. Number of NHS hospital finished consultant episodes (FCEs)[1]/discharges and deaths, UK, 1951 - 2011/12

	FCEs/discharges and deaths '000s				FCEs/discharges and deaths per available bed[1]			
Year	England[2]	Wales[3]	Scotland	Northern Ireland	England[2]	Wales[3]	Scotland	Northern Ireland
1951	3,259	-	443	104	7.0	-	7.3	7.2
1952	3,414	-	459	108	7.2	-	7.5	7.2
1953	3,544	-	473	122	7.4	-	7.6	8.1
1954	3,630	-	489	121	7.5	-	7.8	7.8
1955	3,652	-	494	128	7.6	-	7.8	8.1
1956	3,739	-	516	130	7.7	-	8.1	8.1
1957	3,794	-	528	134	7.9	-	8.3	8.1
1958	3,889	-	537	142	8.1	-	8.4	8.5
1959	4,000	-	558	146	8.3	-	8.7	8.7
1960	4,136	-	571	145	8.6	-	9.0	8.7
1970	5,329	-	699	218	11.7	-	11.1	12.6
1980	6,036	-	774	246	15.8	-	13.4	14.4
1990/91	8,782	584	1,116	324	34.4	30.1	22.1	24.0
1991/92	9,302	633	1,150	339	38.4	34.0	23.6	26.9
1992/93	9,635	668	1,184	343	41.5	37.0	25.4	29.3
1993/94	10,094	710	1,237	369	46.1	40.6	28.0	33.9
1994/95	10,539	753	1,287	389	49.7	44.8	30.3	37.6
1995/96	11,037	778	1,324	400	53.6	48.7	32.6	39.8
1996/97	11,275	690	1,349	398	56.7	44.3	35.1	42.0
1997/98	11,530	643	1,393	410	59.4	42.3	36.7	45.5
1998/99	11,984	649	1,415	449	63.1	43.6	38.9	50.9
1999/00	12,197	639	1,399	452	65.5	44.3	40.3	52.3
2000/01	12,265	711	1,418	456	65.9	48.8	42.8	53.2
2001/02	12,357	701	1,391	458	66.8	48.6	43.6	54.4
2002/03	12,756	671	1,345	465	69.4	47.0	43.7	56.1
2003/04	13,174	702	1,381	482	71.6	49.4	46.2	57.7
2004/05	13,707	709	1,409	490	75.7	50.6	48.5	58.9
2005/06	14,424	794	1,445	500	82.2	57.5	51.0	60.7
2006/07	14,785	931	1,481	519	88.5	68.6	53.4	64.5
2007/08	15,359	944	1,503	539	95.8	70.7	55.6	68.4
2008/09	16,233	978	1,553	551	101.3	74.6	58.4	70.0
2009/10	16,806	1,030	1,572	584	106.1	80.4	61.0	80.2
2010/11	17,270	1,023	1,572	567	121.2	84.2	63.2	84.1
2011/12	17,465	1,064	1,582	588	126.0	90.1	64.9	91.3

Notes:
From 1987/88 onwards, all figures relate to financial years ending 31st March. Before that, all figures are for calendar years.
Figures include both inpatients and day cases.
Data for Wales are based on discharges and deaths.
Data from 1996 onwards for Northern Ireland are based on admissions data.
Data for Scotland and Northern Ireland are based on a system where transfers between consultants don't count as discharges, except in Scotland where figures include patients transferred from one consultant to another within the same hospital, provided there is a change of specialty or significant facilities.
Scotland figures include NHS beds in joint-user and contractual hospitals. A joint user hospital is a local authority institution in which accommodation is made available to NHS Boards under the terms of the sixth schedule of the National Assistance Act 1948. A contractual hospital is an institution where NHS Boards have arrangements with voluntary or private bodies for the use of beds or clinical facilities.
1In England, figures from 1987/88 relate to finished consultant episodes (FCEs) in all NHS hospital trusts.
FCE data for England have not been adjusted to take into account shortfalls in the number of records received or for missing/invalid clinical data.
2 From 1951- 1980 figures are for England and Wales.
3 Data from 2005/06 onwards reflect all records submitted by the trust. For earlier years, day cases were removed where there were concerns that they did not meet the definition of a day case (see Health Statistics Wales).

Sources:
Annual Abstract of Statistics (ONS).
The Government's Expenditure Plans (DH).
Health Statistics Wales (NAW).
Scottish Health Statistics (ISD).

Table 3.7. Inpatient finished consultant episodes (FCEs), discharges and deaths[1] in NHS hospitals, by selected specialties, Great Britain, 1959 - 2010/11

Thousands

	Acute services			Mental illness[3]	Learning disabilities[3]	Maternity	Geriatrics	All FCEs[4]
Year	Medical	Surgical	Total[2]					
1959	987	2,175	3,162	160	7	-	145	4,558
1960	1,021	2,249	3,270	165	9	-	151	4,707
1970	1,314	2,917	4,231	212	15	-	201	6,028
1975	1,439	2,841	4,280	215	19	-	234	5,993
1980	1,620	3,304	4,923	220	29	-	311	6,810
1981	1,676	3,359	5,035	224	32	-	331	6,928
1982	1,718	3,232	4,951	221	34	-	350	6,884
1983	1,791	3,478	5,269	227	40	-	384	7,203
1984	1,846	3,551	5,396	233	46	-	414	7,401
1985	1,935	3,583	5,518	246	49	-	445	7,602
1986	1,952	3,609	5,561	247	54	-	474	7,685
1987/88	2,283	3,705	5,988	248	47	-	474	7,940
1988/89	2,906	3,735	6,641	256	50	-	489	8,677
1989/90	2,983	3,762	6,745	260	60	-	531	8,843
1990/91	3,047	3,736	6,783	265	60	-	553	8,913
1991/92	3,145	3,823	6,968	269	60	-	600	9,170
1992/93	3,216	3,809	7,025	282	61	-	624	9,273
1993/94	3,348	3,773	7,121	285	59	-	652	9,361
1994/95	3,588	3,797	7,385	284	64	-	698	9,449
1995/96	3,162	3,685	6,848	295	61	-	648	9,752
1996/97	3,303	3,575	6,877	290	61	-	640	9,854
1997/98	3,542	3,555	7,097	286	62	-	617	9,963
1998/99	4,023	3,875	7,898	264	43	-	629	10,067
1999/00	4,106	3,846	7,952	258	39	-	616	10,072
2000/01	4,222	3,790	8,013	252	40	925	601	10,119
2001/02	4,372	3,778	8,150	246	38	931	607	10,228
2002/03	4,505	3,834	8,339	243	40	954	631	10,476
2003/04	4,772	3,930	8,702	227	32	935	639	10,891
2004/05	4,964	4,094	9,059	223	28	1,010	674	11,337
2005/06	5,242	4,328	9,570	202	24	1,066	676	11,826
2006/07	5,291	4,384	9,676	193	24	1,092	681	11,961
2007/08	5,393	4,513	9,906	186	20	1,178	695	12,175
2008/09	5,690	4,624	10,314	186	20	1,149	762	12,629
2009/10	5,886	4,613	10,499	184	19	1,099	787	12,805
2010/11	5,990	4,325	10,315	169	19	1,122	798	13,502

Notes:
In this table figures have been added together which are not all based on precisely the same definition or timing. The differences do not affect the broad picture of the health services in Great Britain, i.e England, Scotland and Wales.
Figures for England for 1987/88 onwards are FCEs. Earlier English and all Scottish and Welsh figures are for discharges and deaths.
Figures for England from 1994/95, are based on all FCEs. Figures for previous years are based on a 25 per cent sample of FCEs.
Finished Consultant Episode data for England have not been adjusted to take into account shortfalls in the number of records received or for missing/invalid clinical data.
There is a shortfall in the data for some trusts, and as such figures for Scotland for 2010/11are provisional.
1All figures exclude day cases. Prior to 1987/88, figures relate to calendar years, but from then on to financial years ending 31st March.
2 Including pre-convalescent department and gynaecology.
3 The reduction in mental illness and learning disabilities FCEs was due to changes in definition.
4 Figures include other departments not shown in the table.

Sources:
Hospital Episode Statistics (HSCIC). Copyright © 2013. Re-used with the permission of The Health and Social Care Information Centre. All rights reserved.
Health Statistics Wales (NAW).
Scottish Health Statistics (ISD).

3.3.3 Hospital Episode Statistics (HES)

Hospital activity statistics for England have changed over the years. Before 1988/89 they were provided by the Hospital Inpatient Enquiry (HIPE), an annual report based on a 10 per cent sample of inpatient stays in NHS hospitals in England and Wales taken from the Hospital Activity Analysis (HAA) system. From 1988/89 – 1996/97 the Department of Health published aggregated summary Hospital Episode Statistics (HES) tables, in three volumes for 1988/89 to 1994/95 and on CD-ROM for 1996/97. In 1996 the NHS-Wide Clearing Service (NWCS) was set up to provide a means of transmitting the records. The work of NWCS was subsequently taken over by the National Programme for IT Secondary Uses Services (SUS) in 2006, now under the Health and Social Care Information Centre for England, see:

http://www.hscic.gov.uk/sus

HES are currently managed by the Health and Social Care Information Centre. The processing of the HES data has been outsourced to the HES Team in Northgate Information Services (Northgate). See the HES User Guide for further information, available at:

http://www.hscic.gov.uk/hes

In HES, an episode record consists of a wide range of data items including:

- Patient personal details such as date of birth, gender, address of usual residence including post code
- Admission details such as date of admission and date of discharge from which length of stay can be derived
- Clinical information including diagnosis, operations and dates of operations.

There are additional fields for special records such as maternity/birth or psychiatric admissions. Each episode has several items of data recorded, including the diagnosis (both primary and secondary, currently based on ICD10 but based on ICD9 prior to April 1995), and the operative procedure where relevant (based on OPCS4.4 since 2007/08). The HES data dictionary gives further information relating to the fields available, see:

http://www.hscic.gov.uk/hesdatadictionary

HES also contains information on all hospital outpatient records since 2003/04, Accident and Emergency data since 2007/08, Adult Critical Care data from 2008/09 and Patient Reported Outcome Measures data from 2009/10. See:

http://www.hscic.gov.uk/article/1823/What-HES-data-is-available

Hospital inpatient activity ***Key sources and information***

England

From 1998/99 information on hospital inpatient activity is available through the IC. This includes annual data on a financial year basis providing summary tables based on individual patient records. This information is available in headline figures, by primary diagnosis, main operations, main specialty and Healthcare Resource Groups (HRGs see Section 2.2.8). In addition, summary information by hospital provider and SHA of residence is also available. Recent provisional information is also available on a monthly basis. More detailed information can be obtained on request, subject to controls and restrictions:
http://www.hscic.gov.uk/searchcatalogue?q=title%3A%22hospital+episode+statistics%22&area=&size=10&sort=Relevance

For each financial year, a set of 21 tables is available, covering primary diagnosis, main operations, Health-care Resource Groups (HRGs, see Section 2.2.8 for details), provider and commissioner (PCT).

A description of the review of central returns for England is available at:
http://www.hscic.gov.uk/rocr

Northern Ireland

Hospital inpatient statistics for Northern Ireland are published in two volumes: *Hospital Statistics Volume 1 – Programme of Care* and *Volume 2a– Inpatient Specialty Tables*. They are available in both printed and downloadable pdf/spreadsheet formats:
http://www.dhsspsni.gov.uk/index/stats_research/hospital-stats/inpatients.htm

Scotland

The current version of the hospital inpatient care statistics comes under Health and Care and appears in different programmes of care such as Acute Activity, Births and Babies and Mental Health. The latest version (2011/12) has seen a substantial reduction in the detailed statistics available for public use. For instance, unlike the previous printed version, trends and quarterly acute inpatient and day case information is available by provider and commissioner but there is no further breakdown by consultant specialty. The hospital inpatient statistics published by ISD do not include admissions to maternity and psychiatric hospitals:
http://www.isdscotland.org/Health-Topics/Hospital-Care/Inpatient-and-Day-Case-Activity/

Wales

Summary tables are published in *Health Statistics Wales* both in printed and web downloadable formats:
http://wales.gov.uk/topics/statistics/headlines/health2012/1209272/?lang=en

There are similar, although separately administered, systems of central returns for Northern Ireland, Scotland and Wales. In Scotland, for instance, ISD(S)1 refers to the hospital activity aggregated return including data on hospital bed numbers and hospital activity for a range of services.

3.3.4 NHS available and occupied hospital beds

In England, the KH03 is now a quarterly collection from all NHS organisations, both NHS Trusts and PCTs, that operate beds, open overnight or day only. It shows the total number of available bed days and the total number of occupied bed days by consultant main specialty. Prior to 2010/11 the KH03 was an annual return collecting beds by sector (acute, geriatric, mental illness, learning disability and maternity) and by ward classification such as intensive care beds, short stay and long stay beds. It also included data on Residential Care beds and 'Day Only' beds designed for day case treatment. The change from annual to quarterly data has resulted in a break in the series of beds, for example the annual data related to all specialties, whereas the new quarterly data no longer includes managed care beds, see:
http://www.england.nhs.uk/statistics/index.php?s=bed+availability

Similar data on available and occupied beds are collected in Northern Ireland, Scotland and Wales.

Throughput is the average number of inpatients treated per bed per year. Occupancy is the average percentage of beds in use over a given period.

Methods *Occupied beds*

Statistics for the efficient use of hospital beds and throughput are derived from information relating to the proportion of beds that are occupied. The percentage occupancy is calculated as the percentage of available staffed beds that were occupied at midnight by inpatients during the year, i.e.

$$\frac{\text{total occupied bed days}}{\text{all available staffed bed days}}$$

Despite a decrease over time in the number of available beds, the occupancy rate in UK NHS hospitals has remained relatively constant, between 81 per cent and 87 per cent. In recent decades it has been consistently higher than the UK average in England and lower in Wales and Scotland.

Table 3.8. Average daily number of available NHS hospital beds, UK, 1951 - 2011/12

	Available beds '000s				Per 1,000 population			
Year	England and Wales[1]	Scotland[2]	Northern Ireland[3]	United Kingdom	England and Wales[1]	Scotland[2]	Northern Ireland[3]	United Kingdom
1951	467	61	15	543	10.7	12.0	10.9	10.8
1955	482	63	16	561	10.8	12.3	11.5	11.0
1960	479	64	17	560	10.5	12.4	12.0	10.7
1965	470	64	17	551	9.9	12.3	11.6	10.1
1970	456	63	17	536	9.3	12.1	11.2	9.6
1975	419	61	17	497	8.5	11.7	11.2	8.8
1980	383	58	17	458	7.7	11.2	11.1	8.1
1981	380	58	17	455	7.7	11.2	11.0	8.1
1982	378	58	17	453	7.6	11.2	11.0	8.0
1983	372	57	17	446	7.5	11.1	11.0	7.9
1984	357	57	17	431	7.2	11.1	10.9	7.6
1985	348	57	17	422	7.0	11.1	10.9	7.5
1986	338	55	16	409	6.8	10.8	10.2	7.2
1987/88	318	55	15	388	6.3	10.7	9.7	6.8
1988/89	304	53	15	372	6.0	10.5	9.3	6.5
1989/90	290	52	14	356	5.7	10.3	8.9	6.2
1990/91	274	51	13	338	5.4	10.0	8.4	5.9
1991/92	262	49	13	323	5.2	9.6	7.8	5.6
1992/93	250	47	12	308	4.9	9.2	7.2	5.4
1993/94	236	44	11	292	4.6	8.7	6.7	5.0
1994/95	229	42	10	282	4.5	8.3	6.3	4.9
1995/96	222	41	10	273	4.3	8.0	6.1	4.7
1996/97	215	38	9	262	4.2	7.5	5.7	4.5
1997/98	209	38	9	256	4.1	7.5	5.4	4.4
1998/99	205	36	9	250	4.0	7.2	5.3	4.3
1999/00	201	35	9	244	3.9	6.8	5.1	4.2
2000/01	201	33	9	242	3.8	6.5	5.1	4.1
2001/02	199	32	8	240	3.8	6.3	5.0	4.1
2002/03	198	31	8	237	3.8	6.1	4.9	4.0
2003/04	198	30	8	236	3.7	5.9	4.9	4.0
2004/05	195	29	8	232	3.7	5.7	4.9	3.9
2005/06	189	28	8	226	3.5	5.6	4.8	3.7
2006/07	181	28	8	216	3.4	5.4	4.6	3.6
2007/08	174	27	8	209	3.2	5.3	4.5	3.4
2008/09	173	27	8	208	3.2	5.1	4.4	3.4
2009/10	171	26	7	204	3.1	5.0	4.1	3.3
2010/11	155	25	7	186	2.8	4.7	3.7	3.0
2011/12	150	24	6	181	2.7	4.6	3.5	2.9

Notes:
From 1987/88 onwards, all figures are an average of the daily available beds for the financial year ending 31st March. Before that figures were daily averages on a calendar year basis.
1Figures for England relate to average number of open and staffed beds on wards open overnight in NHS hospitals. Figures for Wales relate to average daily number of staffed beds. For England, the recording of available and occupied beds has changed from Q12010, to be recoded on a quarterly basis, with a mandatory requirement to report bed availability and occupancy by main specialty codes. This has resulted in a break in series, and data from 2010/11is not directly comparable with data reported for previous financial years.
2 Figures relate to average available staffed beds including temporary and borrowed beds.
3 Figures relate to average available beds in wards open overnight during year. From 1974 to 1986, figures relate to 31st December.

Sources:
Health and Personal Social Services Statistics for England (DH).
Performance data and Statistics (DH).
Health Statistics Wales (NAW).
Scottish Health Statistics (ISD).
Annual Abstract of Statistics (ONS).
Hospital Activity Statistics: England (DH).
Population Estimates (ONS).
Population Projections Database (GAD).
2011Census, Population and Household Estimates for England and Wales (ONS).
2011Census (General Registrar Office for Scotland).
2011Census (Northern Ireland Statistics and Research Agency).

Office of Health Economics Research

Table 3.9. Average daily occupied beds[1] in NHS hospitals, by country, UK, 1951 - 2011/12

Year	Average daily occupied beds[1] '000s				
	England[2]	Wales	Scotland	Northern Ireland	United Kingdom
1951	407.0	-	52.0	13.0	472.0
1960	410.0	-	53.0	15.0	478.0
1970	372.0	-	54.0	15.0	441.0
1980	307.0	-	48.0	14.0	369.0
1990/91	232.2	14.8	41.0	10.0	280.0
2000/01	156.3	11.7	26.8	7.0	201.8
2001/02	157.3	11.7	26.0	7.0	202.0
2002/03	156.9	11.8	25.1	7.0	200.8
2003/04	157.9	11.8	24.0	7.0	200.7
2004/05	154.2	11.6	23.3	7.0	196.1
2005/06	148.5	11.4	22.9	6.9	189.7
2006/07	144.1	11.2	22.4	6.6	184.4
2007/08	135.1	11.1	21.6	6.5	174.2
2008/09	136.9	10.8	21.2	6.3	175.2
2009/10	135.0	10.5	20.5	5.9	171.9
2010/11	121.7	10.3	19.9	5.6	157.4
2011/12	118.2	10.1	19.6	5.4	153.2

Year	Bed occupancy rate as % of available beds[1]				
	England[2]	Wales	Scotland	Northern Ireland	United Kingdom
1951	87	-	86	89	87
1960	86	-	83	88	85
1970	82	-	85	87	82
1980	80	-	84	80	81
1990/91	83	76	82	78	83
2000/01	84	80	81	82	83
2001/02	85	81	81	83	84
2002/03	85	83	81	84	85
2003/04	86	83	80	84	85
2004/05	85	83	80	84	84
2005/06	85	83	81	84	84
2006/07	85	83	81	83	85
2007/08	85	83	80	82	84
2008/09	86	83	80	80	84
2009/10	87	82	80	82	84
2010/11	85	85	80	83	85
2011/12	85	85	80	84	85

Notes: From 1987/88 onwards, all figures are an average of the daily available beds for the financial year ending 31st March. Before that figures were daily averages on a calendar year basis.
1Figures include all NHS hospital trusts in England, Wales and in Scotland, figures include NHS beds in joint-user and contractual hospitals. A joint user hospital is a local authority institution in which accommodation is made available to NHS Boards under the terms of the sixth schedule of the National Assistance Act 1948. A contractual hospital is an institution where NHS Boards have arrangements with voluntary or private bodies for the use of beds or clinical facilities.
2 Prior to 1989/90 data is for England and Wales combined. For England, the recording of available and occupied beds has changed from Q12010, to be recoded on a quarterly basis, with a mandatory requirement to report bed availability and occupancy by main specialty codes. This has resulted in a break in series, and data from 2010/11are not directly comparable with data reported for previous financial years.

Sources: Annual Abstract of Statistics (ONS).
Health Statistics Wales (NAW).
Scottish Health Statistics (ISD).
Hospital Activity Statistics: England (DH).

Office of Health Economics Research

Hospital beds data ***Key sources and information***

England

Bed availability and occupancy data in England are available from:

http://www.england.nhs.uk/statistics/index.php?s=bed+availability

Northern Ireland

Annual bed use statistics for Northern Ireland are published by the DHSSPS in *Hospital Statistics,* quarterly data are also available in statistics by hospital:

http://www.dhsspsni.gov.uk/index/stats_research/hospital-stats/inpatients.htm

Scotland

National data on available beds by both acute and non-acute specialty are published on the *Scottish Health Statistics* web site:

http://www.isdscotland.org/Health-Topics/Hospital-Care/Beds/

Wales

Data on NHS Trust bed use in Wales are published by the Welsh Assembly in *Health Statistics Wales*.

Annual outpatient and other hospital activities data for NHS Trusts and commissioning bodies in Wales are published by the Welsh Assembly in *Health Statistics Wales*:

https://statswales.wales.gov.uk/Catalogue/Health-and-Social-Care/NHS-Hospital-Activity/NHS-Beds

3.3.5 Day cases

The definition of a Day Case admission is 'a patient admitted electively during the course of a day with the intention of receiving care who does not require the use of a hospital bed overnight and who returns home as scheduled'. In situations where it is the intention for an admission to be a day case, but where the patient stays in overnight, that patient should be considered as an ordinary admission. True day cases are those who require full operating theatre facilities and/or a general anaesthetic and any day cases not included as outpatients or endoscopies. Further information is available at:

http://systems.hscic.gov.uk/data/nhsdmds/faqs/cds/admitpat/daycase

A move to treat day surgery as the norm for some procedures has resulted in an increase in the number of day cases in recent years, see Table 3.10, from 3.6 million in 2000/01 to over 5.9 million in 2011/12.

3.3.6 Outpatient attendances and other hospital activities

As illustrated in Figure 3.2, for non-emergency hospital cases, patients are usually referred by their GP to see a consultant or other health professional at an outpatient clinic where tests or diagnostic procedures might be carried out to determine the type of treatment, if any, that is required. Tests may be conducted on the same day or at subsequent follow-up outpatient attendances. Figures for the number of attendances at consultant-led outpatient clinics for England were previously collected annually for NHS Trusts through the central return KH09, until 2005/06. Since 2003/04 patient level outpatient information has been collected as part of the Hospital Episode Statistics (HES) for England, and has improved in quality since it was first produced. Initially this information was available on an annual basis, but provisional monthly data are now available. This dataset includes information about the patient, consultant, organisation and source of referral, attendance, diagnosis and treatment and demographic characteristics, see:

http://www.hscic.gov.uk/hes

The figures collected include NHS and private patients seen for a first appointment (new) as well as subsequent appointments (new-to-follow-up) for each consultant specialty, at an NHS hospital see Table 3.11. The numbers of planned/booked appointments and patients who did not attend (DNA) their outpatient appointments are also included.

Information on outpatient activity for Northern Ireland was previously contained in the 'Hospital Statistics' publication, but is now published in a separate 'Outpatient Activity' publication. This is based on information routinely collected through PAS and survey returns see:

http://www.dhsspsni.gov.uk/ni_hospital_statistics_-_outpatient_activity_2011_12.pdf

Information on outpatients for Scotland used to be published as part of the overall 'Acute Hospital Activity'. Since March 2010 quarterly data are available, see:

http://www.isdscotland.org/Health-Topics/Hospital-Care/Outpatient-Activity/

Information on outpatient activity in hospitals and separate clinics providing specialist services for the NHS in Wales is provided by NHS Health Boards in Wales and published through StatsWales within the Health and Care and NHS Hospital Activity subfolder see:

https://statswales.wales.gov.uk/Catalogue/Health-and-Social-Care/NHS-Hospital-Activity/Outpatient-Activity

Patients attend Accident and Emergency (A&E) departments either via ambulance, self-referral or referral by their GP. Some of them require urgent treatments such as those involved in road accidents and brought in by ambulance. Some may require assessment, testing or admission as an inpatient for emergency treatment. Data for England relating to A&E attendances have previously been collected on an annual basis through KH09 and quarterly through Quarterly Monitoring of Accident and Emergency (A&E), for all Trusts and PCTs. Experimental A&E HES data (record level) have also been available since 2007/08 for England via HES; since March 2010 this has been available on a monthly basis:

http://www.hscic.gov.uk/searchcatalogue?q=title%3A%22accident+and+emergency+attendances%22&area=&size=10&sort=Relevance&topics=0%2FHospital+care

There are still limitations with the data due to incompleteness, but the dataset does contain a breadth of information, including information relating to the patient, the organisation where the patient was seen, the time of arrival, conclusion, assessment and departure and the diagnosis, investigation and treatment detail. There have also been improvements in the data quality since it was first published. In April 2011 a new set of indicators relating to the quality of accident and emergency care was introduced, see:

http://data.gov.uk/dataset/provisional-accident-and-emergency-quality-indicators-for-england-experimental-statistics-by-provi.

Figures are submitted to the DH annually by NHS Foundation Trusts and NHS Trusts in England on statistical return KH09 for the total number of attendances at A&E departments or minor injury units, including first attendances and follow-up attendances for the same injury or condition.

In 2007 the 'A&E Data Mart' was established for Scotland. This now contains a range of information, including diagnosis and for larger hospitals it is at episode level.

While in hospital either at an outpatient clinic, an A&E department or as an inpatient, patients may require diagnostic tests such as X-rays and CT scans. The numbers of these tests are included in the KH12 central return submitted by NHS Foundation Trusts and NHS Trusts in England annually. Selected monthly and quarterly data are also available, see: http://www.england.nhs.uk/statistics/diagnostics-waiting-times-and-activity/

In Northern Ireland, Scotland and Wales, similar information is also collected (see details on page 110 for the key publications for these countries).

Table 3.11 shows the total number of attendances at outpatients and A&E for the constituent countries of the UK. In 2011/12 this was 107 million.

Table 3.10. Number of hospital day cases by selected main specialty[1], England, 2000/01 - 2011/12

	Numbers of day cases ('000)					Day cases as a % of FCEs[2]				
	00/01	01/02	09/10	10/11	11/12	00/01	01/02	09/10	10/11	11/12
All specialties	**3,620**	**3,593**	**5,475**	**5,692**	**5,924**	**30**	**29**	**33**	**33**	**34**
All acute sector	2,981	3,002	4,782	5,008	5,234	31	31	34	35	36
Acute surgical	1,848	1,834	2,864	2,987	3,069	42	42	46	47	48
Acute medical	1,133	1,168	1,918	2,021	2,165	22	22	25	25	26
General surgery	496	475	652	676	716	35	34	37	38	39
Ophthalmology	339	352	564	586	581	74	78	91	92	93
Urology	338	337	491	515	533	56	57	62	62	64
Trauma and orthopaedics	212	211	417	445	460	25	26	35	36	37
Gastroenterology	154	161	387	439	496	64	61	56	55	57
General medicine	370	360	430	421	417	18	17	16	16	15
Haematology (clinical)	193	193	322	337	371	76	77	81	82	82
Obstetrics, gynaecology & midwife episode[3]	384	356	350	337	337	21	20	17	16	16
Radiotherapy	193	180	270	276	275	76	72	80	80	79
Oral surgery	138	137	182	181	169	70	70	80	81	81
Medical oncology	118	124	158	167	193	64	69	73	74	76
Anaesthetics	55	57	157	163	172	73	70	86	88	88
Ear, nose and throat	109	103	149	154	160	31	31	41	42	44
Cardiology	69	77	136	145	154	27	27	25	25	25
Plastic surgery	86	87	134	139	139	45	45	53	54	55
Dermatology	54	50	110	111	112	79	81	93	93	94
Rheumatology	30	33	91	98	108	39	43	63	65	65
Paediatrics	53	56	81	88	92	5	5	6	6	6
Neurology	19	20	53	59	68	27	29	50	54	53
Nephrology	27	28	58	55	47	32	30	33	35	33
Thoracic medicine	17	18	36	40	45	19	18	12	12	12
Paediatric surgery	18	17	26	27	27	32	32	40	41	43
Haematology	33	33	26	24	29	70	72	30	77	76
Radiology	9	8	15	20	30	78	76	61	63	67
Paediatric dentistry	8	9	14	17	18	91	93	96	97	97
Endocrinology	6	6	15	17	16	27	31	17	18	15
Geriatric medicine	13	12	12	12	12	3	2	2	2	2
Neurosurgery	4	5	10	11	12	7	8	14	12	13
Clinical immunology and allergy	2	2	11	11	11	88	89	88	90	91

Notes: All data relate to financial years ending 31st March.
A day case is defined as a patient attending a hospital ward for investigation, treatment or operation under clinical supervision on a planned non-resident basis and who occupies a bed.
FCE data from 2004/05 onwards have not been adjusted to take into account shortfalls in the number of records received or for missing/invalid clinical data.
1Excluding specialties with less than 10,000 day cases in 2009/10.
2 FCEs = finished consultant episodes (ordinary admissions and day cases).
3 Prior to 2004/05 also included general practice with maternity function.

Sources: Hospital Episode Statistics (DH).

Table 3.11. Hospital outpatient clinics[1]: total attendances and new cases, by country, UK, 1952 - 2011/12

Year	Outpatient total attendances '000s				New out-patient cases '000s			
	England and Wales[2]	Scotland[3]	Northern Ireland[4]	United Kingdom	England and Wales[2]	Scotland[3]	Northern Ireland[4]	United Kingdom
1952	38,523	6,259	1,028	45,810	-	-	321	-
1955	39,584	7,120	1,193	47,897	11,636	2,131	386	14,153
1960	41,748	7,279	968	49,995	12,768	2,238	341	15,347
1965	44,869	7,983	1,121	53,973	14,588	2,593	385	17,566
1970	48,097	4,631	1,438	54,166	16,391	1,673	515	18,579
1975	50,141	5,000	1,518	56,659	16,179	1,812	563	18,554
1980	50,994	5,321	1,736	58,051	18,146	1,999	628	20,773
1985	54,324	5,593	2,028	61,945	20,193	2,144	739	23,076
1986	54,616	5,668	2,025	62,309	20,424	2,196	756	23,376
1987/88[5]	54,716	5,693	2,049	62,458	20,568	2,233	770	23,571
1988/89	55,731	5,767	1,974	63,472	20,557	2,275	761	23,593
1989/90	56,198	5,815	1,989	64,002	20,982	2,325	780	24,087
1990/91	55,775	5,925	1,954	63,654	20,950	2,381	782	24,113
1991/92	55,596	5,971	1,963	63,530	21,231	2,403	799	24,433
1992/93	55,617	6,005	1,969	63,591	21,589	2,426	819	24,834
1993/94	55,971	6,086	1,967	64,024	22,462	2,457	836	25,755
1994/95	57,645	6,145	2,051	65,841	23,742	2,503	873	27,118
1995/96	58,929	6,241	2,087	67,257	24,856	2,577	937	28,370
1996/97	59,570	6,338	2,072	67,980	25,203	2,666	933	28,802
1997/98	60,674	6,333	2,083	69,091	25,843	2,716	952	29,511
1998/99	61,151	6,426	2,091	69,668	26,111	2,735	962	29,808
1999/00	62,476	6,453	2,111	71,039	26,866	2,767	984	30,617
2000/01	62,663	6,384	2,114	71,161	26,972	2,749	994	30,715
2001/02	62,913	6,256	2,131	71,300	27,142	2,729	997	30,868
2002/03	63,670	6,194	2,122	71,987	27,603	2,731	992	31,326
2003/04	65,541	6,149	2,161	73,851	30,400	2,751	1,014	34,165
2004/05	66,468	5,984	2,175	74,627	31,761	2,718	1,027	35,506
2005/06	72,741	6,065	2,219	81,024	34,412	2,763	1,040	38,215
2006/07	74,885	6,053	2,233	83,171	35,151	2,829	1,081	39,061
2007/08	77,631	6,097	2,282	86,011	36,657	2,895	1,115	40,668
2008/09	84,354	6,274	2,256	92,883	39,439	3,006	1,149	43,593
2009/10	92,111	6,254	2,231	100,596	42,542	3,054	1,150	46,746
2010/11	95,777	*6,296*	2,234	104,307	43,910	*3,082*	1,148	48,140
2011/12	98,262	*6,387*	2,239	106,888	45,260	*3,090*	1,123	49,473

Notes:
1 At consultant and general practitioner clinics in hospitals and in accident and emergency departments.
2 Information on general practitioner maternity clinics is not collected separately in England but is included for Wales.
3 Prior to 1969, figures relate to casualty and ancillary departments. Data for 2010/11 is provisional.
4 Figures relate to casualty and ancillary departments.
5 Figures from 1987/88 onwards for England and Scotland, from 1983/84 onwards for Wales and from 1988/89 onwards for Northern Ireland relate to financial years.
Data in italics for Scotland for 2011 and 2012 are provisional.

Sources:
Annual Abstract of Statistics (ONS).
Health Statistics Wales (NAW).
Scottish Health Statistics (ISD).
Health and Personal Social Services Statistics for England (DH).
Hospital Episode Statistics (DH).

Hospital Activity Statistics (DH).

Hospital outpatient and day cases ***Key sources and information***

England

Details of quarterly monitoring information on outpatient attendances and other hospital activity by consultant specialty are available on the DH website by both provider and commissioner (PCTs):

http://www.england.nhs.uk/statistics/hospital-activity/quarterly-hospital-activity/

Annual data prior to 2005/06 are available from:

http://webarchive.nationalarchives.gov.uk/*/www.performance.doh.gov.uk

Day case and outpatient information for England is available through the Hospital Episode Statistics website and summarised in publications from the Health and Social Care Information Centre:

http://www.hscic.gov.uk/searchcatalogue?productid=11643&q=title%3a%22hospital+episode+statistics%22&sort=Relevance&size=10&page=1#top

Northern Ireland

Annual outpatient statistics for Northern Ireland are published by the DHSSPS in *Hospital Statistics*.

http://www.dhsspsni.gov.uk/outpatients

Day case information is available at:

http://www.dhsspsni.gov.uk/index/stats_research/hospital-stats/inpatients.htm

Scotland

Information relating to inpatient, day case and outpatient activity is published on the *Scottish Health Statistics* web site:
http://www.isdscotland.org/Health-Topics/Hospital-Care/Outpatient-Activity/

Wales

Annual outpatient and other hospital activity data for NHS Trusts and commissioning bodies in Wales are published by the Welsh Assembly in *Health Statistics Wales*:

https://statswales.wales.gov.uk/Catalogue/Health-and-Social-Care/NHS-Hospital-Activity/Outpatient-Activity

3.3.7 Hospital waiting times

In the UK, except for emergencies, patients needing to see an NHS hospital specialist at an outpatient clinic or for inpatient treatment have had to wait some weeks or months. As explained earlier, a patient is referred by the GP or other health professional or from an Accident and Emergency department to see a specialist at an outpatient clinic for testing or other diagnostic procedures. Once a decision has been made by a consultant, the patient is placed on the inpatient or day case list with a date offered as an elective admission either for inpatient stay or day case treatment.

The time patients have to wait for treatment and the numbers of patients waiting (i.e. size of the waiting list) are measures which have been key to monitoring the performance of the NHS. Waiting for treatment is distressing for the patient. A patient's condition may worsen over a prolonged period of waiting for treatment. This not only prolongs pain and inconvenience affecting quality of life but also has considerable economic costs associated with it. Thus it has been the Government's policy to reduce waiting time and to cut the number of patients on the waiting list, either through increases in funding and capacity or through changes in service configuration.

The Government outlined that from January 2009, no-one should wait longer than 18 weeks from referral to treatment (RTT) in England (unless there is a medical reason why the wait should exceed this). RTT data may be unadjusted (raw waiting times) or adjusted (allowing for defined breaks in waiting).

Adjusted data have been available since 2007 and since 2008 they have been disaggregated for a number of key specialty/treatment functions. Data are produced in terms of those who have been admitted (both adjusted and unadjusted), those who are still waiting to be admitted (incomplete pathways), and those for whom a decision not to admit has been made. In 2012/13 the government set out in the Operating Framework for the NHS in England key requirements to keep referral to treat waiting time low, see:

http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_132492.pdf

The Department of Health has revised its reporting requirements for Admitted Patient (and Outpatient) waiting times, which can be expected to result in a change in reporting practices, for further information see:

http://systems.hscic.gov.uk/data/nhsdmds/faqs/waiting/admitted

The Scottish Government has set similar targets, and from 1st October 2012, the Patient Rights (Scotland) Act 2011 establishes a 12 week maximum waiting times for the treatment of all eligible patients who are

due to receive planned treatment delivered on an inpatient or day case basis, see: http://www.isdscotland.org/Health-Topics/Waiting-Times/

In Wales the target maximum time from GP referral to treatment was set at 26 weeks from 2009. In Northern Ireland the target was set in 2007 that by March 2009 the maximum wait from referral to treatment would be 13 weeks.

Specific waiting time targets have also been set relating to GP referral and treatment for suspected and diagnosed cancer patients. For England, cancer waiting time commitments were introduced in 2000, and remain in the NHS Operating Framework for 2012/13. See the annual report on waiting times for suspected and diagnosed cancers: http://www.england.nhs.uk/statistics/index.php?s=cancer+waiting+times

Table 3.12. Referral to treatment (RTT) time for those admitted for treatment, England, March 2012

Commissioner based data

March 2012	Adjusted admitted[1]		
Treatment Function	**Total number admitted[1,2]**	**Average (median) waiting time (in weeks)[3]**	**% of those admitted seen within 18 weeks[1]**
Total	**325,059**	**8.1**	**91.1%**
General Surgery	44,352	7.8	89.4%
Urology	22,224	7.0	91.8%
Trauma & Orthopaedics	61,491	12.3	83.8%
ENT	17,825	9.4	91.3%
Ophthalmology	43,123	9.2	93.6%
Oral Surgery	18,323	11.3	91.3%
Neurosurgery	2,533	9.5	80.6%
Plastic Surgery	11,804	7.0	92.2%
Cardiothoracic Surgery	1,869	6.6	93.1%
General Medicine	6,172	3.0	99.3%
Gastroenterology	11,866	4.0	98.8%
Cardiology	9,779	6.2	95.6%
Dermatology	6,895	6.1	96.3%
Thoracic Medicine	1,560	2.9	99.0%
Neurology	797	3.4	98.6%
Rheumatology	1,679	2.9	98.1%
Geriatric Medicine	180	0.9	100.0%
Gynaecology	28,557	6.5	93.8%
Other	34,030	5.9	93.0%

Notes: Referral to Treatment (RTT) data relates to the length of wait from GP to treatment.
In addition to those admitted for treatment and those who are still waiting (incomplete pathways), information is also available for those who are classified as non-admitted (a pathway that ends in a clock stop that does not require an admission or a non-treatment). In total there were 889,882 non-admitted patients in March 2012 of which 97.4% were treated within 18 weeks.
1Data for admitted patients is presented on an adjusted basis, i.e. including legitimate pauses of patients' waiting time clocks.
2 Considering only those with a known start time for the waiting time.
3 Median waiting times are estimates based on aggregated data rather than individual waiting times and are therefore only estimates of average waits.

Source: Referral to Treatment Statistics (DH). Available at: http://www.england.nhs.uk/statistics/rtt-waiting-times/rtt-data-2011-12/. (Accessed June 2013).

3.3.8 Outpatient waiting times

The outpatient waiting time is the length of time from the date the hospital received a request for an appointment to the actual date of the patient's attendance at the outpatient clinic. For the monitoring of performance and management, NHS providers and PCTs in England are required to provide quarterly information on the waiting list and waiting time for the first outpatient appointment for each consultant specialty. There are two versions of central returns, the commissioner-based return (QM08R) from PCTs for the population for which they are responsible and the provider-based return (QM08) from NHS Foundation Trusts and NHS Trusts. QM08R includes only patients who were referred by a GP or dentist, while QM08 includes also private patients and patients from other parts of the UK and overseas. These two data collections have now been replaced by the outpatient flows dataset. However, both returns exclude referrals by other consultants and other health professionals. For further information see: http://www.connectingforhealth.nhs.uk/systemsandservices/data/nhsdmds/faqs/waiting/outpatflows#1

Both sets of returns originally collected information on the number of GP and other health professional written referral requests for new outpatient appointments by specialty. However, to reduce the burden of data collection, this data has no longer been collected or published by specialty since Q2 2007/08. Thus the length of wait from receipt of GP written referral request to the first outpatient attendance by specialty is available pre Q2 2007/08, but subsequent to this information is only available for all specialties combined. Data also include waiting times for patients who have been waiting and had not yet been seen at the end of the quarter (although this has not always been available). Waiting times for other health professional referral requests, including by A&E departments, which account for one-third of total new outpatient appointments, are not collected.

Details of quarterly monitoring information on outpatient first attendance waiting time by consultant specialty were previously available on the DH website for both providers and commissioners (PCTs). However, to reduce the data burden, this information is no longer produced at specialty level and, from March 2010, only Referral to Treatment figures have been produced.

Similar outpatient waiting time information is obtained in Northern Ireland, Scotland and Wales. Annual outpatient waiting time statistics for Northern Ireland are published by the DHSSPS in *Hospital Statistics Volume 1*. For Scotland quarterly totals as well as new acute outpatient attendances and waiting time data by NHS Trusts and Health Boards (the commissioners) are published on the *Scottish Health Statistics* web site. However, waiting lists by consultant specialty are not available. Annual outpatient waiting time data for NHS providers and commissioning bodies in Wales are published by the Welsh Assembly in *Health Statistics*.

3.3.9 Inpatient waiting times

About half of all patients treated in NHS hospitals are emergency cases. The rest are admitted to hospital for treatment or investigation after a decision has been made by a consultant at an outpatient clinic. A date is offered as an elective admission either for inpatient stay or day case treatment. Self-deferral occurs when a patient is unable to attend or is suspended from the waiting list for medical or social reasons. The recorded waiting time in such cases is then reset to zero.

Every NHS hospital Trust maintains a waiting list for patients waiting for hospital treatment. This enables the Trust to manage the caseload of patients on the list and meets the central requirement to monitor the performance of waiting times. In England, waiting list statistics together with deferred admission information are collected from both PCTs, who commission health care for their populations, and from the NHS Foundation Trusts and NHS Trusts who provide most of the care. The resident based, aggregated, fast track quarterly returns submitted by PCTs (QF01) contain a summary of ordinary (i.e. inpatient) and day case waiting lists for their patients, while the provider based returns (KH07) contain details for all patients on the waiting lists at each Trust. As for outpatient waiting times, this information is no longer published at specialty level. However, RTT data are available for broad specialty groups.

Waiting list statistics are collected and compiled on a similar basis in Northern Ireland and Wales. However, in Scotland prior to April 2003, two waiting lists were maintained: one the 'True Waiting List' and the other the 'Deferred Waiting List'. As it was becoming difficult to distinguish between the two lists, a decision was made in 2002 and implemented in 2003 to move towards a single waiting list by abolishing the 'Deferred Waiting List'.

Details of quarterly monitoring information on inpatient waiting lists by consultant specialty separately for ordinary admissions and day cases are available on the DH website for both providers (NHS Trusts) and commissioners (PCTs) in England. Annual inpatient waiting lists statistics for Northern Ireland are published by the DHSSPS in *Hospital Statistics Volume 1*. In Scotland quarterly acute inpatient waiting list data by NHS Trust and Health Board (the commissioners) are published by the ISD on the *Scottish Health Statistics* website. However, waiting list information by consultant specialty is not available. Annual inpatient waiting list data for NHS providers and commissioning bodies in Wales are published by the Welsh Assembly in *Health Statistics Wales*.

3.3.10 Total waiting times

A patient's total waiting time from referral to inpatient admitted care comprises:

- From when the referral letter is received to see a specialist until the first outpatient attendance - outpatient waiting time

- First outpatient attendance to follow-up attendance for diagnostic tests
- Waiting for treatment at hospital - inpatient waiting time.

Hospital waiting times ***Key sources and information***

England

Details of monthly monitoring information on waiting lists by consultant specialty are available on the DH web site for both providers and commissioners (PCTs) at:

http://www.england.nhs.uk/statistics/rtt-waiting-times/rtt-data-2012-13/#Mar13

Earlier years of data are available from:

http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/en/Publicationsandstatistics/Statistics/Performancedataandstatistics/ReferraltoTreatmentstatistics/index.htm

Further information on waiting times data is available at:

http://www.england.nhs.uk/statistics/rtt-waiting-times/rtt-data-2011-12/

Northern Ireland

Annual waiting lists statistics for Northern Ireland are published by the DHSSPS in *Hospital Statistics Volume 1*:

http://www.dhsspsni.gov.uk/index/stats_research/stats-activity_stats-2/waiting_times_main.htm

Scotland

Quarterly acute waiting list data by Health Board are published by the ISD on the *Scottish Health Statistics* web site:

http://www.isdscotland.org/Health-Topics/Waiting-Times/

Data on A&E waiting times in Scotland is maintained by ISD in the national data warehouse known as the 'A&E Data Mart'.

Wales

Annual waiting list data for NHS Health Boards in Wales are published by the Welsh Assembly in *Health Statistics Wales*:

http://wales.gov.uk/topics/statistics/headlines/health2012/1209272/?lang=en

3.3.11 Community care

Not all of the specialist health care provided by the NHS is in a hospital setting. Community health care can be provided to help people such as the frail elderly or people with disabilities, mental or physical, to receive their care while continuing to live in the community rather than in institutions. Community health care includes a range of services such as ambulance services, chiropody, clinical psychology, community mental health (psychiatric) nursing, contraceptive services, HIV/AIDS and sexually transmitted disease services, district nursing, health advice and support programmes, learning disability nursing, occupational therapy, physiotherapy, specialist care nursing, speech and language therapy and community maternity services.

Community care ***Key sources and information***

England

Community care statistics are published by the Health and Social Care Information Centre, and include information on referrals, assessments and packages of care at council level.

See:
http://www.hscic.gov.uk/searchcatalogue?productid=11124&topics=1%2fSocial+care%2fSocial+care+activity&sort=Relevance&size=10&page=1#top

and also:

https://catalogue.ic.nhs.uk/publications/social-care/activity/comm-care-soci-serv-act-eng-11-12-fin/comm-care-stat-eng-2011-12-soci-serv-act-rep.pdf

Often information is presented for hospital and community services combined. This can present difficulties in creating a consistent series over time, particularly if the requirement is to create a series based solely on hospital services or solely on community services.

Northern Ireland

Further details can be found at:

http://www.dhsspsni.gov.uk/index/stats_research/stats-cib-3/statistics_and_research-cib-guide.htm

Scotland

For further information see:

http://www.scotland.gov.uk/Topics/Health/Support-Social-Care

Additional information is available at:

http://www.scotland.gov.uk/Topics/Statistics/Browse/Health

Wales

Statistics on key areas of community services are published through the Welsh Assembly Government website and include statistics on: community contraception and reproductive health, maternal and child health service activity, immunisation, treatment services for substance misusers and the community dental service. These are available from:

http://new.wales.gov.uk/topics/statistics/theme/health/primary-care/?lang=en

4 'Family Health Services' activity and workforce

Family Health Services *Selected key facts and trends*

- **General Medical Practitioners (GPs) are often the first point of call for patients, referring people to hospital and specialist treatment when necessary**
- **Family Health Services, also known as primary care services, are provided by GPs, pharmacists, dentists, opticians and other health care specialists**
- **In 2011 there were 48,000 GPs, 48,000 pharmacists, 28,000 dentists and 14,000 opticians contracted to the Family Health Services in the UK**

4.1 Family Health Services (FHS) statistics

Family Health Services (FHS), sometimes referred to as primary care services, are largely provided in the community through the NHS in the UK. The services include:

- General Medical Services (GMS) and Personal Medical Services (PMS)
- General Pharmaceutical Services (GPS)
- General Dental Services (GDS)
- General Ophthalmic Services (GOS).

Each of these services is described in detail in the following sub-sections. Primary care services are provided by general medical practitioners (GPs), dentists, pharmacists and opticians. These practitioners are mostly independent contractors providing services for the NHS and are remunerated and reimbursed for the services they provide based on nationally agreed contracts. In England, under the Personal Medical Services (PMS) and Personal Dental Services (PDS) schemes, a minority of GPs and dentists are salaried (see also the GMS and GDS sections below).

In England, services provided by the primary care sector were managed by Primary Care Trusts (PCTs) until March 2013. Since April 2013 they have been the responsibility of NHS England. Elsewhere in the UK, Health and Social Services Boards in Northern Ireland, Health Boards in Scotland and Local Health Boards in Wales have similar responsibilities for the management of primary care services (see Section 2.3 for details). As explained in Section 2 of this Guide, funding for some of the NHS FHS is in part not subject to in-year cash limits at PCT level (or the equivalent level elsewhere in the UK), though FHS expenditure has to be managed within the overall NHS resources.

Data on the activities and resources, including the workforce, for each FHS service are published in a number of reports and on websites for the countries within the UK. These are identified in the following sub-sections.

Table 4.1 shows the number of staff for key FHS groups; in 2011 there were almost 48,000 GPs, more than 48,000 pharmacists, nearly 28,000 dentists and approaching 14,000 opticians in the UK. Additional information relating to FHS staff is shown later in this Section.

Table 4.1. Family Health Services workforce (GPs, pharmacists, dentists and opticians), UK, 1951 - 2011

Headcount

Year	All GPs[1]	Pharmacists[2]	Dentists[3]	Opticians[4]
1951	22,478	-	11,279	7,778
1955	22,771	-	10,795	9,014
1960	23,408	-	11,213	9,158
1965	24,292	-	11,758	8,204
1970	24,865	-	12,263	7,854
1975	26,942	-	13,231	7,785
1980	29,336	-	14,655	8,876
1985	32,436	-	16,903	10,086
1990	34,083	33,395	18,065	7,934
1995	35,619	36,839	18,226	8,681
1996	35,868	37,832	18,431	8,913
1997	36,266	-	18,729	9,188
1998	36,677	-	19,121	9,584
1999	37,033	-	20,551	9,804
2000	37,314	-	20,925	9,726
2001	37,852	-	21,595	10,084
2002	38,388	47,087	21,780	10,174
2003	39,878	48,246	22,184	10,498
2004	41,384	49,487	22,964	10,736
2005	42,723	48,281	24,225	10,969
2006	42,989	48,961	24,120	11,393
2007	43,671	49,906	24,176	12,193
2008	45,292	50,804	25,074	12,049
2009	47,870	51,699	25,770	12,694
2010	47,173	52,725	26,681	13,186
2011	47,544	48,401	27,620	13,597

Notes:

Figures for the UK are aggregates of England, Wales, Scotland and Northern Ireland, which are not all based precisely on the same definition or timing.

1Including all medical practitioners and trainee GPs but excluding retainers.

2 Information prior to 1989 was not readily available. Data prior to 1997 are based on OECD Health Database 2009 and relate to practicing pharmacists. Data from 2002 onwards relate to the number of registered pharmacists and are from the General Pharmaceutical Council, the Royal Pharmaceutical Societies of Great Britain and Northern Ireland.

The apparent fall in 2011is due to leavers from the non-practising part of the register.

3 Dentist data prior to 2006 were as at 30th September, from 2006 onwards data are as at 31st March. Data for 2011for Northern Ireland relates to all dentists, including Salaried and Oasis dentists, in in earlier years data for Northern Ireland related to Principals only. Oasis dentists provide NHS and private dental care.

4 Optician figures comprise ophthalmic practitioners, ophthalmic opticians and dispensing opticians. From 1987 figures for England, Wales and Scotland relate to 31st March and for Northern Ireland to 1st July. From 1995 figures relate to 31st December for England and Wales and Scotland and to April for Northern Ireland.

As a result of the introduction of voucher scheme on 1st July 1986, which led to the cessation of dispensing opticians' contracts, figures are no longer available for them from 1987 onwards.

Figures from 1949 to 1954 relate to England and Wales only.

Figures from 1955 to 1968 relate to Great Britain only.

Sources:

Health and Personal Social Services Statistics for England (DH).
Scottish Health Statistics (ISD).
Health Statistics Wales (NAW).
StatsWales (NAW).
Annual Abstract of Statistics (ONS).
Population Projections Database (GAD).
Population Estimates and Projections (ONS).
OECD Health Database (OECD).
HPSS Workforce Census (DHSSPS in Northern Ireland).
Community Statistics (DHSSPS in Northern Ireland).
Annual Statistical Report (HSCBSO).
Annual Report (The Pharmaceutical Society of Northern Ireland).
GPhC Register Analysis 2011(University of Manchester).

FHS *Key sources and information*

The *Annual Abstract of Statistics* published annually online by ONS contains a number of summary tables on FHS expenditure, workforce and activity at national level for the four countries of the UK.

England

The *Department of Health Annual Report and Accounts* published annually by the Department of Health contains information on General Pharmaceutical and General Dental Services.

Main Estimates published annually by HM Treasury has information on General Ophthalmic Services.

Investment in General Practice published annually by the Health and Social Care Information Centre (HSCIC) contains data on General Medical Services.

Northern Ireland

The corresponding information can be found in the ONS *Annual Abstract of Statistics,* published annually online.

Scotland

Details of FHS statistics are published annually by the Scottish Information Services Directorate (ISD) in *Scottish Health Statistics* and *Scotland Health Services (Cost Book)*:

http://www.isdscotland.org/Health-Topics/Finance/Costbook/Costs_Guidance_Manual_2010.pdf

Wales

Health Statistics Wales produced annually by the Welsh Assembly is the key source of FHS statistics:
http://wales.gov.uk/topics/statistics/headlines/health2012/1209272/?lang=en

4.2 General Medical Services (GMS)

Practically everyone in the UK is registered with a GP practice. For most people seeking medical treatment, the GP is the first point of face-to-face contact with the NHS. Patients may also contact the NHS through the NHS 111 telephone service which operates a 24-hour advice service, providing information on particular health problems, where to seek further help and how to help oneself. It is normally a GP referral that gives access to hospital and specialist treatment, the exception being admission as an emergency case from a hospital A&E department (see Figure 3.3 in Section 3).

In addition to providing essential services as described in detail below, many GPs are approved to carry out minor surgery within their practices. This is the result of an increasing numbers of GPs undergoing training in surgical procedures/specialist areas. They are known as GPs with special interests (GPwSIs), see http://www.pcc-cic.org.uk/. Other GP services include child health surveillance, maternity services and health promotion programmes. In rural areas some GPs, 'dispensing doctors', may be approved to dispense medicines and supply certain appliances in their surgeries to any patient who has serious difficulty in obtaining them from a pharmacist, or who lives at least a mile (1.6 kilometres) from the nearest pharmacy.

Along with the increased funding for the GMS and changes in practice organisation and the range of services available, the number of support staff employed by general practices has risen significantly. Support staff includes practice nurses and other staff for direct patient care, plus administrative and clerical staff.

As a result of the 'new' GP contract in 2004, GP practices, rather than individual GPs, are contracted to NHS Primary Care Organisations (PCOs, i.e. Primary Care Trusts in England (until March 2013 – NHS England since then) and equivalent bodies in the other UK countries) to provide services. This has resulted in some discontinuities in available data, which are now available at practice rather than individual GP level.

Personal medical services (PMS) and personal dental services (PDS – see Section 4.3) schemes were introduced in England in April 1998 through the NHS (Primary Care) Act of 1997. PMS cover the same type of services as GMS except that GPs under PMS are paid for delivery of a locally (not nationally) agreed contract through cash-limited resources which are allocated annually. Many PMS GPs are salaried NHS staff rather than independent contractors to the NHS.

Table 4.2. Number of general medical practitioners[1] (GPs including registrars) in general practice, and per 100,000 population, by country, UK, 1985 - 2012

30th September[2]

	Headcount of medical practitioners[1]				
Year	England	Wales	Scotland	Northern Ireland	UK
1985	25,793	1,699	3,539	933	31,964
1990	27,184	1,800	3,689	969	33,642
1995	28,869	1,845	3,872	1,033	35,619
2000	30,252	1,903	4,067	1,092	37,314
2001	30,685	1,919	4,148	1,100	37,852
2002	31,182	1,930	4,163	1,113	38,388
2003	32,593	1,932	4,237	1,116	39,878
2004	34,085	1,931	4,248	1,120	41,384
2005	35,302	1,952	4,345	1,124	42,723
2006	35,369	2,034	4,428	1,158	42,989
2007	35,855	2,101	4,522	1,193	43,671
2008	37,213	2,138	4,727	1,214	45,292
2009	39,798	2,101	4,749	1,222	47,870
2010	38,990	2,206	4,752	1,225	47,173
2011	39,343	2,224	4,748	1,229	47,544
2012	39,944	2,238	4,721	1,167	48,070
	Per 100,000 population				
	England	Wales	Scotland	Northern Ireland	UK
1985	55	61	69	60	57
1990	57	63	73	61	59
1995	60	64	76	63	61
2000	61	65	80	65	63
2001	62	66	82	65	64
2002	63	66	82	66	65
2003	65	66	84	66	67
2004	68	66	84	65	69
2005	70	66	85	65	71
2006	70	69	87	66	71
2007	70	71	88	68	72
2008	72	71	91	68	74
2009	77	70	92	68	77
2010	75	73	91	68	76
2011	74	73	90	68	75
2012	75	74	89	64	76

Notes: 1Comprising all medical practitioners in general practice, including GP registrars (trainees) but excluding GP retainers.
2 Data for England and Wales are as at 1st October before 2000. Data for Northern Ireland from 1996 to 2002 are as at 1st January and from 2003 onwards are as at 1st October. Data for Scotland are as at 1st October before 2005.

Sources: Health Statistics Wales (NAW).
Population Estimates and Projections (ONS).
Health and Personal Social Services Statistics for England (DH).
Scottish Health Statistics (ISD).
Annual Statistical Report (HSCBSO).
General and Personal Medical Services Statistics: England and Wales (DH).
General and Personal Medical Services Statistics: England and Wales (HSCIC).
Population Estimates and Projections (ONS).
2011Census, Population and Household Estimates for England and Wales (ONS).
2011Census (General Registrar Office for Scotland).
2011Census (Northern Ireland Statistics and Research Agency).

4.2.1 GMS data sources

The General Medical Services Database (the Exeter System) contains information about general practice in England. It is a computerised register of all GPs who are under contract with the NHS in England and records every registration of a patient to a GP practice. The database is based on statistical returns 'General and Personal Medical Services Census' collected from PCTs in England (similar systems exist in Northern Ireland and Scotland and from Local Health Boards in Wales) at 30th September every year (1st October before 2000). The database contains details of each GP, including name, age, sex, patient list size, partnership structure, country of qualification, practice supporting staff and services offered by doctors. Like most central returns, data are collected for administrative purposes and no clinical data on patients are available.

As most GPs' remuneration now depends partly on their activity, data collection systems reflect this. In general, data at patient level is not available from these systems. But nationally analysed data in terms of the GMS Quality and Outcomes Framework (QOF) provides a source of information relating to GP activity at practice level; this is described in further detail in Section 4.2.4.

General practice activity such as consultations, prescribing and minor surgical procedures can be obtained through commercial patient record databases or through extracts of computerised general practice databases using software such as MIQUEST:

http://systems.hscic.gov.uk/data/miquest

GMS workforce statistics are discussed in more detail in Section 4.2.2 and further information on GP consultation rates is discussed in Section 4.2.5.

Table 4.3 contains information relating to average patient list size per GP. This shows that for all countries the average list size has decreased over the past decade. For Scotland, this information is now available only in terms of the list size per GP practice, but we have estimated the average list size per individual GP.

Table 4.3. Average patient list size of medical practitioners[1] (excluding GP registrars and retainers) in general practice, by country, UK, 1964 - 2012

30th September[2]

	Average list size				
Year	England	Wales	Scotland[3]	Northern Ireland	United Kingdom
1964	2,379	2,136	2,013	1,982	-
1965	2,423	2,192	2,066	2,001	-
1970	2,478	2,192	2,045	2,091	-
1975	2,365	2,193	1,939	2,105	-
1980	2,247	2,086	1,832	2,097	-
1985	2,068	1,914	1,668	1,865	2,016
1990	1,942	1,813	1,592	1,811	1,894
1995	1,835	1,708	1,506	1,714	1,833
1996	1,820	1,694	1,488	1,700	1,818
1997	1,815	1,681	1,468	1,690	1,810
1998	1,809	1,685	1,450	1,693	1,801
1999	1,788	1,665	1,441	1,679	1,778
2000	1,795	1,676	1,425	1,686	1,779
2001	1,780	1,665	1,409	1,670	1,768
2002	1,764	1,679	1,392	1,652	1,716
2003	1,736	1,659	1,380	1,658	1,692
2004	1,666	1,674	1,343	1,663	1,633
2005[3]	1,613	1,650	*1,333*	1,655	1,587
2006[3]	1,610	1,643	*1,317*	1,631	1,582
2007[3]	1,606	1,598	*1,297*	1,625	1,574
2008[3]	1,586	1,605	*1,299*	1,610	1,558
2009[3]	1,520	1,616	*1,282*	1,615	1,503
2010[3]	1,567	1,584	*1,296*	1,623	1,542
2011[3]	1,562	1,564	*1,295*	1,635	1,537
2012[3]	1,569	1,575	*1,295*	1,635	1,544

Notes:
1964 is the first year of available data.
Figures for the UK are weighted averages, weighted by the number of medical practitioners.
- UK figures are not available prior to 1985 and cannot be estimated as GP workforce data was not available.
1Due to the introduction of the new GMS contract (1st April 2004), some of the definitions and groupings used to represent the GP workforce have changed. Figures presented from 1994 have been revised in light of the new GP contract and correspond to medical practitioners, including all contracted and salaried GPs but excluding registrars and retainers. Prior to 1994 figures relate to unrestricted principals (UPE), the category of UPE is no longer identified apart from in Northern Ireland.
2 Data for England and Wales are as at 1st October before 2000. Data for Northern Ireland from 1996 to 2002 are as at 1st January and from 2003 onwards are as at 1st October. Data for Scotland are as at 1st October before 2005.
3 Figures in italics for Scotland for 2005 onwards are OHE estimates based on the average practice list size, the number of practices and the number of medical practitioners (excluding GP registrars and retainers) in Scotland.

Sources:
Health and Personal Social Services Statistics for England (DH).
Scottish Health Statistics (ISD).
Health Statistics Wales (NAW).
Annual Statistical Report (HSCBSO).
Annual Abstract of Statistics (ONS).
NHS Staff (HSCIC). Copyright © 2013, Re-used with the permission of The Health and Social Care Information Centre. All rights reserved.
General and Personal Medical Services Statistics: England and Wales (DH).
General and Personal Medical Services Statistics: England and Wales (HSCIC). Copyright © 2013. Re-used with the permission of The Health and Social Care Information Centre. All rights reserved.
NHS Staff 2002-2012 General Practice detailed tables (HSCIC). Copyright © 2013. Re-used with the permission of The Health and Social Care Information Centre. All rights reserved.
General Medical Practitioners - StatsWales (NAW).
General Medical Services Statistics (Northern Ireland CSA).

4.2.2 GMS workforce statistics

There are various types of general medical practitioners (GPs) working in general practice. The classification of GPs is based on their qualifications and the type of contract they have with the NHS. Under the new GMS contract from 1st April 2004, medical practitioners working in general practice are categorised as: registrars, retainers and all practitioners. A GP registrar is a fully registered practitioner who is being trained for general practice while a GP retainer is one who is employed by the general practice to provide approximately half a day each week.

PMS pilots, which first began in 1998, introduced a new method of paying GPs. Under the PMS scheme, a GP practice undertakes to provide services to the community for a fixed period of time, in return for a fixed financial payment. Salaried GPs who work in PMS were previously classified as 'PMS Other' and are now classified into 'GPs other/salaried GPs', this group also includes those previously known as 'GMS other'. 'All practitioners' include GMS and PMS contracted or salaried GPs, GMS others and PMS others, and exclude registrars and retainers. Similar arrangements are also in place in Northern Ireland, Scotland and Wales.

In recent years, there has been an increase in the number of multi-partner practices where GPs work in group practice. Despite this increase, there are still concentrations of single-handed practices in some areas in the UK, particularly in inner cities and on some Scottish islands.

GP classification ***Issues and points of interest***

The new categorisation of medical practitioners working in general practice has created problems in the use of GMS workforce statistics. Some statistical tables published by the DH have been revised to achieve some backward compatibility but this is only available for a ten-year period. This makes long term trend analysis difficult. Furthermore, the inclusion of 'GMS other' (GP assistants) in 'all practitioners' (formerly Unrestricted Principals) in the calculation of average list size served by a GP also distorts the true picture of GP workload. As a consequence, where possible the revised data should be used to consider a continuous series and caution should be applied when making comparisons over time or between countries in the UK.

4.2.3 The 'new' GMS contract

A new GMS contract governing payments to GPs took effect throughout the UK on 1st April 2004.

Key features include:

- The contract is between the GP practice and the PCO rather than between the individual GP and the PCO.
- Patients are registered with a practice and funding of the practice is based on the predicted health needs of its patients as a group. An allocation formula (global sum formula) is used to calculate the weighted needs of a practice's patients taking into account the differences in workload and costs.

Information relating to the global sum payment system is available via:

http://www.nhsemployers.org/PayAndContracts/GeneralMedicalServicesContract/GMSfinance/globalsumformula/Pages/GlobalSumFormula.aspx

Under the 2004 GMS contract, practices can choose to offer:

- Only the 'essential services', including management and providing primary medical care to registered and temporary patients in core hours
- Essential services plus 'additional services' such as child health surveillance, screening and some minor surgeries.

In addition to the above there are 'enhanced services' such as influenza immunisation, treating patients with drug or alcohol abuse problems and the homeless. Some 'enhanced' services are defined according to a national specification, others can be negotiated locally.

GPs are allowed to opt out of providing out-of-hours care. PCOs are then responsible for finding alternative providers of out of hours cover.

Practices are rewarded financially in part (around a quarter of their total income on average) according to a 'Quality and Outcomes Framework' (QOF) by scoring points in each of the four domains: clinical, organisation, patient experience and additional services. See '*Delivering Investment in General Practice: Implementing the New GMS Contract*' (2003, Department of Health see

http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4070231.pdf) for details and Section 4.2.4 following.

A number of GP practices offer dispensing of prescriptions (in locations where community pharmacists are relatively inaccessible); these numbers are shown in Table 4.4a and 4.4b. Whereas in the past information on dispensing doctors was available for all constituent countries, it is now collected for some countries in terms only of the number of dispensing practices rather than dispensing doctors; this is likely to create issues in considering a long time series for this data in coming years.

Table 4.4(a). Number of dispensing GP practices by country, UK, 2000 - 2011

	Year									
	2000	2001	2004	2005	2006	2007	2008	2009	2010	2011
United Kingdom	-	-	1,419	1,416	1,402	1,383	1,364	1,362	1,352	1,336
England	-	-	1,181	1,179	1,166	1,149	1,135	1,139	1,129	1,118
Wales[1]	-	-	88	88	88	89	*89*	*89*	89	87
Scotland	-	-	139	138	137	135	131	129	128	125
Northern Ireland	-	-	11	11	11	10	9	5	6	6

Notes: - Data not available.
1Data for Wales for 2008 and 2009 are not accurately available but according to NHS Wales Primary Care Services is given as between 80 and 90 for these years.

Sources: Dispensing Doctors association using data from Prescribing Services Unit (PSUIT).
Health and Social Care Business Services Organisation (HSCBSO).

Table 4.4(b). Number of NHS prescription items dispensed by dispensing doctors by country, UK, 2000 - 2011

Millions

	Year									
	2000	2001	2004	2005	2006	2007	2008	2009	2010	2011
United Kingdom	44.3	47.1	56.6	60.2	63.1	66.9	54.4	72.0	73.4	74.4
England	39.0	41.6	50.4	53.6	56.3	59.8	47.1	64.5	65.7	66.9
Wales	2.5	2.6	3.1	3.3	3.5	3.8	4.0	4.1	4.3	4.4
Scotland	2.4	2.6	2.8	3.0	3.1	3.1	3.2	3.2	3.2	3.1
Northern Ireland	0.4	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1

Sources: NHS Prescription Services, NHSBSA, previously the Prescription Pricing Authority Annual Reports (PPA).
Health and Personal Social Services Statistics for England (DH).
Scottish Health Statistics (ISD).
Health Statistics Wales (NAW).
Annual Statistical Report (HSCBSO).
General and Personal Medical Services Statistics: Detailed Results (DH).
General and Personal Medical Services Statistics: Detailed Results (HSCIC).

4.2.4 The Quality and Outcomes Framework

The Quality and Outcomes Framework (QOF) has provided a rich source of information on performance against indicators and also estimates of disease prevalence. Since the sample for which the prevalence estimates are calculated represents the registered population, which is close to but not exactly the whole population, caution should be taken when interpreting the prevalence estimates.

Table 4.5 provides details of the areas for which there are indicators under the QOF in 2013/14. It can be seen that a range of clinical areas are covered, for which there are a number of related indicators.

Table 4.5. Quality and Outcomes Framework indicators, 2013/14

Domain	Areas	Number of indicators
Clinical	Coronary heart disease,), heart failure, stroke and transient ischaemic attack, hypertension, diabetes mellitus, chronic obstructive pulmonary disease, epilepsy, hypothyroidism, cancer, palliative care, mental health, asthma, dementia, depression, chronic kidney disease, atrial fibrillation, obesity, learning disabilities and rheumatoid arthritis.	93
Public Health	Cardio-vascular disease (primary prevention), blood pressure, obesity and smoking	9
Public Health Additional Services	Cervical screening, child health surveillance, maternity services and contraception (sexual health).	9
Quality and Productivity	Data reviews on e.g. outpatient referrals, emergency admissions as well as comparing information with other contractors etc.	9
Patient	Consultation length and patient experience of access to GPs.	1

Note: The indicators are relevant to all countries of the UK.
Source: 2013/14 general medical services (GMS) contract quality and outcomes framework (QOF). (NHS England, BMA and NHS Employers). Available at: http://www.nhsemployers.org/Aboutus/Publications/Documents/qof-2013-14.pdf. (Accessed September 2013).

4.2.5 Estimating the number of GP consultations

Information relating to consultations is available from patient record databases such as the Clinical Practice Research Datalink, which is operated on a self-financing, not-for-profit basis (see http://www.cprd.com/intro.asp). In addition, self-reported information is available from the General Lifestyle Survey, ONS, on:

> the percentage of persons who consulted a doctor in the 14 days before interview, by age, sex and economic activity status.

In order to estimate consultation rates in the UK based on this information, the number of consultations per age group is multiplied by population estimates within those age groups, split by gender. This information is provided in Table 4.6. For example, considering males and females combined, those aged 75 and over visited their doctors an average of 8 times in the previous year, which equates to approximately 36 million consultations.

For England, consultation numbers are also available from QResearch via the Health and Social Care Information Centre website. They are presented based on a number of different methods, by age and sex and also by whether the consultation was with a nurse or a GP. See the publication 'Trends in General Practice' under the General Practice sub section of the Primary Care section on the Health and Social Care Information Centre website:

http://www.hscic.gov.uk/media/11511/General-Practice-Trends-in-the-UK-to-2011/pdf/General_Practice_Trends_in_the_UK_to_2011.pdf

Table 4.6. Average number of NHS GP consultations per person per year by age of patient, GB, 1975 - 2009

	Year							
	1975	**1980**	**1990**	**2000**	**2006**	**2007**	**2008**	**2009**
All Males	**3**	**4**	**4**	**4**	**3**	**4**	**4**	**4**
0-4	4	6	9	6	4	5	5	4
5-15[1]	2	3	3	2	2	2	2	2
16-44[1]	2	3	3	3	2	2	3	3
45-64	4	4	5	5	4	4	4	5
65-74	4	6	5	6	6	7	7	7
75 and over	7	7	7	6	8	7	8	8
All Females	**0**	**0**	**6**	**5**	**5**	**5**	**5**	**6**
0-4	4	5	7	4	5	5	5	4
5-15[1]	4	5	4	3	2	2	2	2
16-44[1]	2	3	6	5	5	5	6	6
45-64	4	5	6	5	5	5	6	6
65-74	4	4	6	7	7	5	7	8
75 and over	5	6	7	7	7	6	7	7
Total	**6**	**6**	**5**	**4**	**4**	**4**	**5**	**5**
0-4	0	0	8	5	5	5	5	4
5-15[1]	4	4	4	2	2	2	2	2
16-44[1]	4	6	5	4	4	4	4	4
45-64	2	3	5	5	5	5	5	5
65-74	3	4	6	6	7	6	7	7
75 and over	4	4	7	7	7	6	8	8

Estimated number of NHS GP consultations by age of patient, UK, 1975 - 2009

Millions

All Males	**83**	**99**	**117**	**113**	**98**	**101**	**117**	**124**
0-4	8	11	18	11	7	9	9	8
5-15[1]	10	14	11	8	7	7	7	7
16-44[1]	27	31	38	37	25	25	38	38
45-64	23	23	30	34	30	30	30	38
65-74	8	13	11	14	14	17	17	18
75 and over	6	7	9	10	14	13	15	15
All Females	**113**	**143**	**174**	**153**	**155**	**148**	**177**	**180**
0-4	7	9	13	7	9	9	9	7
5-15[1]	9	13	14	11	7	7	7	7
16-44[1]	46	63	75	61	63	63	75	75
45-64	25	28	37	35	38	39	47	48
65-74	15	17	17	19	19	13	19	22
75 and over	11	14	18	19	20	17	20	20
Total	**196**	**241**	**291**	**266**	**253**	**249**	**295**	**304**
0-4	15	20	31	18	16	18	18	15
5-15[1]	20	27	25	19	14	14	14	14
16-44[1]	73	94	113	98	88	88	113	113
45-64	48	51	68	70	68	69	77	86
65-74	23	29	28	32	33	30	36	40
75 and over	17	21	28	29	34	30	35	36

Notes: All figures are subject to rounding and sampling errors.
The estimated number of GP consultations for the UK is obtained by applying the GB rates to the UK population
Data shown for 1998 onwards are based on data weighted to compensate for differential non-response thus making the results more representative of the population (see General Lifestyle Survey ONS).
From 1988 to 2004 the General Household Survey was on a financial year basis with interviews taking place from April to the following March.
According to the ONS, the 2011dataset including that for GP visits will be available soon from the UK Data Archive.
1In 1975, figures relate to age groups 5-14 and 15-44, respectively.

Sources: Living in Britain: Results from the General Household Survey (ONS).
General Lifestyle Survey (ONS).
Population Projections database (GAD).
Population Estimates and Projections (ONS).

GMS *Key sources and information*

England and Wales

Statistics for General Medical Practitioners in England, previously published by the DH and now by the IC, contains two sets of tables (bulletin and detailed) relating to GPs providing GMS and PMS in England. The data are derived from the GMS and PMS census:

Trends in consultation rates in General Practice produced by QResearch are available through the IC:
http://www.hscic.gov.uk/primary-care

Northern Ireland

There are no published data for Northern Ireland on GMS. However some basic information, including the number of GPs and payments to GPs, appears in the ONS *Annual Abstract of Statistics* in the table about 'Hospital and general health services' for Northern Ireland.

Scotland

Like their English and Welsh counterparts, data are collected through an annual census of all GPs and associated medical practice staff. Summary tables for the numbers and types of GPs, practice list sizes, and number of practices by Health Board at 1st October are published by the ISD in *Scottish Health Statistics*. The set of tables, however, is not as comprehensive as that found for England and Wales:
http://www.isdscotland.org/Health-Topics/General-Practice/

UK and Great Britain

The Clinical Practice Research Datalink (CPRD) contains a wealth of information related to general practice activity in the UK and is based on a sample of approximately 8 per cent the population. It includes information ranging from drug utilisation to health outcomes:
http://www.cprd.com/intro.asp

The Quality and Outcomes Framework (QOF) contains information on disease prevalence and also on general practice performance against a set of indicators. For further information for England, Northern Ireland, Scotland and Wales see respectively:

http://www.hscic.gov.uk/qof

www.dhsspsni.gov.uk/index/hss/gp_contracts/gp_contract_qof.htm

www.isdscotland.org/qof

http://www.wales.nhs.uk/sites3/docmetadata.cfm?orgid=480&id=62501&pid=17050

The General Lifestyle Survey, formerly the General Household Survey, ONS, contains information on self reported consultation rates:

http://www.ons.gov.uk/ons/search/index.html?pageSize=50&newquery=general+lifestyle+survey

4.3 General Pharmaceutical Services (GPS)

General Pharmaceutical Services (GPS) relate to dispensing of prescriptions in the community by pharmacists, appliance contractors or dispensing doctors, and prescriptions for items personally administered such as vaccinations, but do not include the use of hospital medicines. A great majority of prescriptions dispensed in the community are written by GPs and a small proportion by dentists and nurses. Since 1998, community nurses and practice nurses have been trained to become independent prescribers of a limited formulary. Since 2006 some nurses have gained further qualification to prescribe any medicine for any condition within their competence in England, with similar schemes for nurse prescribers in the other constituent countries, see:

https://www.gov.uk/government/publications?keywords=nurse+prescribing&publication_filter_option=all&topics%5B%5D=all&departments%5B%5D=department-of-health&world_locations%5B%5D=all&direction=before&date=2013-05-01

A very small proportion of prescriptions dispensed in the community are written by hospital doctors. Together with medicines issued and dispensed to their patients by hospitals, these sources constitute the NHS medicines supply system.

GPS were until 31st March 2013 managed by PCTs in England and by similar bodies in Northern Ireland, Scotland and Wales. In England the role has been taken by NHS England since 1st April 2013. In England the processing of prescription information and reimbursement of the costs of prescriptions are handled by the NHS Prescription Services within the NHS Business Services Authority (NHSBSA). In Northern Ireland this role is fulfilled by the Family Practitioner Services (FPS) Pharmaceutical Services of the Health and Social Care Business Services Organisation. In Scotland, the Practitioner Services Division of the Common Services Agency is responsible for processing and reimbursing all prescriptions dispensed in Scotland. In Wales, these functions are performed by the Prescribing Services Unit of Health Solutions Wales.

4.3.1 The Drug Tariff

One of the main functions of the NHS prescription services is to calculate and make payments to dispensing contractors for the NHS prescriptions they dispense. The amount reimbursed includes a dispensing fee, container allowance and the cost of the medicines, less a deduction ('clawback') to allow for the discount the dispensers are assumed to have received from suppliers. The Drug Tariff, see: www.ppa.org.uk/ppa/edt_intro.htm, compiled monthly by the NHS Prescription Services, lists the prices of dispensed drugs, appliances etc. at which NHS dispensers are reimbursed. It also sets out the way that dispensing fees and other payments such as container allowances are calculated.

In addition to reimbursement and remuneration information, the Drug Tariff carries lists of prescription items or appliances a contractor can prescribe or dispense. The Drug Tariff also contains an up to date list of preparations that not be prescribed on NHS prescriptions. This so called 'black list', or Schedule 10, was first introduced in 1985 to exclude from NHS prescriptions a number of branded products for which generics were available and products deemed to be of no medicinal use. The Drug Tariff also contains a list of preparations that can only be prescribed under certain criteria or conditions (XVIIIB), for instance the prescription of clobazam for patients suffering from epilepsy, or of sildenafil (Viagra) for erectile dysfunction. Patients requiring excluded medicines may obtain them through a private prescription if they are willing to meet the whole cost themselves.

4.3.2 The NHS medicines bill

Total expenditure on GPS comprises total medicines expenditure (the medicines bill) and dispensing costs (that is the remuneration paid to contractors). These figures are derived from the NHS Prescription Services reimbursement system, in which payments to dispensers include the basic price of a medicine (the 'net ingredient cost') less an assumed discount (called the 'clawback') plus dispensing fees and other costs.

The medicines bill is the cash amount after discount that is paid to pharmacists, appliance contractors and dispensing doctors for medicines and appliances dispensed in the community for prescriptions written by NHS practitioners including GPs, nurses, dentists and hospital doctors where the prescription is for dispensing in the community (this is a small number). The amount is gross in that it includes patient charges (co-payments), but it does not include dispensing costs. In the previous Departmental Reports on expenditure plans published by the DH the total figure for England represents cash reimbursement between April and March, i.e. during a financial year. This in turn relates to prescriptions prescribed between February and January due to the two-month time lag in processing and payment by the NHS Prescription Services. This is what is known as the cash expenditure for reimbursement during the financial year. The resource expenditure, on the other hand, is the actual cost of drugs and appliances dispensed during the financial year. The use of cash or resource terms creates confusion. For instance, for 2001-02, in cash terms the drugs bill for England showed a 7.6 per cent increase over the previous year. However, in resource terms the increase was 10.7 per cent.

Discrepancies also arise when the NHS medicines bill is published based on calendar year instead of financial year. An added complication is the use of net ingredient cost (NIC) without adjustment for discounts in some official publications on pharmaceutical expenditure, which causes confusion in the interpretation of the medicines bill.

Information on calculating the NHS medicines bill is given in the methods box 'Estimating the NHS medicines bill at manufacturers' prices' on page

137. By utilising the available statistics, and making the assumptions outlined in this box, the NHS medicines bill at manufacturers' prices for 2011 was £13,079 million in the UK, representing 9.8 per cent of total NHS expenditure, see Table 4.7.

Methods ***Estimating the NHS medicines bill at manufacturers' prices***

An estimate of the total UK NHS medicines bill can be constructed by taking into account the discounts wholesalers and dispensers receive for community dispensed medicines and adding to the community medicines bill the hospital expenditure on medicines, but excluding dressings and appliances (which are, in general, not related to pharmaceutical manufacturing). This gives a more representative pharmaceutical expenditure figure, which includes not only spend on medicines dispensed in the community but also the NHS hospital drugs spend.

As community pharmacists receive a discount from their suppliers of medicines which could vary from pharmacy to pharmacy, a few assumptions have to be made. To allow for discount the net ingredient cost (before discounts) of prescriptions dispensed in the community during the year is deflated by using a standard manufacturers' discount rate to wholesalers of 12.5 per cent (15 per cent prior to 1980). The result is known as 'NHS sales at manufacturers' prices'. These figures are representative of NHS expenditure on medicines, although the assumed discount percentage may differ slightly to that obtained by the NHS, which varies from year to year.

For hospitals, the prices of medicines bought by NHS Trusts in England are determined by negotiation between the manufacturers and either the individual Trusts or consortia of Trusts or through the Department of Health Commercial Medicines Unit acting on their behalf. Northern Ireland, Scotland and Wales have similar arrangements. Again the assumed wholesale discount factor of 12.5 per cent is used to deflate the total NHS hospitals medicines spend. See Table 4.7.

Table 4.7. Estimated total NHS expenditure on pharmaceuticals at manufacturers' prices[1], UK, 1969 - 2011

£ million (cash)

Year	Pharmaceutical services[1]	Dispensing doctors[1]	Hospital[1]	Total NHS medicines[1]	NHS medicines cost: Per capita[2] £ (2011 prices)	% total NHS cost	% of GDP
1969	113	5	26	144	31.01	8.3	0.31
1970	124	6	29	159	31.85	8.0	0.31
1975	208	12	59	279	30.09	5.4	0.26
1980	613	35	178	826	44.49	7.3	0.35
1985	1,217	74	336	1,627	63.07	9.5	0.45
1990	1,918	121	495	2,533	73.95	8.9	0.44
1995	3,406	286	891	4,583	112.54	11.0	0.62
1996	3,749	241	890	4,880	115.99	11.2	0.62
1997	4,090	259	978	5,327	123.75	11.7	0.64
1998	4,409	291	1,107	5,807	131.84	12.1	0.66
1999	4,977	322	1,251	6,551	145.19	12.5	0.70
2000	5,264	337	1,390	6,991	153.40	12.3	0.72
2001	5,753	367	1,552	7,672	164.98	12.2	0.75
2002	6,450	409	1,764	8,623	180.66	11.9	0.81
2003	7,069	447	2,041	9,557	194.65	11.9	0.84
2004	7,581	482	2,340	10,403	205.54	11.9	0.87
2005	7,377	471	2,409	10,258	196.64	10.6	0.81
2006	7,640	490	2,575	10,705	198.28	10.4	0.80
2007	7,804	492	2,928	11,224	202.11	10.0	0.79
2008	7,767	479	3,389	11,635	201.97	9.8	0.81
2009	7,969	472	3,836	12,278	208.97	9.7	0.88
2010	8,249	471	4,132	12,852	211.26	9.8	0.88
2011	8,210	451	4,418	13,079	207.01	9.8	0.86

Notes: All figures exclude dressings and appliances.
GDP = Gross Domestic Product at market prices.
1These figures have been obtained by deflating the net ingredient cost (before discount) of prescriptions dispensed during the year with a standard manufacturers' discount rate of 12.5 per cent (15 per cent prior to 1980). They are also known as NHS sales at manufacturers' prices'. These figures are representative of NHS expenditure on medicines, although the discount rate may differ slightly to that obtained by the NHS, which varies from year to year. Figures from 1996-2011for hospital expenditure are based on English data and a population grossing factor to yield a UK estimate.
2 At 2011prices, as adjusted by the GDP deflator at market prices.

Sources: NHS Prescription Services, NHSBSA, previously the Prescription Pricing Authority Annual Reports (PPA).
Annual Abstract of Statistics (ONS).
Health and Personal Services Statistics for England (DH).
Scottish Health Statistics (ISD).
Health Statistics Wales (NAW).
Hospital Prescribing (HSCIC). Copyright © 2013. Re-used with the permission of The Health and Social Care Information Centre. All rights reserved.
Economic Trends and Labour Market Review (ONS).
Population Estimates and Projections (ONS).
2011Census, Population and Household Estimates for England and Wales (ONS).
2011Census (General Registrar Office for Scotland).
2011Census (Northern Ireland Statistics and Research Agency).
Intercontinental Medical Statistics (IMS).
Department of Health Departmental Report (DH).
Economic Indicators (HM Treasury).

4.3.3 Community pharmacy

Pharmacies and appliance suppliers are contracted to local PCTs in England (until 31st March 2013, contracted to NHS England since then) and equivalent bodies in Northern Ireland, Scotland and Wales to provide dispensing services for the NHS. Community pharmacies can dispense the full range of drugs and appliances listed in the NHS Drug Tariff, while appliance contractors can only supply certain appliances, including the supply and fitting of stoma and continence appliances. The terms 'chemists' and 'pharmacies' are sometimes used interchangeably to refer to community pharmacies and appliance contractors taken together.

Community pharmacies are required by their NHS terms of service to supply medicines and certain appliances ordered on NHS prescription forms. Dispensing must be performed by a registered pharmacist and medicines must be of the quality specified. Medicines and appliances will normally be supplied from stock purchased by the retail pharmacies from a wholesaler, or in some cases directly from the manufacturer. Remuneration of, and reimbursement to, community pharmacies is financed directly by the Department of Health in England and its counterparts in Northern Ireland, Scotland and Wales. In England the processing of prescription forms and payments to dispensers of prescriptions is administered by the NHS Prescription Services of the NHSBSA.

Information about the number of pharmacies and appliance contractors in contract with the NHS to dispense NHS prescriptions in England and Wales has been published annually by the Health and Social Care Information Centre since 2005, and was previously published by the Department of Health. This bulletin (see 'Key sources and information' for GPS on page 154) contains the number of closures and openings of pharmacies, decisions on applications to open pharmacies and schemes for the disposal of unwanted medicines. For Scotland, similar but less detailed information can be found on the Scottish Information Services Directorate website. However, there is no such information available for Northern Ireland.

4.3.4 Prescribing in the community

In England, Clinical Commissioning Groups (CCGs) are currently responsible for setting and managing the prescribing budgets of their constituent GP practices. Similar bodies exist in Northern Ireland, Scotland and Wales to manage prescribing budgets. Like HCHS commissioning, the prescribing budget in primary care is cash-limited and comes within the CCG unified budget allocation from the DH. It is cash-limited so that any overspend on the prescribing budget has to be offset by a reduction in other parts of the budget and vice versa. Thus although the formula used to derive CCGs' funding allocations is calculated using a weight of about 15 per cent for expected costs of prescribing, individual CCGs are free to determine how to allocate their total unified budget as they wish. The setting of prescribing budgets by CCGs for GP practices in their area is

based on a mix of a weighted capitation methodology, historic prescribing patterns and local judgement.

Statistical information about the volume of prescriptions and the associated costs are published regularly by government departments or agencies of the respective countries in the UK. Details about this are described in the 'Key sources and information' on page 154 and also in Section 4.4. In 2012 over 1.2 billion prescriptions were dispensed in the community in the UK, equivalent to 19.3 per capita (see Table 4.9). Table 4.8 provides details of the number of prescriptions dispensed in the community per pharmacy, which exceeded 81,000 on average in 2011 for the UK.

Items and fees ***Issues and points of interest***

Some problems are encountered when looking at prescription data as some sources relate to the number of items dispensed and some relate to the fees that the prescription attracts (e.g. a made up cream may attract more that one fee due to the multiple ingredients involved). This can result in small differences between the number of prescriptions recorded in different sources.

The Prescriptions Cost Analysis (PCA) is available for all four countries of the UK and gives a breakdown, to individual product level, of prescriptions dispensed and their cost. A prescription form written by a doctor, dentist or nurse may contain one or more items of medicines or appliances and all prescription items attract a professional fee for dispensing. Some prescription items however may attract more than one fee. It is thus important to note that some prescription statistics previously produced by the PPA and now produced by the NHSBSA for England are prescription fee based while those from Northern Ireland, Scotland and Wales are based on items. Some prescription statistics published by the Health and Social Care Information Centre are also item based.

Table 4.8. Number of community pharmacies and appliance contractors, and number of prescription items dispensed per pharmacy, by country, UK, 2000 - 2011

Number of community pharmacies and appliance contractors

	Year						
	2000	2005	2007	2008	2009	2010	2011
United Kingdom	12,302	12,247	12,685	12,851	13,049	13,251	13,539
England	9,935	9,870	10,261	10,414	10,598	10,786	11,051
Wales	713	710	710	711	710	711	713
Scotland	1,144	1,154	1,195	1,204	1,216	1,224	1,240
Northern Ireland	510	513	519	522	525	530	535

Number of prescription items dispensed per pharmacy[1]

	Year						
	2000	2005	2007	2008	2009	2010	2011
United Kingdom	51,805	67,427	71,904	75,047	77,754	80,282	81,376
England	51,578	67,975	72,519	75,776	78,474	81,016	81,989
Wales	56,949	75,725	83,158	86,910	90,831	93,955	96,751
Scotland	53,349	63,589	65,641	68,047	69,759	71,437	72,906
Northern Ireland	45,581	54,035	58,769	60,486	64,050	67,433	67,866

Notes: Pharmacies relate to the number of community pharmacies and appliance suppliers who are contracted to the NHS.
From 2002 onwards figures for England and Wales relate to 31st March, from 1997 to 2001figures relate to 30th September.
From 2006 onwards figures for Northern Ireland relate to 31st March, from 1997 to 2005 figures relate to October.
Figures for Scotland relate to financial year ending 31st March.
1These figures do not take into account those prescriptions dispensed by dispensing doctors.

Sources: Community Pharmacies in England and Wales (DH Statistical Bulletin).
General Pharmaceutical Services in England and Wales (HSCIC Statistical Bulletin).
NHS Prescription Services, NHSBSA, previously the Prescription Pricing Authority Annual Reports (PPA).
Health and Personal Social Services Statistics for England (DH).
Scottish Health Statistics (ISD).
Community Pharmacies (ISD). Available at: http://www.isdscotlandarchive.scot.nhs.uk/isd/2208.html. (Accessed June 2013).
Health Statistics Wales (NAW).
Annual Statistical Report (HSCBSO).
Private communication with Heath and Social Care in Northern Ireland (HSCNI).

4.3.5 Prescription charges

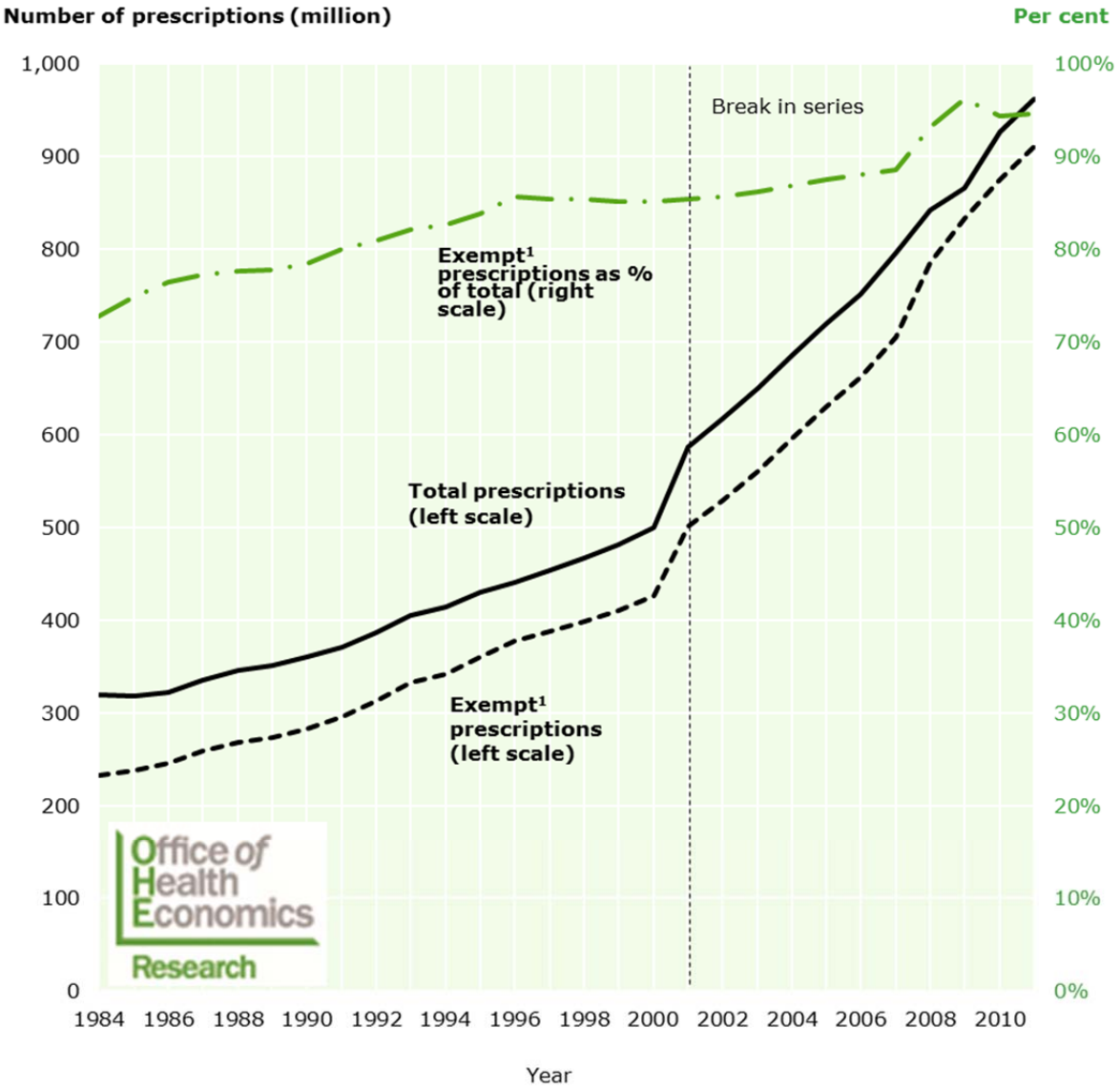
Between 1952 and 2007, except for the period between February 1965 and June 1968, some patients in the UK requiring NHS medicines through prescriptions have been subject to a fixed charge per prescription dispensed to them. This rose from £0.05 in 1952 to £6.85 in 2007. There have been numerous increases in the charges, which are usually revised annually and take effect on 1st April. This system continued in England where the charge since April 2013 has been £7.85. However, since 1st April 2010 charges for Northern Ireland were abolished; charges in Scotland were abolished on 1st April 2011 and since 2007 all prescriptions have been free in Wales. For England, where a fixed charge remains, there are a number of exemption categories (see the box 'Prescription charges in the UK' on page 143 and Figure 4.1).

Prescription charges in the UK *Issues and points of interest*

In 1968 a set of exemption categories was established across the UK. These were consistent across the constituent countries until 2001 when Wales introduced free prescriptions to those aged 16-25. Since 2007 prescription charges were abolished for all age groups in Wales. In April 2010 in Northern Ireland and in April 2011 in Scotland prescription charges were also abolished. But in England they remain and stand at £7.85 per item since 1st April 2013 for those who are not exempt; the exemption criteria are:

- Children under 16 and students aged 16 to 18 in full-time education; men and women aged 60 and over
- Expectant mothers and women who have borne a child in the last 12 months (with a valid MatEx form)
- People suffering from a number of specified conditions with a valid MedEx form):
    - Permanent fistula (including caecostomy, colostomy, ileostomy or laryngostomy) requiring continuous surgical dressing or an appliance
    - Forms of hypoadrenalism (including Addison's disease) for which specific substitution therapy is essential
    - Diabetes insipidus and other forms of hypopituitarism
    - Diabetes mellitus except where treatment is by diet alone
    - Hypoparathyroidism
    - Myasthenia gravis
    - Myxoedema (hypothyroidism)
    - Epilepsy requiring continuous anti-convulsive therapy
    - A continuing physical disability which prevents the patient leaving their residence except with the help of another person (this does not mean a temporary disability even if it is likely to last for a few months)
- War and service pensioners (for prescriptions needed for treating their accepted disablement)
- People who have purchased a prepayment certificate (FP96)
- No charge is payable for contraceptive substances and listed contraceptive appliances for women prescribed on form FP10 or any of its variants
- Those on income support or whose partners are on income support
- Patients being treated for cancer or the effects of cancer are also now exempt (with a MedEx form).

Figure 4.1. Proportion of NHS prescriptions exempt[1] from the prescription charge, England, 1984 - 2011



Notes: Total prescriptions include those dispensed by chemists, dispensing doctors and for personal administration. Exempt items also include prescribed contraceptives and personally administered items, which are free of charge.
Figures from 1991 onwards are based on the new PCA system and are based on items; they are not strictly comparable with previous years. Since 1991, figures relate to the total count of items written and dispensed, whereas earlier figures relate to the aggregate prescription fees.
Prior to 2001 figures are based on a sample of 1 in 20 prescriptions dispensed by community pharmacists and appliance suppliers who are contracted to the NHS only. From 2001 all figures also include prescriptions dispensed by dispensing doctors and personally administered prescriptions which are free of charge.
From 1984 onwards figures for chargeable prescriptions include pre-payment certificates.
From 2008, exempt prescriptions relates to prescriptions free at the point of dispensing. Prior to 2008, prescriptions covered by pre-payment certificates were considered as charged, for 2008 and 2009, these are included in the exempt category.
From April 2009, patients undergoing treatment for cancer are also exempt from prescription charges, resulting in the observed increase in exempt prescriptions between 2008 and 2009.
1 See page 143 for the categories of people exempt from prescription charges.

Sources: Health and Personal Social Services Statistics for England (DH).
Prescriptions Dispensed in the Community Statistics: England (DH).
Prescriptions Dispensed in the Community Statistics: England (HSCIC).

Office of Health Economics Research

4.4 Prescription statistics

4.4.1 NHS Prescription Services system

All prescription forms (FP10) for prescriptions dispensed in England by NHS contractors and dispensing doctors are submitted to the NHS Prescription Services of the NHSBSA for processing. Prescription data fed into the NHS Prescription Services information system include the names and costs of the medicines and the number of items dispensed, by individual GP practice and PCT/CCG.

Medicines, drugs and appliances are classified into therapeutic groups according to the British National Formulary (BNF). The BNF lists over 4,000 drugs and appliances for prescribing in the UK. It is a joint publication of the British Medical Association (BMA) and the Royal Pharmaceutical Society of Great Britain (RPSGB) and is published bi-annually. NHS prescriptions (including dressings, appliances and other drugs) are categorised into 16 broad therapeutic groups as defined in the BNF. Each group relates to a particular function of the human body or to some aspect of medical care. Each group is further divided into a number of sub-groups for a finer level of classification. For items not included in the BNF, the NHS Prescription Services have created four pseudo chapters (20-23). The majority of these are for dressings and appliances. In 1991, prescription statistics compiled by the DH were re-based according to the BNF. This resulted in some incompatibilities with data from earlier years, which were based on a different classification method.

Within the NHS Prescription Services information system are the Prescription Analysis and Cost Tabulation (PACT) system and the Prescription Cost Analysis (PCA) system from which statistical information and reports about prescribing are derived for England. Similar schemes exist for Northern Ireland, Scotland and Wales.

The NHS Prescription Services in England also publish on the internet the monthly Prescriber Dispenser 1 Report (PD1) which provides information on NHS prescriptions dispensed by contractors, dispensing doctors and by personal administration, at national level. The PD1 Report shows statistical fee-based data including number and value of fees, number of prescription forms, net ingredient cost and prescription charges broken down by type of dispenser. There are minor differences of about 1 per cent between the fee based and item based counting systems (see the box on Items and fees on page 140).

Table 4.9. Number of NHS prescriptions (based on fees)[1] dispensed by community pharmacists and appliance contractors, and per capita, UK, 1948 - 2012

Year	England[2]	Wales	Scotland	Northern Ireland	United Kingdom
			Number of prescriptions (millions)		
1948[3]	83.7	-	6.6	2.3	92.6
1949	202.0	-	17.2	5.9	225.1
1950	217.1	-	19.5	6.6	243.2
1960	218.7	-	22.0	7.2	247.9
1970	247.7	18.9	28.9	10.5	306.0
1980	303.3	23.7	34.3	12.7	374.0
1990	360.5	28.3	42.4	15.4	446.6
2000	551.5	43.1	63.4	23.7	681.6
2002	619.1	49.0	68.8	25.4	762.2
2003	652.7	51.3	71.5	26.4	801.8
2004	689.9	54.4	74.3	27.3	845.8
2005	724.6	56.7	76.4	28.0	885.6
2006	760.1	59.5	78.7	29.2	927.4
2007	803.9	62.8	81.5	30.7	979.0
2008	836.2	65.8	85.1	31.8	1018.9
2009	896.1	68.6	88.0	33.8	1086.6
2010	939.6	71.1	90.7	35.9	1137.2
2011	972.9	73.3	93.5	36.4	1176.1
2012	1008.4	75.4	96.3	38.3	1218.5
			Per capita		
1948[3]	-	-	-	-	-
1949	4.6	-	3.3	4.3	4.5
1950	5.0	-	3.8	4.8	4.8
1960	4.7	-	4.2	5.1	4.7
1970	5.4	6.9	5.5	6.9	5.5
1980	6.5	8.4	6.6	8.3	6.6
1990	7.6	9.9	8.3	9.7	7.8
2000	11.2	14.8	12.5	14.1	11.6
2002	12.5	16.8	13.6	15.0	12.8
2003	13.1	17.5	14.1	15.5	13.5
2004	13.8	18.5	14.6	16.0	14.1
2005	14.4	19.2	15.0	16.2	14.7
2006	15.0	20.1	15.4	16.8	15.3
2007	15.7	21.1	15.9	17.5	16.1
2008	16.3	22.0	16.5	17.9	16.6
2009	17.3	22.9	17.0	18.9	17.6
2010	18.0	23.6	17.4	19.9	18.3
2011	18.4	23.9	17.7	20.1	18.6
2012	19.0	24.9	18.2	21.0	19.3

Notes:

Figures relate to community pharmacists and appliance suppliers who are contracted to the NHS and from 2000 onwards include prescriptions dispensed by dispensing doctors.
1Figures in this table differ from those published by the Information Centre as the above data are taken from prescription reports from the various agencies dealing with prescription information in the constituent countries of the UK and relate to the number of prescriptions (number of fees), as opposed to total count of items written and dispensed as per Table 4.8.
2 Figures from 1948 to 1960 relate to England and Wales.
3 From July to December.

Sources:

NHS Prescription Services, NHSBSA, previously the Prescription Pricing Authority Annual Reports (PPA).
NHS Wales Health in Wales.
Information Services Division of the NHS in Scotland (ISD).
Health and Social Care Business Services Organisation (HSCBSO).
Health and Personal Social Services Statistics for England (DH).
Scottish Health Statistics (ISD). Annual Statistical Report (HSCBSO).
Health Statistics Wales (NAW). Annual Abstract of Statistics (ONS).
Population Estimates and Projections (ONS).
2011Census, Population and Household Estimates for England and Wales (ONS).
2011Census (General Registrar Office for Scotland).
2011Census (Northern Ireland Statistics and Research Agency).

4.4.2 Prescription Analysis and Cost Tabulation (PACT)

Prescription Analysis and Cost Tabulation (PACT) provides information about prescribing in general practice. It is an item based system and includes all items prescribed in England by GPs and nurse prescribers for prescriptions dispensed in the community. It also includes items that have been personally administered by GPs, such as vaccinations. Excluded from the PACT system are prescriptions written by dentists (FP10D) and hospital doctors (FP10HP). Table 4.10 shows the total cost of prescriptions in the UK

At practice and CCG level, PACT is used to monitor and control prescribing costs and prescribing budgets for GP practices. It is also used at individual practitioner level as an education and audit tool. Standard PACT reports derived from the PACT system at GP and practice level are sent to the source GPs and practices quarterly, showing their prescribing patterns compared with other practices in the same locality. This information is only available to the individual GP and practice and not to the public. CCGs also receive prescribing information in paper format. An electronic link (ePACT) set up between CCGs and the NHS Prescription Services enables closer and timelier monitoring of GP prescribing among the CCG's constituent practices.

Table 4.10. Total cost of NHS prescriptions dispensed in the community[1], UK, 1948 - 2012

£m (2012 prices*)

Year	England[2]	Wales	Scotland	Northern Ireland	United Kingdom
1948[3]	303	-	55	-	358
1949	806	-	107	27	940
1950	917	-	105	26	1,048
1960	1,298	-	148	49	1,495
1970	1,887	147	237	90	2,362
1980	2,763	212	342	126	3,443
1990	4,070	298	505	183	5,057
2000	7,599	556	959	359	9,473
2002	8,803	643	1,074	408	10,928
2003	9,384	677	1,137	436	11,635
2004	9,859	708	1,164	457	12,188
2005	9,807	693	1,138	449	12,087
2006	9,969	704	1,168	459	12,300
2007	10,044	713	1,165	475	12,398
2008	9,987	698	1,163	473	12,321
2009	10,403	716	1,185	497	12,801
2010	10,471	703	1,181	499	12,855
2011	10,307	691	1,172	470	12,641
2012	9,985	663	1,106	463	12,217

£ per capita (2012 prices*)

Year	England[2]	Wales	Scotland	Northern Ireland	United Kingdom
1948[3]	-	-	-	-	-
1949	18.39	-	20.81	19.60	18.80
1950	20.83	-	20.49	19.14	21.22
1960	28.36	-	28.56	34.72	28.59
1970	40.88	53.83	45.51	59.31	42.49
1980	59.06	75.40	65.76	82.31	61.11
1990	85.34	104.23	99.38	114.70	88.35
2000	154.34	191.26	189.41	213.16	160.86
2002	177.29	220.25	212.50	240.42	184.21
2003	188.18	231.06	224.91	256.02	195.35
2004	196.75	240.32	229.18	267.14	203.66
2005	194.33	234.65	223.39	260.21	200.65
2006	196.39	237.49	228.18	263.49	203.02
2007	196.59	239.41	226.39	270.13	203.32
2008	194.13	233.12	225.06	266.61	200.73
2009	200.76	238.60	228.33	278.06	207.15
2010	200.46	233.95	226.24	277.31	206.46
2011	194.43	225.58	221.43	259.50	200.07
2012	188.02	218.70	209.35	254.13	193.18

Notes:

For the years 1948-1963, total cost for England and Wales consists of net ingredient cost, less discount, plus on cost, dispensing fee, container allowance and oxygen delivery allowances. From 1964 total cost includes net ingredient cost, less discount, plus dispensing fee, container and on-cost allowances, oxygen payments and from 1973 value added tax for appliances. Total cost shown includes charges paid by patients.
The above data are taken from prescription reports from the various agencies dealing with prescription information in the countries of the UK and relate to the number of prescriptions (number of fees).
- Not available.
* Adjusted by GDP deflator at market prices.
1Figures from 1994 onwards relate to prescriptions dispensed by community pharmacists and appliance suppliers who are contracted to the NHS and dispensing doctors, prior to this they relate to community pharmacists and appliance contractors only.
2 Figures from 1948 to 1960 relate to England and Wales.
3 From July to December.

Sources:

NHS Prescription Services, NHSBSA, previously the Prescription Pricing Authority Annual Reports (PPA).
NHS Wales Health in Wales.
Scottish Health Statistics (ISD). Health and Personal Social Services Statistics for England (DH).
Annual Statistical Report (HSCBSO). Annual Abstract of Statistics (ONS).
Central Services Agency, Northern Ireland.
2011Census, Population and Household Estimates for England and Wales (ONS).
2011Census (General Registrar Office for Scotland).
2011Census (Northern Ireland Statistics and Research Agency).
Health Statistics Wales (NAW).
Information Services Division of NHS in Scotland (ISD).
Population Estimates and Projections (ONS).

Office of Health Economics Research

4.4.3 Prescription Cost Analysis (PCA)

The PCA system contains all the NHS prescriptions dispensed in the community by contractors and dispensing doctors. Unlike the PACT system it also includes prescriptions written by dentists and hospital doctors, plus those written by GPs from practices outside England in the UK but dispensed in the community in England. Prescriptions written in England, but dispensed outside England are not included.

Prescriptions Dispensed in the Community Statistics: England is a statistical bulletin published annually by the Health and Social Care Information Centre (and previously by DH) based on PCA data. It contains a summary of prescriptions dispensed in the community in England. For the analysis of category of charge exemption and age breakdown, prior to 2001 the statistics were derived based on a sample of 1 in 20 prescriptions dispensed by chemists and appliance contractors only. However, as from 2001, patients of dispensing doctors have also been required to complete the category question on the back of the prescription form. Thus from 2001 the sample includes prescriptions dispensed by dispensing doctors and personally administered prescriptions. There are slight discrepancies in the data series over time as a result. Key tables include trends in the number of prescription items and cost of prescriptions dispensed in the community by category of charge exemption, broad age groups and BNF sections.

An annual report based on the PCA system is published by the Health and Social Care Information Centre showing details of the number of items and the net ingredient cost of all prescriptions dispensed in the community in England. The items dispensed are listed alphabetically within chemical entity (for drugs) by BNF therapeutic class. Since 2000, PCA reports for Northern Ireland, Scotland and Wales have been available in the same format as for England (see 'Key sources and information' on page 154). See Table 4.11 for a UK breakdown of prescriptions, and their cost, by therapeutic class.

Table 4.11. Number and net ingredient cost (NIC) of prescriptions by therapeutic group, UK, 2001 - 2011

		Prescription items (millions)			NIC of prescriptions (£m at 2011 prices)		
BNF	Therapeutic group	2001	2010	2011	2001	2010	2011
	Total	**723.3**	**1,123.7**	**1,164.7**	**9,623.7**	**11,118.8**	**10,834.1**
1	Gastro-intestinal system	57.5	90.8	96.6	959.7	594.8	541.2
2	Cardiovascular system	178.1	340.3	347.8	2,284.7	1,910.5	1,674.4
3	Respiratory system	61.4	74.3	76.1	1,014.5	1,311.9	1,305.7
4	Central nervous system	138.5	204.1	215.2	1,663.5	2,402.5	2,443.2
5	Infections	51.9	57.9	58.8	348.8	278.2	273.4
6	Endocrine system	52.8	98.5	103.7	891.8	1,298.3	1,303.8
7	Obstetrics and gynaecology[1]	17.3	25.9	27.5	250.4	406.1	425.4
8	Malignant disease[2]	4.1	4.7	4.9	328.7	420.4	382.3
9	Nutrition and blood	20.0	52.1	53.8	331.6	616.5	599.7
10	Musculo-skeletal and joint disease	34.1	38.3	39.2	374.0	249.9	239.2
11	Eye preparations	16.8	22.9	23.4	135.9	198.6	195.4
12	Ear, nose and oropharynx	11.7	13.8	14.1	80.7	93.0	91.5
13	Skin	42.9	49.4	50.0	298.3	343.6	345.1
14	Immunological products	13.8	14.7	16.1	160.8	144.6	146.7
15	Anaesthesia	0.9	1.4	1.5	4.3	16.1	19.2
	Others including dressings and appliances	21.3	34.1	36.5	495.9	819.5	831.4

Notes: All figures are based on the British National Formulary (BNF) and its chapter headings.
Figures relate to prescriptions dispensed by community pharmacists and appliance contractors who are contracted to the NHS, dispensing doctors and personal administration.
1Including urinary tract disorders.
2 Including immunosuppression.

Sources. Prescription Cost Analysis, England (DH).
Prescription Cost Analysis, Wales (NAW).
Prescription Cost Analysis, Scotland (ISD).
Prescription Cost Analysis, Northern Ireland (HSCBSO).

4.4.4 Branded and generic prescribing

A brand name medicine is one that is, or was, under patent and while under patent is (was) the only version that can be manufactured and prescribed. When the patent expires, other manufacturers are allowed to make their own, generic, versions. Generic medicines are in general priced lower than the original brands were while they were on-patent. Thus it has been government policy for many years to promote generic prescribing, meaning that the prescription is written using the generic name for the medicine rather than specifying the original brand name. PACT reports sent to GPs include information on the availability of generic medicines and cost comparisons with branded drugs. NHS medical and pharmacy advisors also promote the prescribing of generic medicines by GPs.

In the PCA system, a generically written prescription is defined as one that has been written using the British Approved Name (BAN), while generic dispensing is defined as occurring where a drug is prescribed and available generically and the dispenser is reimbursed at the Drug Tariff price or the price of the generic. However, if the prescriber writes the brand name on the prescription form then only the brand name version of the medicine may be dispensed: there is no generic substitution by pharmacists in the UK. The Drug Tariff (Part VIII) shows the amount that will be reimbursed for most generic drugs dispensed against a prescription written generically. It is possible in such circumstances for a branded drug or a parallel import (products exported from a country where its price is relative low to a place where the price is higher) to be dispensed against the prescription. Thus within the PCA system prescriptions dispensed are classified into four groups (Class of Preparation):

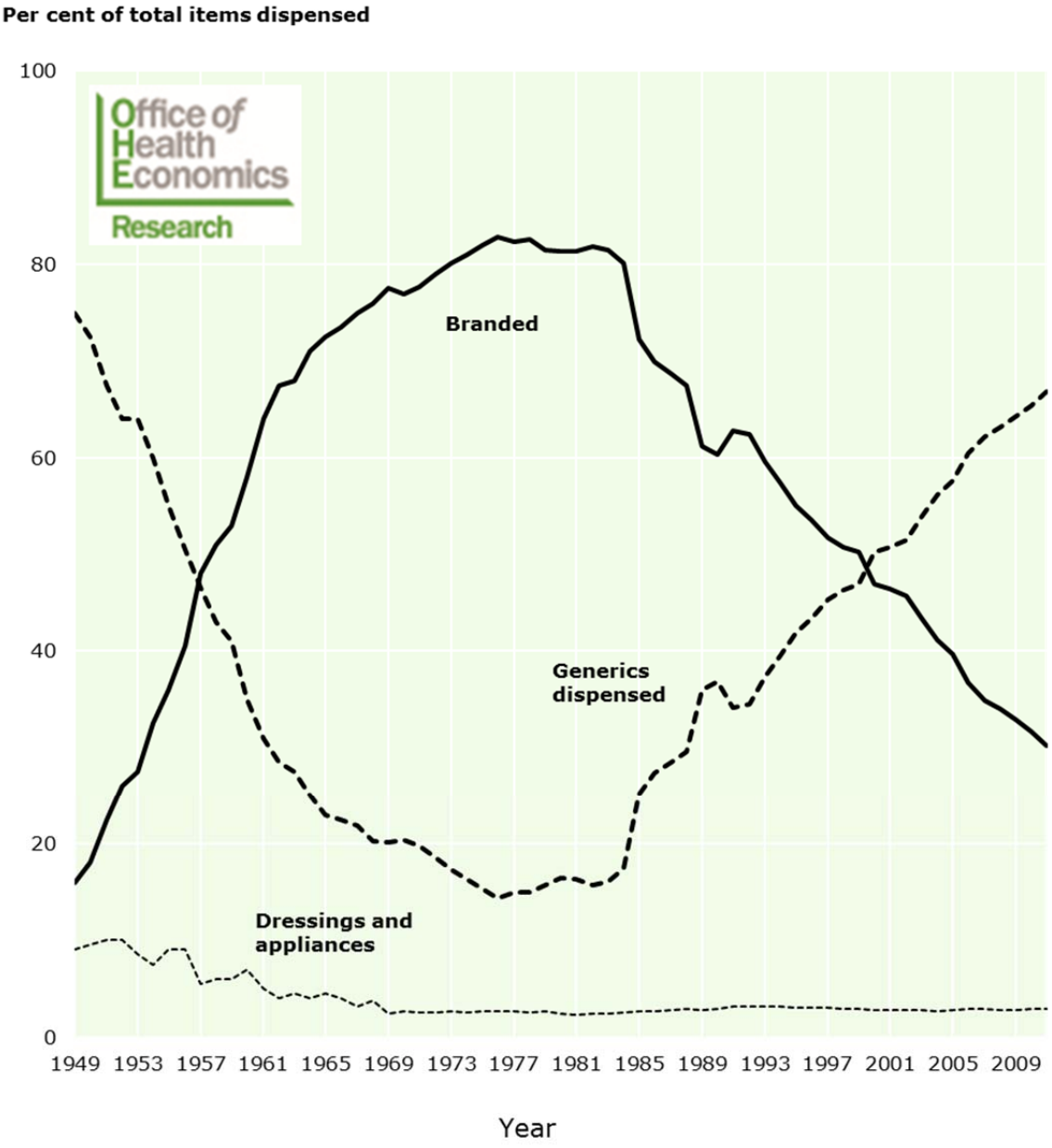
Class 1 - Drugs prescribed and available generically for which the dispenser is reimbursed at the Drug Tariff price or the price of the generic. It is possible in such circumstances for a branded drug or a parallel import to be dispensed against the prescription

Class 2 - Drugs prescribed generically but because a generic is not available (for example the proprietary version is still under patent) a proprietary product or a parallel import has been dispensed

Class 3 - Drugs prescribed and dispensed by proprietary brand name

Class 4 - Dressings and appliances.

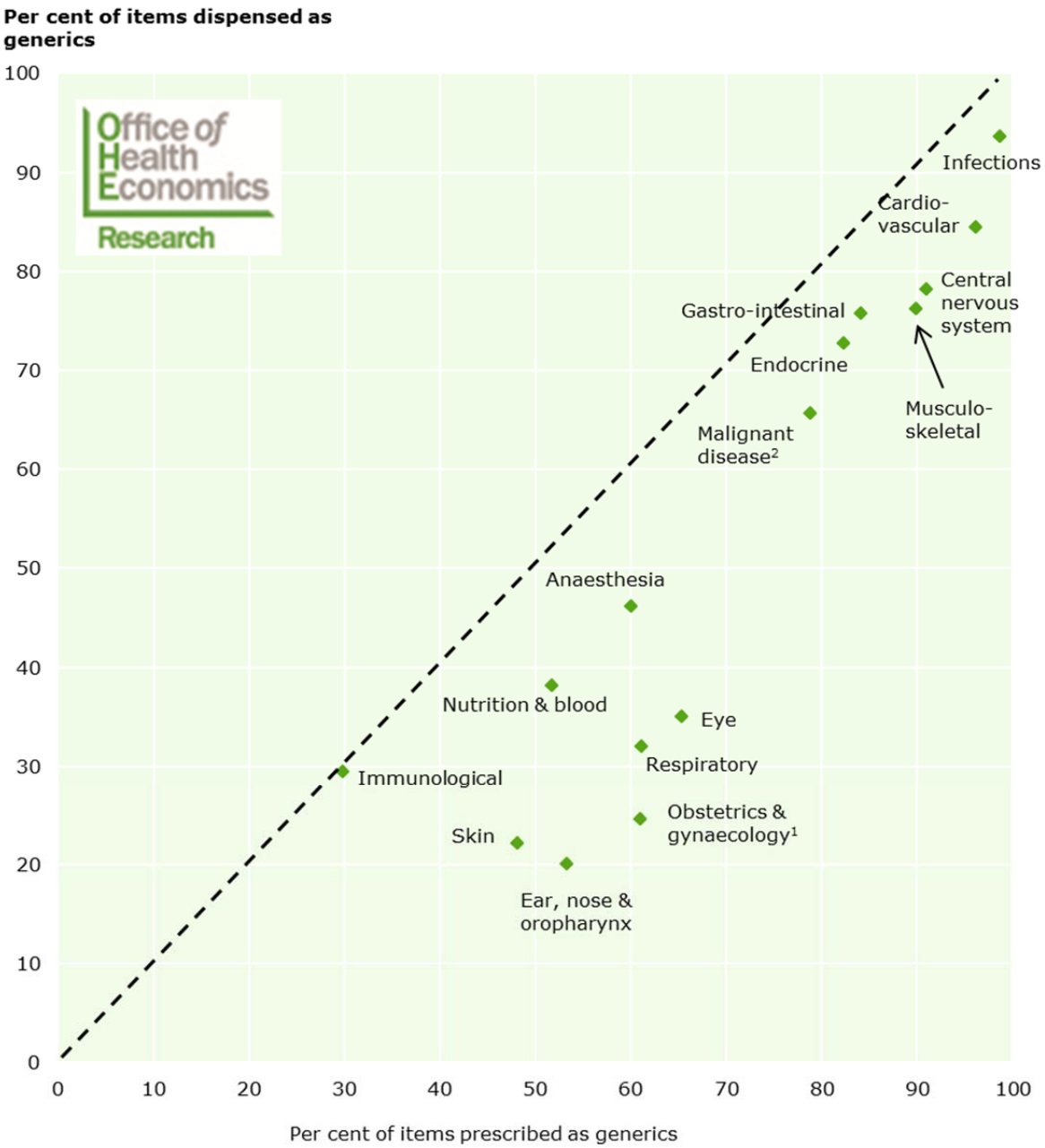
Figure 4.2. Market share of branded and generic prescription items dispensed by community pharmacists[1], England, 1949 - 2011



Notes: Data from 1994 have been revised, see DH Statistics Bulletin 2000/20.
1Figures relate to community pharmacists and appliance contractors contracted to the NHS and from 1991 include dispensing doctors and items personally administered.

Sources: Prescriptions Dispensed in the Community Statistics: England (DH).
Prescriptions Dispensed in the Community Statistics: England (HSCIC).

Figure 4.3. Relationship between generic prescribing and generic dispensing, England, 2011



Notes: The dashed line is a reference line showing equality between generic dispensing and prescribing.
Figures include all prescription items dispensed by community pharmacists and appliance contractors, dispensing doctors and personal administration.
Data points relate to British National Formulary chapters.
1 Including urinary tract disorders.
2 Including immunosuppression.

Sources: Prescriptions Dispensed in the Community Statistics: England (DH).
Prescriptions Dispensed in the Community Statistics: England (HSCIC).

GPS *Key sources and information*

England: Most of the relevant publications including reports and downloadable tables were previously found on the DH website and can now be found on the IC website:

http://www.hscic.gov.uk/searchcatalogue?q=general pharmaceutical services&topics=1/Primary care services/Community pharmacy services&sort=Most recent&size=10&page=1#top

General Pharmaceutical Services in England and Wales - this statistical bulletin published annually by the DH provides detailed information about community pharmacies and appliance contractors with NHS contracts in England and Wales to dispense prescriptions.

Prescriptions Dispensed in the Community Statistics: England – this statistical bulletin was previously published annually by the DH and now by the Health and Social Care Information Centre. It contains a summary of prescriptions dispensed in the community in England.

Prescription Cost Analysis (PCA), England – this annual report published by the HSCIC is available both in print and spreadsheet format and provides details of the number and the net ingredient cost of prescriptions dispensed in the community by BNF therapeutic class, chapter, section, sub-paragraph, chemical and individual preparation:

http://www.hscic.gov.uk/article/2021/Website-Search?productid=11412&q=PCA&sort=Relevance&size=10&page=1&area=both#top

Northern Ireland*: Prescription Cost Analysis* – this annual report by the HSC BSO (formerly the Central Services Agency) on prescription cost analysis is available on the web site:

http://www.hscbusiness.hscni.net/services/1806.htm

Scotland*: Scottish Health Statistics* produced by the Information and Statistics Division (ISD) is on the ISD website and includes most of the GPS-related statistics:

http://www.isdscotland.org/Health-Topics/Prescribing-and-Medicines/Community-Dispensing/

Prescription Cost Analysis: Scotland - the Scottish version of the PCA for England is published by the Information and Statistics Division:

http://www.isdscotland.org/Health-Topics/Prescribing-and-Medicines/Community-Dispensing/Prescription-Cost-Analysis/

Wales: *Health Statistics Wales* is published by the National Assembly for Wales, in both book and web formats and contains summary statistics on prescriptions:

http://wales.gov.uk/topics/statistics/headlines/health2012/1209272/?lang=en

Prescription Cost Analysis: Wales – the Welsh version of the PCA for England is published by the Health of Wales Information Services:

http://new.wales.gov.uk/topics/statistics/headlines/health2013/prescriptions-dispensed-community-2012/?lang=en

4.5 General Dental Services (GDS)

In the UK, dental care is provided by both the NHS and the private sector for both preventive care and restorative treatments. In the NHS, dental care is mainly provided by general dental practitioners, both salaried and non-salaried, who are contracted with the NHS. Some treatment, however, is carried out by NHS community dental services and hospital dental departments employing salaried dentists. Community dental services are offered to pre-school and school age children, and to pregnant and nursing mothers attending community health clinics. Access to treatment at a dental hospital is usually by referral from a general dental practitioner, although patients may also present themselves at dental hospitals for emergency treatment.

GDS are managed by the PCOs. The assessment of fees or approval of treatment as well as the process of payment is undertaken by the NHS Business Services Authority Dental Services Division for both England and Wales. The Dental Practice Board performs the equivalent role in Scotland and the HSC Business Services Organisation does so in Northern Ireland.

Under the NHS (Primary Care) Act 1997, a number of personal dental service (PDS) schemes have been set up. These enable dentists and PCOs to develop innovative ways to deliver dental services to meet local needs. Projects include mobile dental surgeries to provide dental care for those unable to travel and for elderly people living in residential or nursing homes, and the appointment of dental therapists to carry out simple dental procedures. The majority of dentists have GDS rather than PDS contracts.

From the creation of the NHS in 1948, dentists working under contract to the NHS were paid a fee for each item of treatment given. Since 1st October 1990, the remuneration of dentists by the NHS has included payment for preventive care as well as for restorative treatments. From 1st April 2006 new GDS and PDS contracts have been implemented. They introduced a new remuneration system and terms of service for practitioners working within the reformed GDS and PDS: under this scheme payment is made for a course of treatment.

Increasing numbers of people in the UK are seeking private dental care or no dental care. Data for England published by the Health and Social Care Information Centre showed that just over 55 per cent of the UK population visited an NHS dentist in the 24 month period to June 2010, although this percentage varies considerably according to region.

Dental charges ***Issues and points of interest***

Charging is no longer consistent across the constituent countries of the UK. Since April 2006 England and Wales started operating under the new NHS dental contract, but Scotland and Northern Ireland continue to operate under the old system of charges. In all countries some patients are entitled to free NHS dental treatment, the exemptions from charges include:

- Full time students under 19 years of age;
- Those under 18 years of age;
- Pregnant women;
- Women who have had a child within the past 12 months; and
- Members of families receiving income support or tax credits.

Dental charges in England and Wales from 1st April 2013

For patients who pay there are three bands of charges. Only one charge will be made for one treatment, even if more than one visit to the dentist is required to complete the course of treatment. If more than one treatment is required at the same charge level within two months of seeing the dentist, the further treatment is free of charge.

Levels of treatment charges:

Band 1	
England: £18.00	Band 1 covers: examination, diagnosis (e.g. x-rays), advice on how to prevent future
Wales: £12.70	dental problems, a scale and polish if needed, urgent care
Band 2	
England: £49.00	Band 2 covers: everything in Band 1 above plus additional treatment such as fillings,
Wales: £40.10	root canal work or extractions
Band 3	
England: £214.00	Band 3 covers: everything in Bands 1 and 2 plus crowns, dentures and bridges
Wales: £177.00	
No charge in England or Wales	Writing a prescription or removing stitches (usual charges apply for dispensing or prescription)
	Repairs to dentures
	Referrals to sedation, orthodontic or home visit services (although a charge may be levied for treatment prior to referral and for the specialist service)

Referrals to another dentist

Only one charge is made for one course of treatment even if this includes a referral to another dentist. If a new course of treatment is required involving specialised services (sedation, orthodontics, and home visits) only one charge is paid to the dentist who provides the specialised service. For further information see:

http://www.nhs.uk/chq/Pages/1781.aspx?CategoryID=74

and the Health of Wales Information Service:

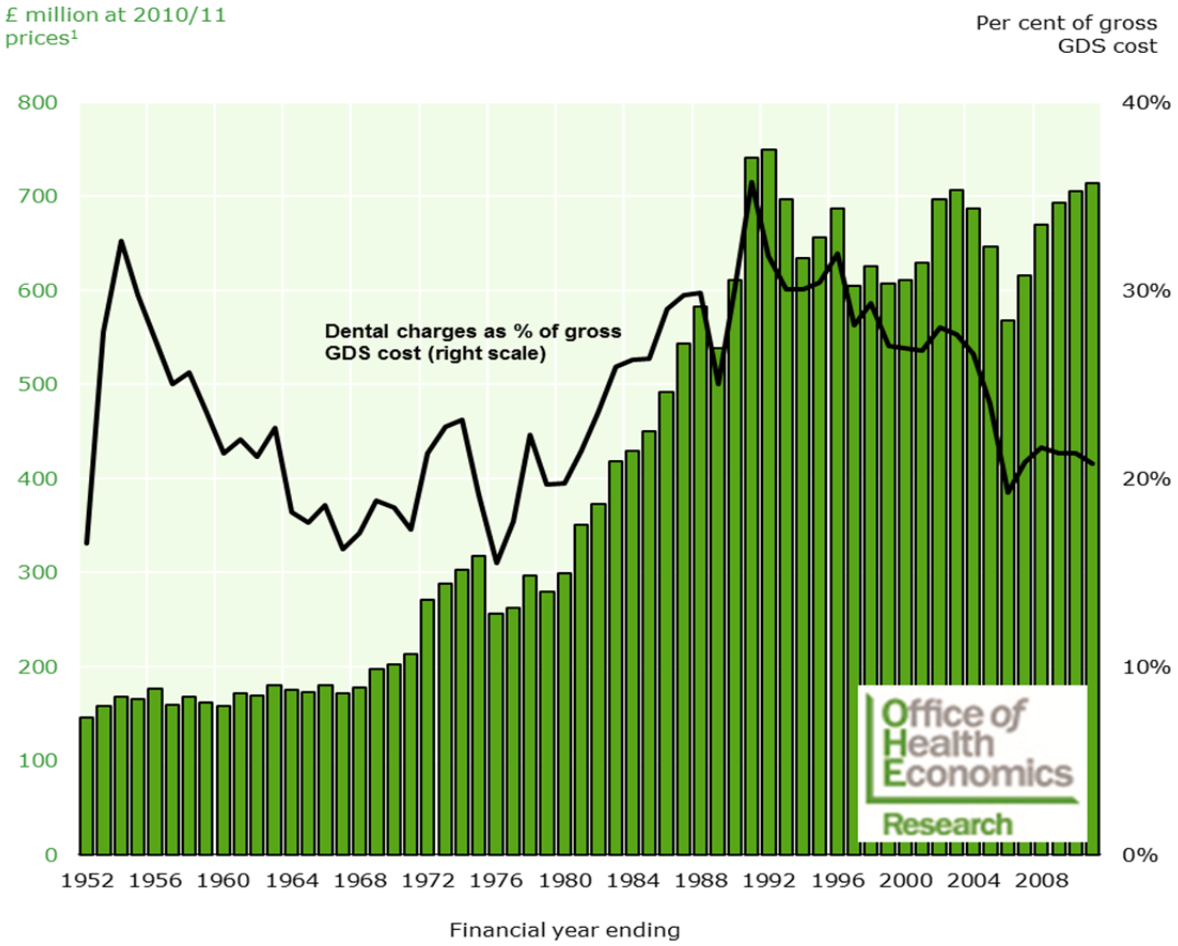
http://wales.gov.uk/publications/accessinfo/drnewhomepage/dr2013/janmar/health/7193703/?lang=en

Northern Ireland and Scotland

In Northern Ireland dental examination fees are charged to adults over the age of 18. An NHS dental examination is free to everyone in Scotland. In both Northern Ireland and Scotland (apart from examinations), dental fees are 80 per cent of the cost of dental treatment, up to a maximum amount set by the Dental Practice Board, see:

www.scottishdental.org/index.aspx?o=1923

Figure 4.4. Patient dental charges and as a percentage of the gross cost of General Dental Services (GDS), UK, 1951/52 - 2010/11



Notes: Dental charges were first introduced in 1951. Data for 2001/02 onwards are OHE estimates based in part on available published data.
Data for 2004/05 onwards are not strictly comparable with earlier data, as reliable data for Personal Dental Services (PDS) in England and Wales are not available before 2004/05 and therefore data prior to 2004/05 are based on GDS patient charges alone. In 2005/06 there was a shortfall in patient charge income, in part attributable to PDS pilots income being based on the old GDS system of patient charges in England and Wales.
Figures are for financial years, ending 31st March e.g. 2006 = 2005/06.
The expenditure record for GDS for 2005/06 was enhanced by an accounting adjustment to increase the estimate of GDS creditor payments outstanding at the year end (see Departmental Report (DH)).
1 At 2010/11 prices, as adjusted by the Gross Domestic Product (GDP) deflator at market prices.

Sources: Annual Abstract of Statistics (ONS).
Health and Personal Social Services Statistics for England (DH).
Health Statistics Wales (NAW).
Scottish Health Statistics (ISD).
Department of Health Departmental Report (DH).
Annual Statistical Report (HSCBSO).
Economic Trends (ONS).
Personal correspondence (DH).
HPSS Expenditure in Northern Ireland (DHSSPSNI).
Economic Data (HM Treasury).

Office of Health Economics
Research

4.5.1 Dental and dentistry statistics

Information on dental activity is taken from FP17 forms in England, most of which are submitted electronically to the NHSBSA. Information on what is collected on these forms is detailed at:

http://www.nhsbsa.nhs.uk/Documents/Completion_of_forms_guidance_FP17_England-_1_April_2010_onwards.pdf

Information is extracted from this data by the Health and Social Care Information Centre and dental statistics publications for England are produced based on this. The *NHS Dental Statistics* publication for England is available quarterly and provides information relating to NHS dental activity, numbers of patients seen, workforce and patient charges.

Information relating to the number of patients registered with an NHS dentist (registrations), fees and treatments in Scotland is published on the ISD website. This is based on the Management Accounting and Dental Accounting System (MIDAS), which is the GDS payment system in Scotland, but also includes information on registrations and treatments. Community dental statistics within Scotland are taken from SMR13, the community dental treatment record, and are also available via the ISD.

Recently the Health and Social Care Information Centre has also published some dental information from Northern Ireland relating to the hours worked by dentists. Similar information is also available for the other countries of the UK. Table 4.12 provides information on the number of dental practitioners in the UK.

Changes to the dental contract in some constituent countries have resulted in breaks in the series of dental activity statistics.

Data on hospital dental treatment are available from statistics on inpatients and day cases for the constituent countries, as outlined in Section 3.

Dental surveys provide an additional source of information. The Adult Dental Health Survey (ADHS) covers all four countries of the UK and contains a variety of information, including the condition of natural teeth. In Scotland the National Dental Inspection programme provides information on improvements in dental health amongst children.

Table 4.12. Number of NHS dental practitioners[1], UK, 1951 - 2011

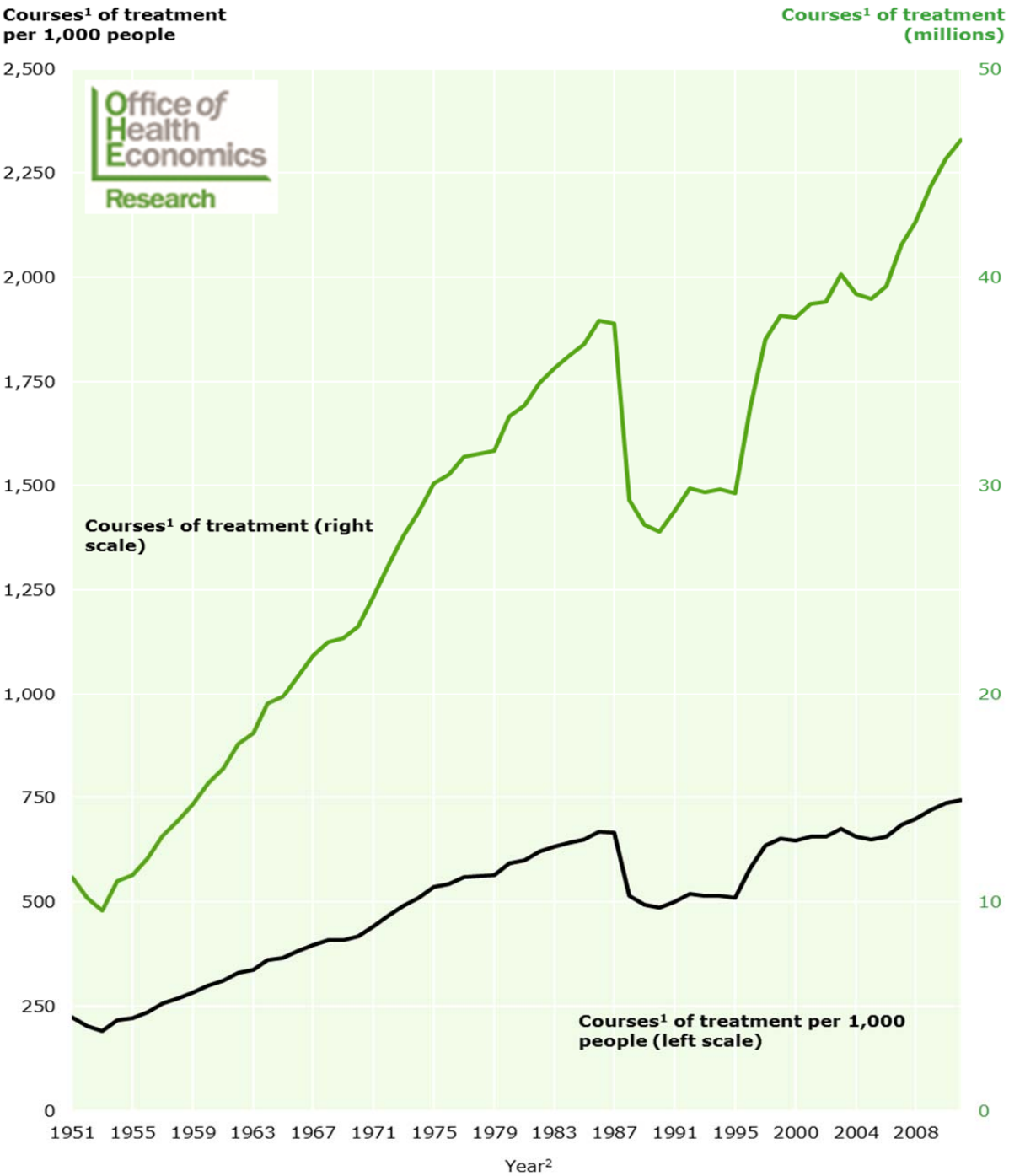
30th September

Year	Number of dental practitioners				
	England[2]	Wales[3]	Scotland[4]	Northern Ireland[5]	United Kingdom
1951	9,694	-	1,254	331	11,279
1960	9,853	-	1,064	296	11,213
1970	10,843	-	1,091	329	12,263
1980	13,039	-	1,280	336	14,655
1990	15,901	-	1,645	519	18,065
1999	17,151	913	1,827	660	20,551
2000	17,500	928	1,823	674	20,925
2001	18,119	931	1,856	689	21,595
2004	19,398	927	1,919	720	22,964
2005	20,500	1,070	1,933	722	24,225
2006	20,257	1,087	2,025	751	24,120
2007	20,160	1,141	2,085	790	24,176
2008	20,815	1,247	2,189	823	25,074
2009	21,343	1,293	2,301	833	25,770
2010	22,003	1,310	2,365	1,003	26,681
2011	22,799	1,349	2,437	1,035	27,620
Year	Per 100,000 population				
	England[2]	Wales[3]	Scotland[4]	Northern Ireland[5]	United Kingdom
1951	22.1	-	24.6	24.1	22.4
1960	21.5	-	20.5	20.8	21.4
1970	22.2	-	20.9	21.5	22.0
1980	26.3	-	24.6	21.9	26.0
1990	31.4	-	32.4	32.5	31.6
1999	35.0	31.5	36.0	39.3	35.0
2000	35.5	31.9	36.0	40.0	35.5
2001	36.6	32.0	36.6	40.8	36.5
2004	38.7	31.5	37.8	42.1	38.4
2005	40.6	36.2	37.9	41.9	40.2
2006	39.9	36.6	39.6	43.1	39.8
2007	39.5	38.3	40.5	44.9	39.6
2008	40.5	41.7	42.4	46.4	40.8
2009	41.2	43.1	44.3	46.6	41.7
2010	42.2	43.5	45.4	55.7	42.9
2011	43.4	44.6	46.6	57.0	44.1

Notes:
1 Figures exclude assistants.
2 Figures for England from 1951 to 1990 relate to England and Wales.
3 Figures for Wales from 2006 onwards are as at 31st March.
4 Figures for Scotland for 2009 are as at 31st March.
5 Figures for Northern Ireland prior to 2005 relate to 31st December, for 2005 and 2006 figures relate to 1st April and from 2007 to September. From October 2010 onward, the recording of Dentists by BSO Information Unit changed slightly. It moved from recording Principals only to recording all dentists, including Salaried and Oasis dentists, leading to an overall increase.

Sources:
Annual Abstract of Statistics (ONS).
Health and Personal Social Services Statistics for England (DH).
Health Statistics Wales (NAW).
Scottish Health Statistics (ISD).
Annual Statistical Report (HSCBSO).
NHS dental statistics (HSCIC). Copyright © 2013. Re-used with the permission of The Health and Social Care Information Centre. All rights reserved.
Statswales (NAW).
Population Estimates and Projections (ONS).
2011 Census, Population and Household Estimates for England and Wales (ONS).
2011 Census (General Registrar Office for Scotland).
2011 Census (Northern Ireland Statistics and Research Agency).

Figure 4.5. Courses[1] of dental treatment and per 1,000 people, UK, 1951 - 2011/12



Notes: Prior to 1988 figures relate to the number of treatments completed and emergency cases that were scheduled for payment. From 1988 onwards figures relate to the number of adult courses of treatment. Welsh figure for 2005/06 is an OHE estimate based on available data for 2004/05 and 2006/07. Welsh figures for 2006/07 onwards relates to the number of claims, not the number of courses of treatment.
1 Including emergency cases.
2 Figures from 1998 onwards relate to financial years ending 31st March e.g. 2006 = 2005/06.

Sources: Annual Abstract of Statistics (ONS).
Health and Personal Social Services Statistics for England (DH).
Health Statistics Wales (NAW).
Statswales (NAW).
Scottish Health Statistics (ISD).
Annual Statistical Report (Northern Ireland CSA).
2011 Census, Population and Household Estimates for England and Wales (ONS).
2011 Census (General Registrar Office for Scotland).
2011 Census (Northern Ireland Statistics and Research Agency).

Office of Health Economics Research

GDS ***Key sources and information***

England and Wales

The IC produces a range of dental statistics publications, which cover: dental workforce registered to provide NHS services, activity statistics including courses of NHS treatments performed; and patient charges for England. It also provides some information on dental earnings relating to the other constituent countries:

http://www.hscic.gov.uk/searchcatalogue?topics=1/Primary care services/Dental services&sort=Most recent&size=10&page=1#top

Previously, the Dental Practice Board in England and Wales provided detailed information on dental care covering all aspects of NHS dentistry, including workforce, dental treatments, registrations and fees paid. Historic information is still available via the archive at:

http://www.nhsbsa.nhs.uk/dental

Similar information was previously produced in *Health and Personal Social Services Statistics (HPSSS),* published by the DH.

Northern Ireland

GDS data are collected by HSC Business Services Organisation Although the information is not routinely published, summary data on GDS, such as dental workforce and expenditure, appear in the ONS *Annual Abstract of Statistics* in the table 'Hospital and general health services' for Northern Ireland.

Scotland

Information on dental care in Scotland can be found on various web pages of the ISD Scotland web site, the *Scottish Health Statistic*s:

http://www.isdscotland.org/Health-Topics/Dental-Care/

4.6 General Ophthalmic Services (GOS)

The objective of the GOS is to provide preventative and corrective eye care via high street opticians. Until April 1989, the NHS General Ophthalmic Services (GOS) provided free sight tests to the whole population. Subsequently, access to these free services was restricted to children under 16 years, full-time students aged under 19 years, people who need complex lenses, diagnosed diabetics and glaucoma sufferers, those registered blind or partially-sighted, and people receiving income support or family credit. Free sight tests were reinstated from 1st April 1999 for those aged 60 or over for all of the UK countries. In England, Northern Ireland and Wales, free sight tests are still dependent on meeting this set of criteria, but since 2007 UK residents are entitled to get free sight tests in Scotland.

For England, Northern Ireland and Wales see the link below for a complete list of conditions for which free sight tests are available:

http://www.nhs.uk/chq/pages/895.aspx?CategoryID=68&SubCategoryID=157

In England, Northern Ireland and Wales those not exempt are required to pay the full cost of sight tests and for all constituent countries those not exempt are required to pay the full cost of spectacles. Under the exemption scheme, a person requiring spectacles can exchange vouchers (introduced in July 1986) for a limited range of spectacles or contact lenses (effective from April 1988), or use them as partial payment for higher priced spectacles/lenses of their choice. The value of vouchers issued to exempt people varies from year to year and from one category of spectacle or lens to another. In all, there are currently 18 categories of voucher values, including those issued by hospital eye services. See the link below for a full list of who is entitled to vouchers:

http://www.nhs.uk/nhsengland/healthcosts/pages/eyecarecosts.aspx/pages/nhsopticians.aspx

There are two types of practitioners working under contract to the NHS ophthalmic services under the management of PCOs. These are ophthalmic medical practitioners (doctors who test sight and prescribe spectacles) and ophthalmic opticians (optometrists), who are not doctors but are qualified to test sight and to prescribe and supply spectacles. In addition, there are dispensing opticians who dispense spectacles on NHS prescriptions, but their services are now provided on a private basis following the introduction of the voucher scheme in 1986.

4.6.1 Ophthalmic statistics

Although a large number of sight tests are conducted on an entirely private basis with no government funding, information relating to these is not centrally collected on a regular basis. As such, this section focuses on ophthalmic activity that is funded or subsidised by government.

In England, activity data are collected through a number of GOS forms: GOS1-GOS6 which cover NHS sight tests, NHS optical vouchers, NHS optical repair and replacement vouchers, private sight tests which are partially subsidised and domiciliary sight tests (those conducted in a person's own home and at residential homes). A large number of these forms are sent as paper returns to PCTs and are used for payments. Not all of the detail collected is entered into a central system, which reduces the completeness of data available at a national level for some items; for example although patient eligibility criteria are included on form GOS1 this information is not always recorded on the payments system by PCTs. Since 2007, some data has also been submitted electronically by a subset of practices.

Activity statistics for England are published by the Health and Social Care Information Centre. In previous years this has been an annual publication, although there are plans to publish this information biannually.

Ophthalmic workforce statistics for England are published separately from activity statistics, also by the Health and Social Care Information Centre. These cover ophthalmic practitioners authorised to carry out NHS funded treatment. In 2008 there were changes to the method of data collection, which resulted in a break in series for regional but not for national level figures. The workforce figures are based on the number of practitioners on what is known as the 'performers register', however not all of these practitioners will be performing sight tests and information is not available to estimate this proportion.

For Northern Ireland, information on GOS activity and workforce was previously available through the CSA in the Family Services Statistical Report. Statistical information on ophthalmic services is now available on the HSC website: http://www.hscbusiness.hscni.net/services/1807.htm

A review of the community eye care workforce in Scotland is available within the following report:

http://www.scotland.gov.uk/Publications/2006/12/13102441/11

Data for NHS GOS activity in Scotland are collected on a series of forms known as GOS forms, these are described in:

http://www.isdscotland.org/Health-Topics/Eye-Care/General-Ophthalmic-Services/

Information on workforce is also available through the same link via the Ophthalmic Practitioner Contractor Database.

Information on ophthalmic workforce for Wales is published within the same report as for England, by the Health and Social Care information Centre.

Table 4.13. Number of opticians and per 100,000 population, UK, 1949 - 2011/12

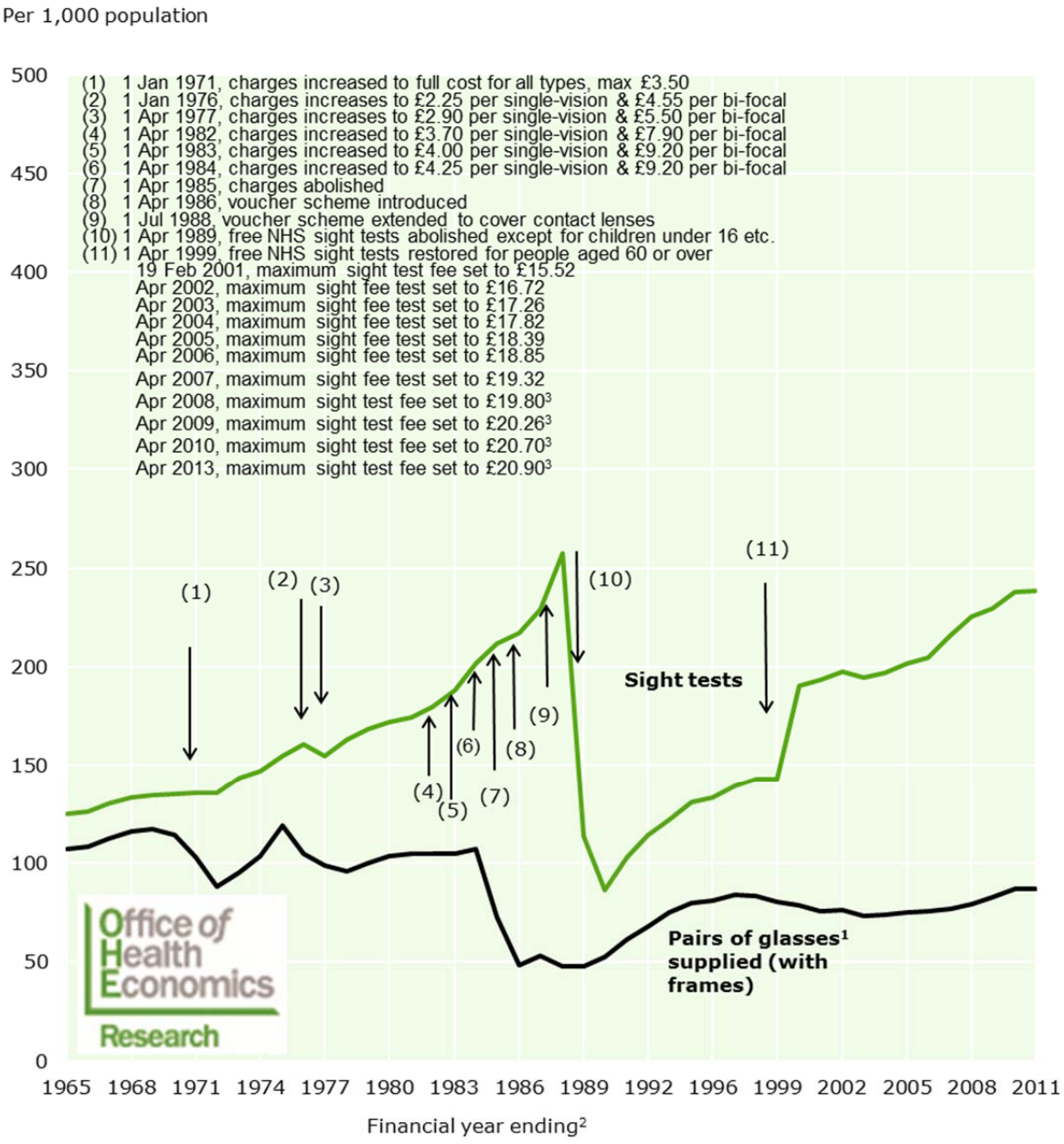
31 December

Year	Number of:			Per 100,000 population		
	Ophthalmic practitioners[1]	Ophthalmic opticians[2]	Total[3]	Ophthalmic practitioners[1]	Ophthalmic opticians[2]	Total[3]
1949[4]	996	5,739	7,334	2.3	13.2	16.9
1950[4]	983	6,179	7,801	2.3	14.2	17.9
1960[5]	976	7,150	9,158	1.9	14.0	18.0
1970	986	5,594	7,854	1.8	10.1	14.1
1980	965	5,679	8,876	1.7	10.1	15.8
1981	972	5,689	9,033	1.7	10.1	16.0
1982	978	5,772	9,251	1.7	10.3	16.4
1983	972	5,880	9,451	1.7	10.4	16.8
1984	988	6,024	9,778	1.7	10.7	17.3
1985	1,010	6,217	10,086	1.8	11.0	17.8
1986	1,048	6,318	10,345	1.8	11.1	18.2
1987/88	1,028	6,464	7,492	1.8	11.4	13.2
1988/89	1,003	6,691	7,694	1.8	11.7	13.5
1989/90	954	6,841	7,795	1.7	12.0	13.7
1990/91	944	6,990	7,934	1.6	12.1	13.9
1991/92	920	7,234	8,154	1.6	12.5	14.2
1992/93	897	7,416	8,313	1.5	12.8	14.4
1993/94	860	7,482	8,342	1.5	12.9	14.5
1994/95	800	7,561	8,361	1.4	13.1	14.4
1995/96	807	7,874	8,681	1.4	13.6	15.0
1996/97	832	8,081	8,913	1.4	13.9	15.3
1997/98	851	8,337	9,188	1.5	14.3	15.7
1998/99	878	8,706	9,584	1.5	14.9	16.4
1999/00	840	8,964	9,804	1.4	15.3	16.7
2000/01	795	8,931	9,726	1.3	15.2	16.5
2001/02	789	9,295	10,084	1.3	15.7	17.0
2002/03	720	9,454	10,174	1.2	15.9	17.1
2003/04	673	9,825	10,498	1.1	16.5	17.6
2004/05	639	10,097	10,736	1.1	16.8	17.9
2005/06	522	10,447	10,969	0.9	17.3	18.2
2006/07	451	10,942	11,393	0.7	18.0	18.8
2007/08	466	11,727	12,193	0.8	19.2	20.0
2008/09	409	11,640	12,049	0.7	18.9	19.6
2009/10	413	12,281	12,694	0.7	19.8	20.5
2010/11	398	12,788	13,186	0.6	20.5	21.1
2011/12	387	13,210	13,597	0.6	20.9	21.5

Notes:
Prior to 1987/88 figures relate to various points of the year.
From 1987/88 figures for England, Wales and Scotland relate to 31st March and for Northern Ireland to 1st July.
From 1995 figures relate to 31st December for England, Wales and Scotland and to April for Northern Ireland.
Data for Scotland for 2007/08 and 2008/09 are as at 30 September.
1 An ophthalmic medical practitioner is a medically qualified optician who is entitled to test sight and prescribe (but not dispense) glasses.
2 An ophthalmic optician is entitled to test sight and dispense glasses.
3 Total includes data for dispensing opticians upto 1986. A dispensing optician is entitled only to dispense glasses. As a result of the introduction of voucher scheme on 1st July 1986, which led to the cessation of dispensing opticians' contracts, figures are no longer available for the UK from 1987 onwards.
4 Figures relate to England and Wales only.
5 Figures relate to Great Britain only.

Sources:
Health and Personal Social Services Statistics for England (DH).
Health Statistics Wales (NAW). Scottish Health Statistics (ISD).
Annual Statistical Report (HSCBSO).
Annual Abstract of Statistics (ONS).
Population Estimates and Projections (ONS).
2011 Census, Population and Household Estimates for England and Wales (ONS).
2011 Census (General Registrar Office for Scotland).
2011 Census (Northern Ireland Statistics and Research Agency).

Figure 4.6. Numbers of NHS sight tests and pairs of glasses[1] supplied per 1,000 population, UK, 1965 - 2011/12



Notes: 1 From April 1989, figures relate to numbers of vouchers paid for.
2 From 1993/94 onwards figures relate to financial year, ending 31st March of year shown on the x-axis (e.g. 2006 = 2005/06).
3 In Scotland the fee is no longer applicable.

Sources: Annual Abstract of Statistics (ONS).
Health and Personal Social Services Statistics for England (DH).
Health Statistics Wales (NAW).
General Ophthalmic Services: Activity Statistics for England and Wales (HSCIC). Copyright © 2013. Re-used with the permission of The Health and Social Care Information Centre. All rights reserved.
Scottish Health Statistics (ISD).
Annual Statistical Report (HSCBSO).
2011 Census, Population and Household Estimates for England and Wales (ONS).
2011 Census (General Registrar Office for Scotland).
2011 Census (Northern Ireland Statistics and Research Agency).

GOS *Key sources and information*

England

Statistical Bulletin: Ophthalmic Statistics for England – this is an annual report published by the HSCIC and contains detailed statistics derived from statistical returns from PCOs that contract with ophthalmic practitioners to provide general ophthalmic services and from the practitioners themselves.

Health and Personal Social Services Statistics (HPSSS) previously published by the DH contains summary statistics on GOS including current and trend data on the number of practitioners by type in GOS, number of GOS sight tests and number of vouchers reimbursed:

www.performance.doh.gov.uk/HPSSS/INDEX.HTM

Northern Ireland

GOS data are collected by HSC Business Services Organisation. Although the information is not routinely published, summary data on GOS such as number of sight tests given and expenditure appear in the ONS *Annual Abstract of Statistics* in the table 'Hospital and general health services' for Northern Ireland.

Scotland

Similar information on NHS ophthalmic care in Scotland can be found on various web pages of the ISD Scotland website, the *Scottish Health Statistics:*

http://www.isdscotland.org/Health-Topics/Eye-Care/General-Ophthalmic-Services/

Wales

Summary statistics on GOS including current and trend data on the number of practitioners by type, number of GOS sight tests and number of vouchers reimbursed, are published by the Welsh Assembly in *Health Statistics Wales*:

http://wales.gov.uk/topics/statistics/headlines/health2012/1209272/?lang=en

Glossary

ABPI Association of the British Pharmaceutical Industry

Acute ill health A term used to describe a restriction of normal activities, as a result of illness or injury, for a period of at least two weeks.

Acute services Surgical and non-surgical interventions provided in hospitals.

AGR Average annual growth rate expressed in percentage terms

ASR Age standardised rate

Average The arithmetic mean

BMI Body mass index. A measure that takes weight in kilogrammes divided by the square of height in metres.

BNF British National Formulary. A classification of medicines according to their action on the human body. The BNF is a joint publication of the British Medical Association and the Royal Pharmaceutical Society of Great Britain. It is revised twice a year.

Cash limit Limit on the amount of money the Government plans to spend on certain services in a financial year as a means of control over cash spending in the year ahead. Cash limits were first introduced in 1976.

CHMS Central Health and Miscellaneous Services.

CI The confidence interval provides information about how uncertain we are about an unknown parameter. Confidence intervals in this publication are based on the theory of repeated sampling, in that for 95% CI if repeated samples were taken we would expect the true value to lie within the CI 95% of the time.

Chronic ill health A term used to describe longstanding illness, disability or infirmity.

CNS Central nervous system.

Consultant A specialist hospital medical practitioner.

Crude death rate The total number of deaths in a given time period divided by the population at the midpoint of the time period. Crude death rates are often expressed as 'deaths per 100,000 population'.

CSA Northern Ireland Central Services Agency.

Cubic splines The term splines refers to a wide class of functions which may be used for

smoothing data. Cublic splines yield a mathematical description of the data, where the smooth line approximates the available data. Within the *OHE Guide* cubic splines are fitted using the spline function within the package STATA. For technical details see 'Interpolating Cubic Splines' by Knott (2000).

Day case Day case patients are those admitted electively to a hospital ward for investigation or treatment and who do not occupy a bed overnight.

DCLG Department for Communities and Local Government.

Decadal Relating to a period of ten years. Decadal change is the change in a quantity over a period of ten years.

DH Department of Health for England.

DHSSPS Northern Ireland Department of Health, Social Services and Public Safety.

Discharges and deaths Patients who have received hospital inpatient treatment and are subsequently discharged or have died in hospital.

Dispensing doctor A general medical practitioner (GP) licensed to dispense medicines. Dispensing doctors are usually found in rural areas, where pharmacies are few.

Drug Tariff A monthly publication of the DH and the Welsh Office, giving price and other information for prescription medicines.

EU European Union. Comprised 15 members in 2003: Austria, Belgium Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden and the UK. On 1st May 2004 ten new members joined: Cyprus (Northern and Southern Cyprus), the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia. On 1st January 2007 the EU enlarged further to include Bulgaria and Romania; and on 1st July 2013 Croatia joined.

Exempt prescriptions Prescriptions that do not attract an NHS prescription charge. Roughly half of the UK population receive free NHS prescription medicines. See Section 4 of the *OHE Guide* for further details and a list of exemption categories.

FCE Finished consultant episode. Measure of hospital inpatient activity, used in England since 1987/88. The period of

time that one hospital inpatient spends under the care and responsibility of one consultant within one care provider. If a patient is transferred from the care of one consultant to another, even within the same hospital or ward, it constitutes a new FCE. The birth of a (live) infant in hospital also constitutes a FCE.

FHS Family Health Services include the General Medical (GMS), General Pharmaceutical (GPS), General Dental (GDS) and General Ophthalmic (GOS) services.

Financial year The UK Government's financial year ends on 31st March. For example, the financial year 2012/13 begins on 1st April 2012 and ends on 31st March 2013.

FTE Full-time equivalent. A measure of the work of part-time staff. For example, one part-timer working three days per week is equivalent to 0.6 (i.e. 3/5) FTE.

GAD Government Actuary's Department.

GB Great Britain. Comprises England, Scotland and Wales.

GDP Gross Domestic Product. The value of all goods and services produced by UK residents, usually measured on an annual basis.

GDP deflator An index showing the average growth of the prices of all items included in GDP. The GDP deflator is derived by dividing GDP in current prices by GDP in constant prices, and expressing it in index form. For example, the series may be scaled by taking the 1990 value to be 100. **GDS** General Dental Services.

Generic An off-patent medicine. Until the patent expires, only the company that discovered a new medicine or their licensees may produce it. After patent expiry any company may produce the same generic compound.

GHS General Household Survey. An annual survey carried out by the ONS, providing data on health, population characteristics, education and economic activity.

GMS General Medical Services.

GOS General Ophthalmic Services.

GP General medical practitioner.

GPS General Pharmaceutical Services.

GROS General Register Office of Scotland.

HCHS Hospital and Community Health Services.

HES Hospital Episode Statistics.

HRG Healthcare Resource Group. A system for grouping treatment episodes which are similar in resource use and clinical response.

HSCBSO Health and Social Care Business Services Organisation. Provides services formerly provided by the Central Services Agency (CSA) in Northern Ireland.

HSCIC Health and Social Care Information Centre.

HSCNI Health and Social Care in Northern Ireland.

HWIS Health of Wales Information Services.

ICD International Classification of Diseases. An internationally defined system for classifying diseases and related health problems. The ICD undergoes periodic revision and is managed by the World Health Organisation. The latest edition is the 10th Revision (ICD10) published in 1992.

Index number A statistical measure designed to show changes in a quantity with respect to time, location, or some other characteristic.

Infant mortality rate The death rate amongst children under the age of one year, expressed per 1,000 live births.

Inpatient A person occupying a hospital bed for at least one night.

ISD Information and Services Division of the NHS in Scotland.

Life expectancy The average further number of years that a person at a specified age may expect to live.

List size The number of people registered with a GP.

Mean A measure of the central value of a set of observations. The arithmetic mean of a set of n observations x_1, x_2, x_3,....,x_n, is defined as the sum of all the x_i divided by the number of observations, n. The geometric mean is defined as the n^{th} root of the product of the x_i.

Median A measure of the central value of a set of observations. The median is the value in a set of ranked numbers that divides the data into two equal parts. For example, for the set of numbers 1, 2, 2, 5, 6, 10, 13, the median is 5. For an even number of observations, the median is defined as the mean of

the two central observations.

Medical practitioner GP contracted to the NHS to provide the full range of general medical services.

Morbidity Relating to illness or disease.

Mortality Relating to death.

NAO National Audit Office.

NHS National Health Service of the UK.

NHSBSA NHS Business Services Authority.

NIC Net Ingredient Cost refers to the cost of the drug before discounts and does not include any dispensing costs or fees. (See Section 4).

NISRA Northern Ireland Statistics and Research Agency.

NWIS NHS in Wales Informatics Service.

OECD Organisation for Economic Co-operation and Development. The Organisation for Economic Co-operation and Development (OECD) was formed in 1960. The 20 original member countries are: Austria, Belgium, Canada, Denmark, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the UK and the USA. The following 10 countries became members subsequently: Japan (in 1964), Finland (1969), Australia (1971), New Zealand (1973), Mexico (1994), the Czech Republic (1995), Hungary (1996), Poland (1996), Republic of Korea (1996) and the Slovak Republic (2000), Chile, Estonia, Israel and Slovenia (2010)

OHE Office of Health Economics.

Old age support ratio The ratio of the non-working age population to the working age population. Non-working age in the UK is taken as below 16 and above 65.

ONS Office for National Statistics.

Ordinary admission An admission where the patient is expected to remain in hospital for at least one night.

OTC Over-the-counter medicine. A medicine available without a prescription.

Outpatient A patient attending a hospital for a planned consultation, without being admitted to a bed.

PACT Prescription Analysis and Cost Tabulation. Prescribing doctors receive regular PACT reports from the PPD giving details of their recent prescribing,

comparing them with local and national averages.

Patient charges Payments made by patients for various aspects of NHS treatment. Such charges include the prescription charge, payments made for amenity beds in NHS hospital wards, and charges for some types of dental treatment.

PCA Prescription Cost Analysis.

Per capita Per person.

PMI Private medical insurance.

PPA Prescription Pricing Authority, replaced since 1st April 2006 by the NHS Prescription Services of the Business Services Authority.

Prescription charge A charge made to patients for NHS prescription medicines.

Real (terms, growth, etc.) A monetary amount adjusted to remove the effect of inflation. The *OHE Guide* usually uses the GDP deflator to make this adjustment, but other methods are possible. For example, the *all items Retail Price Index* may be appropriate in some circumstances.

Sampling error A numerical measure of the uncertainty associated with a quantity estimated from a sample of data. Sampling error decreases with increasing sample size.

Throughput A measure of hospital activity. The number of patients treated in a given time per bed.

UK United Kingdom. The UK comprises England, Scotland, Wales and Northern Ireland.

USA United States of America.

WHO World Health Organisation. An agency of the United Nations with responsibility for international health matters. It promotes the development of health services and the prevention and control of diseases.

References

This section contains details of all source documents used in compiling the *OHE Guide*. Where appropriate, frequency of publication and other information are shown in italics. Government publications are generally available from The Stationery Office (formerly Her Majesty's Stationery Office). Most publications of the Department of Health in England are available from the DH Publications Orderline at: http://www.orderline.dh.gov.uk/ecom_dh/public/home.jsf

Altman DG. (1991) *Practical Statistics for Medical Research.* Chapman and Hall.

British Heart Foundation and Department of Public Health, University of Oxford. (2006) *Diet, Physical Activity and Obesity Statistics 2006.* London. (www.heartstats.org).

Department of Communities and Local Government. *Household Estimates and Projections.* London. *(Annual).*

Department of Health. *Annual Report and Accounts. (Annual).*

Department of Health. *Bed Availability and Occupancy: England. (Annual).*

Department of Health. *Community Pharmacies in England and Wales. Statistical Bulletin (Annual).*

Department of Health. *Elective Admissions and Patients Waiting: England. Statistical Bulletin. (Quarterly).*

Department of Health. *General Medical Services Statistics: England and Wales. (Annual).*

Department of Health. *General Pharmaceutical Services in England and Wales. Statistical Bulletin. (Annual).*

Department of Health. *The Government's Expenditure Plans: Departmental Report.* London: The Stationery Office. *(Annual).*

Department of Health. *Health and Personal Social Services Statistics for England.* London: The Stationery Office. *(Annual).*

Department of Health. (1993) *Hospital Doctors: Training for the Future.* Working Group on Specialist Medical Training. London.

Department of Health. *Hospital Episode Statistics*. London. *(Annual).*

Department of Health. *NHS Hospital Activity Statistics: England. Statistical Bulletin. (Annual).*

Department of Health. *NHS Hospital and Community Health Services Non-medical Staff in England. Statistical Bulletin. (Annual).*

Department of Health. *NHS Hospital, Public Health Medicine and Community Health Service Medical and Dental Workforce Census England. (Annual).*

Department of Health. (2003) *Payment by Results: England*. London.

Department of Health. *Prescription Cost Analysis: England*. London. *(Annual).*

Department of Health. *Programme Budgeting.* Leeds. *(Annual).*

Department of Health. *Reference Costs*. Leeds. *(Annual).*

Department of Health. *Statistics for General Medical Practitioners in England. Statistical Bulletin. (Annual).*

Department of Health. *Statistics of Prescriptions Dispensed in the Community: England. Statistical Bulletin. (Annual).*

Department of Health and Association of the British Pharmaceutical Industry. (2009) *Pharmaceutical Price Regulation Scheme: 2008.*

Department of Health and the Office of Population Censuses and Surveys. *Hospital Inpatient Enquiry: Inpatient and Day Case Trends. (Series MB4)*. London: The Stationery Office. (This publication has been superseded by Hospital Episode Statistics from 1988).

European Observatory on Health Care Systems. (2002) *Healthcare Challenges in Eight Countries*.

General Register Office of Scotland. *Household Estimates and Projections.* Edinburgh. *(Annual).*

General Register Office of Scotland. *Vital Events Reference Tables.* Edinburgh. *(Annual).*

General Register Office of Scotland. (2011) *Census 2011.* Edinburgh.

Government Actuary's Department. *Life Tables. (Annual).*

Government Actuary's Department. *Population Projections. (Annual).*

Health and Social Care Information Centre. *General and Personal Medical Services, Detailed Results. (Annual).*

Health and Social Care Information Centre. *General Ophthalmic Services: Activity Statistics for England and Wales. (Annual).*

Health and Social Care Information Centre. *General Ophthalmic Services: Workforce Statistics for England and Wales. (Annual).*

Health and Social Care Information Centre. *General Pharmaceutical Services Annual Bulletin. (Annual)*.

Health and Social Care Information Centre. *Hospital Episode Statistics. (Annual).*

Health and Social Care Information Centre. *NHS HCHS Medical and Dental Staff in England. (Annual).*

Health and Social Care Information Centre. *NHS HCHS Non-Medical Staff in England. (Annual).*

Health and Social Care Information Centre. *NHS Staff. (Annual).*

Health and Social Care Information Centre. *NHS Staff, General Practice Detailed Tables. (Annual).*

Health and Social Care Information Centre. *Prescriptions Dispensed in the Community: England. (Annual).*

Health and Social Care Information Centre. *Statistics on Obesity, Physical Activity and Diet: England. (Annual).*

Health of Wales Information Services. *Prescription Cost Analysis: Wales*. Cardiff: The National Assembly for Wales. *(Annual).*

HM Treasury. *Economic Data.* London. *(Quarterly).*

HM Treasury. *Public Expenditure: Statistical Analyses.* London: The Stationery Office. *(Annual).*

HM Treasury. *Supply Estimates: Main Estimates.* London: The Stationery Office. *(Annual).*

House of Commons. *NHS (England and Wales) Summarised Accounts.* London: The Stationery Office. *(Annual).*

House of Commons. *NHS (England) Summarised Accounts.* London: The Stationery Office. *(Annual).*

House of Commons. *NHS (Scotland) Summarised Accounts.* London: The Stationery Office. *(Annual).*

House of Commons. *NHS (Wales) Summarised Accounts.* London: The Stationery Office. *(Annual).*

House of Commons Health Committee. *Public Expenditure on Health and Personal Social Services*. London: The Stationery Office. *(Annual).*

Information Services Division. *Cancer Statistics.* Edinburgh: The NHS in Scotland. *(Annual).*

Information Services Division. *Community Pharmacies.* Edinburgh: The NHS in Scotland. *(Annual).*

Information Services Division. *Daycase and Inpatient Activity.* Edinburgh: The NHS in Scotland. *(Annual).*

Information Services Division. *Dental Statistics.* Edinburgh: The NHS in Scotland. *(Annual).*

Information Services Division. *NHS Board Operating Costs and Capital Expenditure.* Edinburgh: The NHS in Scotland. *(Annual).*

Information Services Division. *Prescription Cost Analysis: Scotland.* Edinburgh: The NHS in Scotland. *(Annual).*

Information Services Division. *Scottish Health Service Costs.* Edinburgh: The NHS in Scotland. *(Annual).*

Information Services Division. *Scottish Health Statistics.* Edinburgh: The NHS in Scotland. *(Annual).*

Information Services Division. *Workforce Statistics.* Edinburgh: The NHS in Scotland. (Annual).

Intercontinental Medical Statistics (IMS). *Mediplus.* Pinner. *(Annual).*

Jarman B, Aylin P, Bottle A. (2004) Trends in admissions and deaths in English Hospitals. *BMJ* 328(7444) 855.

Knott GD. (2000) *Interpolating Cubic Splines*. Boston.

Laing and Buisson. *Laing's Healthcare Market Review*. London: Laing and Buisson Publications Ltd. *(Annual)*.

Marketing and Business Development. (2008) *UK Dentistry Market Research Report.*

National Assembly for Wales. *Health Statistics Wales*. Cardiff. *(Annual).*

National Assembly for Wales. *StatsWales*. Cardiff. *(Annual).*

National Assembly for Wales. *Welsh Health Circular: Programme Budgeting Results*. Cardiff. *(Annual).*

National Audit Office. *NHS Pay Modernisation. (Annual).*

Navarro V. (2002) The world health report 2000: can health care systems be compared using a single measure of performance *Am J Public Health* 92(1): 31-34

NHS England, British Medical Association and NHS Employers. *(2013) 2013/14 general medical services (GMS) contract quality and outcomes framework (QOF).* (Available at: http://www.nhsemployers.org/Aboutus/Publications/Documents/qof-2013-14.pdf. (Accessed September 2013).

Northern Ireland Department of Health, Social Services and Public Safety. *Annual Statistical Report.* Belfast: Department of Health, Social Services and Public Safety. *(Annual).*

Northern Ireland Department of Health, Social Services and Public Safety. *Community Statistics*. Belfast: Department of Health, Social Services and Public Safety. *(Annual).*

Northern Ireland Department of Health, Social Services and Public Safety. *Hospital Statistics*. Belfast. *(Annual).*

Northern Ireland Department of Health, Social Services and Public Safety. *Main Estimates*. Belfast. *(Annual).*

Northern Ireland Department of Health, Social Services and Public Safety. *Prescription Cost Analysis: Northern Ireland*. Belfast. *(Annual).*

Northern Ireland Statistics and Research Agency. (2011) *Census 2011.* Belfast.

Northern Ireland Statistics and Research Agency. *Demographic Statistics.* Belfast. *(Annual).*

Office for National Statistics. (2000) *Adult Dental Health Survey, 1998*. London: The Stationery Office.

Office for National Statistics. *Annual Abstract of Statistics*. London: The Stationery Office. *(Annual)*.

Office for National Statistics. *Cancer Registration Statistics.* London: The Stationery Office. *(Annual).*

Office for National Statistics. (2011) *Census 2011, Population and Household Estimates for England and Wales.* London.

Office for National Statistics. *Consumer Trends.* London: The Stationery Office. *(Annual).*

Office for National Statistics. *Economic and Labour Market Review.* London: The Stationery Office. *(Monthly).*

Office for National Statistics. *Economic Trends (Annual Supplement).* London: The Stationery Office. *(Annual).*

Office for National Statistics. *General Household Survey. (Living in Britain: Results from the General Household Survey)*. London: The Stationery Office. *(Annual).*

Office for National Statistics. *General Lifestyle Survey.* (Replaces the *General Household Survey*). London: The Stationery Office. *(Annual).*

Office for National Statistics. *Key Population and Vital Statistics.* London: The Stationery Office. *(Annual).*

Office for National Statistics. *Mid-Year Population Estimates*. *Population and Health Monitors: PP1.* London: The Stationery Office. *(Annual).*

Office for National Statistics. *Mortality Statistics (England & Wales): Cause. (Series DH2).* London: The Stationery Office. *(Annual).*

Office for National Statistics. *Mortality Statistics (England & Wales): Childhood, Infant and Perinatal. (Series DH3)*. London: The Stationery Office. *(Annual).*

Office for National Statistics. (2011) *Population Estimates and Projections.* The Stationery Office.

Office for National Statistics. (2010) *Population Estimates by Marital Status: Methodology Paper*. London: The Stationery Office.

Office for National Statistics. *Population Projections*. *Population and Health Monitors: PP2*. London: The Stationery Office. *(Annual).*

Office for National Statistics. *Population Trends.* London: The Stationery Office. *(Quarterly).*

Office for National Statistics. *Regional Trends.* London: The Stationery Office. *(Quarterly)*.

Office for National Statistics. *UK Economic Accounts*. London: The Stationery Office. *(Quarterly).*

Office for National Statistics. *United Kingdom National Accounts (The Blue Book).* London: The Stationery Office. *(Annual).*

OPCS and Department of Health. *Morbidity Statistics from General Practice. Royal College of General Practitioners.* London: The Stationery Office. *(This is a national study carried out every ten years).*

Organisation for Economic Co-operation and Development and Centre de Recherche, d'Etude et de Documentation en Economique de la Santé. *OECD Health Database.* Paris: OECD. (*Annual).*

Pharmaceutical Society of Northern Ireland. *Annual Report.* Available on the world wide web at: http://www.psni.org.uk/publications/annual-reports-2/. (Accessed June 2013).

Prescription Pricing Authority. *PPA Annual Report.* Newcastle upon Tyne: Prescription Pricing Division of the NHS Business Services Authority. *(Annual).*

Rooney CIF and Smith SK. (2000) *Implementation of ICD10 for Mortality Data in England and Wales from January 2001* Office for National Statistics *Health Statistics Quarterly (Quarterly).*

Rothman KJ. (2002) *Epidemiology an Introduction*. Oxford University Press.

Royal College of General Practitioners. (2006) *RCGP Profile of UK Practices.*

Royal Pharmaceutical Society of Great Britain. *Annual Workforce Census. (Annual).*

Smith M, Edgar G, Groom G. (2008) Health expectancies in the United Kingdom 2004-2006. *Health Statistics Quarterly*, 40, Winter 2008. Office for National Statistics.

The United Nations. *World Population Prospects.* New York. *(Annual).*

University of Manchester. (2012) *GPhC Register Analysis 2011*. Available on the world wide web at: http://www.pharmacyregulation.org/sites/default/files/Analysis%20of%20GPhC%20Pharmacist%20Register%202011.pdf. (Accessed July 2013).

Welsh Cancer Intelligence and Surveillance Unit. *Cancer Statistics. (Annual).*

World Bank. *World Development Indicators. (Annual).*

World Health Organisation. *Global InfoBase*. Geneva. *(Annual).*

World Health Organisation (1992). *International Classification of Diseases, 10th Revision*. Geneva.

World Health Organisation. *Mortality Database.* Geneva. *(Annual).*

World Health Organisation. *National Health Accounts Series*. Geneva. *(Annual).*

World Health Organisation. *World Health Report: Core Health Indicators.* Geneva. *(Annual).*

World Health Organisation.(2000) *World Health Report Health Systems: Improving Performance .*

World Health Organisation. *World Health Statistics Annual.* Geneva. *(Annual).*

Index